FY2019 PERFORMANCE PLAN

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Albuquerque Bernalillo County Water Utility Authority

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Report Prepared by Frank Roth Senior Policy Manager

Executive Summary

The Albuquerque Bernalillo County Water Utility Water Authority's (Water Authority) Budget Ordinance requires that a Performance Plan be connected to the Five-Year Goals and contain performance measures that help guide the operating and capital budgets in allocating the Water Authority's financial resources. The FY19 Performance Plan assesses the performance of the Water Authority using a set of identified and tested, high-level performance measures. These measures are designed to help the Water Authority improve its operational efficiency and effectiveness by identifying areas of improvement. The measures also provide a mechanism to conduct comparative analyses in order to implement quality improvement processes and enhance decision-making.

The Performance Plan contains three years of actual prior year data which establishes a baseline as well as projected performance targets that drive financial and budgetary policies. In addition to assessing its performance year to year, the Water Authority assesses its performance in relation to the other utilities.

The Performance Plan contains 27 key performance measures organized by the Water Authority's Five-Year Goal areas. The following table summarizes the Water Authority's performance compared to it targets and tracks the Water Authority's progress of baseline, current, and target performance.

Goal	Performance Measure	Baseline	Current	Target
	Drinking Water Compliance Rate			
Water Supply & Operations	Distribution System Water Loss			
	Water Distribution System Integrity			
	Operations and Maintenance Cost Ratios			
	Planned Maintenance Ratio			
	Water Use per Capita Consumption			
	Sewer Overflow Rate			
Wastewater	Collection System Integrity			
Collection &	Wastewater Treatment Effectiveness Rate			
Operations	Operations and Maintenance Cost Ratios			
	Planned Maintenance Ratio			
	Customer Service and Technical Quality Complaints			
	Customer Service Cost per Account			
Customer	Billing Accuracy			
Services	Call Center Indicators			
	Residential Cost of Water/Sewer Service			
	Stakeholder Outreach Index			
D	Debt Ratio			
	Return on Assets			
Services Business Planning & Management	System Renewal/Replacement Rate			
managomon	Triple Bottom Line Index			
	Employee Health and Safety Severity Rate			
	Training Hours per Employee			
Organization	Customer Accounts per Employee			
Development	Employee Turnover			
	Retirement Eligibility			
	Organizational Best Practices Index			
	Performance Key			
Excelle	nt Good Fair		Ροοι	

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Introduction

The Albuquerque Bernalillo County Water Utility Water Authority's (Water Authority) Budget Ordinance requires that a Performance Plan be connected to the Five-Year Goals and contain performance measures that help guide the operating and capital budgets in prioritizing and allocating the Water Authority's financial resources. The Water Authority uses these measures to help improve its operational efficiency and effectiveness by identifying areas of improvement. The measures also provide a mechanism to conduct comparative analyses in order to implement quality improvement processes and enhance decision-making.

The Water Authority utilizes the American Water Works Association's (AWWA) Benchmarking Performance Indicators Survey (Survey) in developing its Performance Plan. The Survey provides utilities an opportunity to collect and track data from already identified and tested performance measures, based on the same collection process and definitions. The most recent survey data was compiled in 2017 by AWWA from 129 different utilities. The Performance Plan uses the survey data as a basis for its performance measures to track the Water Authority's performance with that of other utilities.

Five-Years Goals

The Water Authority's Performance Plan is organized by the Water Authority's Five-Year Goal areas which are modeled after AWWA's business model. This model is based on fifteen successful quality achievement programs, including the Malcolm Baldridge National Quality Award Program, the Deming Award, and the International Standards Organization series of quality standards. The model characterizes the work of the typical water and wastewater utility around five business systems. Figure 1 shows the Water Authority's Five-Year Goals which parallels the AWWA model. The Water Authority also developed guiding goal statements for each goal area which explains the long-term desired result for each goal.

Figure 1: Water Authority's Five-Year Goals & Guiding Goal Statements

Customer Services Provide quality customer services by communicating effectively, billing accurately, and delivering water and wastewater services efficiently based on understanding the needs and perceptions of our customers and the			Business Planning & Managem Maintain a well planned, managed, coordinated, and financially stable utility continuously evaluating and improving means, methods, and models used to deliver services.		
community at large.	Orgar	ization Development			
	safe, organize effectively custome	ell informed, trained, motivated ed, and competitive work force meet the expectations of the rs, community, and Board in ce with adopted policies and			
Water Supply &		mandates.		Wastewater Collection &	
Operations				Operations	
Provide a reliable, safe, affordable, and sustainable water supply by transitioning renewable supplies and minimizing long te environmental impacts on the community a natural resources while ensuring the ability the community to grow in a responsible mar	to erm and / of		syste Gra wate	Provide reliable, safe and affordable stewater collection, treatment and reuse ems to protect the health of the Middle Rio ande Valley by safeguarding the regional ershed, minimizing environmental impacts, returning quality water to the Rio Grande for downstream users.	

The Performance Plan contains 27 key performance measures. The performance measures are organized by the Water Authority's Five-Year Goal areas shown in Figure 2. The performance measures are linked to the Goal areas in that the tracking of the metric is used to achieve the long-term desired result for that goal.

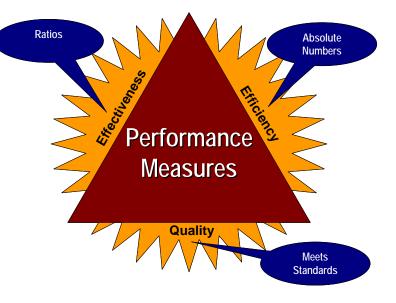
Figure 2: Performance Measures by Goal Area

Customer Services Customer/Technical Quality Complaints Customer Service Cost per Account Billing Accuracy Call Center Indicators Residential Cost of Water/ Sewer Service Stakeholder Outreach		Business Planning & Management Debt Ratio Return on Assets System Renewal/Replacement Rate Triple Bottom Line
Water Supply & Operations Drinking Water Compliance Rate Distribution System Water Loss Water Distribution System Integrity Operations and Maintenance Cost Ratios Planned Maintenance Ratio Water Use per Capita Consumption	Organization Development Employee Health and Safety Severity Rate Training Hours per Employee Customer Accounts per Employee Employee Turnover Retirement Eligibility Organizational Best Practices Index	e Wastewater Collection & Operations Sewer Overflow Rate Collection System Integrity Wastewater Treatment Effectiveness Rate Operations and Maintenance Cost Ratios Planned Maintenance Ratio

Performance Measure Types

The Plan's performance measures fall into three main categories: Quality, Effectiveness and Efficiency. Quality measures are presented as standards. Effectiveness measures are presented as ratios. Efficiency measures are presented as absolute numbers.

- (1) *Standards*, such as meeting drinking water quality standards
- (2) *Ratios*, such as operation and maintenance costs per million gallons of water or wastewater processed
- (3) Absolute numbers, such as the monthly bill for a residential water or wastewater customer



Performance Plan Logic Model

The Performance Plan presents each performance measure through an *evaluation logic model*. The logic model is a systematic and visual method that shows how performance measures quantify what is being done (inputs), how well it is being done (outputs), and why it is being done (outcomes). *Inputs* are the specific data needed to construct and calculate each performance measure. These resources may include dollars, hours, people or material resources used to produce an output. *Outputs* are the product of the calculation of the inputs and describe the level of effectiveness of each performance measure. The outputs are the metrics that are benchmarked with other utilities. *Outcomes* are the desired result of the performance measure that the Water Authority would like to achieve in connection with its long-range goals and with its shorter-term objectives. The logic model is used to show where the organization wants to be and how it can get there.

Simply stated, the performance measures identify gaps in service delivery or performance. They are used to help monitor the Water Authority's performance and to develop performance targets. The Water Authority sets performance targets that are aligned with the desired outcomes to determine how effective or efficient the utility is in achieving the desired outcome. The Water Authority uses the desired outcomes to create an ongoing discussion with its stakeholders and show why decisions are made in prioritizing and allocating financial resources.

The Five-Year Goals and One-Year Objectives are incorporated into the logic model. Figure 3 shows the alignment between the goals, objectives and performance measures in the logic model. With the performance measures being used to identify gaps, the One-Year Objectives which are policy directives from the Water Authority Board are used to close performance or service delivery gaps and improve performance levels. It should be noted that not all One-Year Objectives are tied to performance measures or have a measurable component. Some Objectives are related to completing projects or improving or implementing programs.

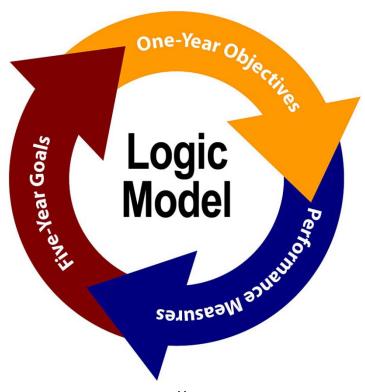


Figure 3: Logic Model Alignment of Goals, Objectives and Performance Measures

Benchmarking and Industry Peer Group

The Performance Plan contains three years of actual prior year data (FY15 through FY17) which establishes a baseline. The Plan also includes estimated current fiscal year performance measures (FY18) as well as projected performance in the proposed budget year (FY19). The Plan allows the Water Authority to benchmark its performance from year to year and to determine how its current and projected performance compare to baseline past performance. Overall, the Performance Plan's logic model incorporates five years of data in determining it's performance, evaluating trends, and determining projected performance.

In addition to assessing its performance year to year, the Water Authority also compares its performance with that of other utilities in its *industry peer group*. As stated in the Introduction section, the Water Authority obtains its comparative data from the AWWA Benchmarking Performance Indicators Survey. By benchmarking with other utilities, the Water Authority is able to assess its performance relative to other high-performing utilities. For each performance measure, the industry peer group is presented throughout the Plan.

	Industry Peer Group
1)	Combined Water/Sewer Represents those utilities designated as providing both water and wastewater services
2)	Populations greater than 500,000 Utilities that serve populations greater 500,000
3)	Region 4 Utilities in the following States: AR, AZ, CO, ID, KS, LA, MO, NE, NM, OK, TX, UT, WY

Strategic Planning, Budgeting and Improvement Process

The Performance Plan is a component of the *Strategic Planning, Budgeting and Improvement Process* that is discussed in the Financial Plan. This Process drives the development of the annual operating and capital budgets by providing data used to set performance goals, as well as allocate and prioritize resources. Performance measures provide an approach for strategically allocating and prioritizing resources to balance the level and cost of services with customer expectations. For example, higher treatment costs may be the desired outcome to improve customer satisfaction.

As a part of the Strategic Planning, Budgeting and Improvement Process, the Five-Year Goals, One-Year Objectives, and performance measures are integrated through the use of the logic model in order to achieve service delivery and performance improvement. A good example of the integration between performance measures and objectives is the Employee Health and Safety Severity Rate (see pages 115-117) which measures the rate of employee days lost from work due to illness or injury. Since starting the benchmarking process, the Water Authority noticed that its lost workdays were on average fifteen times higher than other utilities. As a result, the Water Authority has used the Objectives to implement several programs including safety incentive bonuses to reduce the number of employee lost days. Overall, the integration of the performance measures and objectives are used to achieve the long-term desired results of the Water Authority's Five-Year Goals.

Performance Accountability & Budgeting

Each Water Authority division manager is responsible for their respective goal areas and objectives and for tracking their performance. The Executive Director, who is the champion and supportive leader of the performance management process, meets with the division managers and their staff to review progress reports on the performance measures and objectives.

A biennial customer opinion survey is conducted to assess the utility's performance from the customer's viewpoint. Results of a customer opinion survey are presented to the Board. The survey allows the Water Authority to track customer satisfaction on the programs, policies, and operational performance of the organization. Several survey questions are tied to the performance measures and levels of service. In this way, the survey provides qualitative data that relates to quantitative data from the benchmarking to ensure that the Water Authority is balancing performance improvement with customer expectations.

The Water Authority also uses performance measures and performance targets in conjunction with the review of the annual budget. The Executive Director and Division Managers integrate performance reporting into the budget process in order to focus the budget discussion on the allocation of resources and to address performance gaps. Budget requests are tied either to performance measure targets or objectives in terms of providing a justification for their purpose. By integrating the objectives and performance measures into the budget process, the Water Authority has moved from just measuring performance to managing performance and how and what it what it wants to achieve. As a result, the Water Authority has become more transparent and accountable to its customers and the governing board.

Performance Measurement Linkage to Asset Management Planning

The Water Authority has established an asset management program based on a business model that helps the Water Authority make better acquisition, operations and maintenance, renewal, and replacement decisions. The principles of asset management were developed to address the critical problem of aging public infrastructure and changing utility business environment. The Water Authority has completed an Asset Management Plan (AMP) which provides a 30-year projection that will allow the Water Authority to budget for renewals and replacements into the future. The Water Authority uses performance measures, performance targets, and the customer opinion survey to develop its levels of service to deliver the defined services at the lowest life-cycle cost. In quantifying its performance, the Water Authority has begun to balance its performance with the levels of service, cost of service, customer expectations, and business risk. As a part of its AMP, the Water Authority has developed its levels of service to coincide with its performance measures at the Goal level. Moreover, a quarterly key performance indicator report is presented to the governing board which provides a snapshot of utility performance by service level categories.

Performance Measurement Linkage to Effective Utility Management

The Effective Utility Management (EUM) was developed in 2008 by the Environmental Protection Agency and several water and wastewater associations and research foundations. EUM is designed to help water and wastewater utilities comprehensively assess current operations and identify a path to improving in key areas that are the highest priorities. The Water Authority uses EUM to make informed decisions and practical, systematic changes to achieve excellence in utility performance in the face of everyday challenges and long-term needs for the utility and the community it serves.

The Water Authority uses the EUM guidebook to help identify and address its most pressing needs through an incremental, continual improvement management approach. This guidebook, called the Primer, contains *Ten Attributes of Effectively Managed Utilities* which helps the utility maintain a balanced focus on the ten operational areas. Figure 4 provides a performance relationship matrix between the Five-Year Goals and the EUM Attributes. The Water Authority uses performance benchmarking data from both the AWWA and EUM frameworks to select priorities for improvement, based on the utility's strategic objectives and the needs of the community it serves.

EUM Attribute	Water Supply & Operations	Wastewater Collection & Operations	Customer Services	Business Planning & Management	Organization Development	Attribute Score
CUSTOMER SATISFACTION						
EMPLOYEE AND LEADERSHIP DEVELOPMENT						
ENTERPRISE RESILIENCY						
S						
INFRASTRUCTURE STRATEGY AND PERFORMANCE						
		Perfo	ormance Key			
					▼	
Excelle	ent	Good		Fair	Poor	

Figure 4: Performance Relationship Diagram of Goals and EUM Attributes

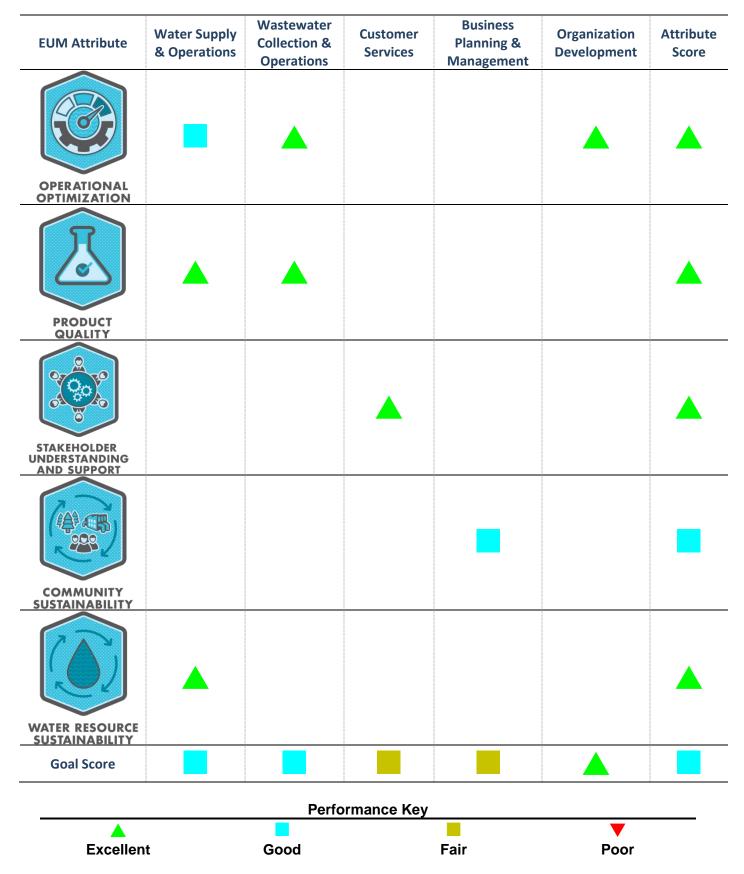


Figure 4: Performance Relationship Diagram of Goals and EUM Attributes (continued)

Communicating Performance Measurement

Performance measurement results and progress in meeting performance targets are communicated to elected officials and customers through this report, and to employees through-out the organization. Increasing employee understanding of the performance measures and the organization's long-term goals is a critical step in achieving the Water Authority's long-term goals. The Employee Health and Safety Severity Rate is a good example how the Water Authority educated the importance of meeting its goals and making safety a high priority in the organization. Employee annual performance reviews are aligned with the policy strategic objectives which have helped to educate employees about the utility's core values, goals and annual objectives. It has engaged employees by creating awareness or by specifically allowing employees to be more accountable in improving the utility's performance as measured through its key performance indicators.

Presentation of Data

The Performance Plan's comparative data is presented in quartile rankings. The top quartile reflects the 75th percentile, and the bottom quartile reflects the 25th percentile. The median is the 50th percentile value. Figure 5 illustrates the four quartiles. Data in the 2nd and 3rd guartiles is described as the "Interguartile Range" which includes 50% of all the values submitted for each performance measure. This range is considered nominal or representative of the majority of the data.

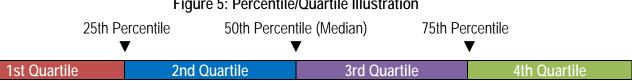


Figure 5: Percentile/Quartile Illustration

Layout of Performance Plan

The performance measures are categorized by the Water Authority's Five-Year Goal areas.

- Each Goal area section provides an overview of the Goal with a Guiding Goal Statement and Goal Performance Scorecard for each performance measure.
- Each Goal area section shows how the Objectives are linked to the performance measures and their scorecard status.
- > Each performance measure is presented through a logic model of inputs, outputs and outcomes as well as comparative statistics and charts to illustrate how the Water Authority is performing year to year and how it is performing compared to the industry peer group.

A results narrative includes a discussion and analysis of how the performance measure meets anticipated performance targets and long-range goals. If the targets are not being met, an explanation is provided for the reason and what is expected in the future. The Performance Plan also indicates if there are One-Year Objectives related to a performance measure to show how policy directives are used to improve service delivery and/or minimize performance gaps. In addition, the Performance Plan provides customer opinion survey statistics to show how customer expectations relate to the performance measure.

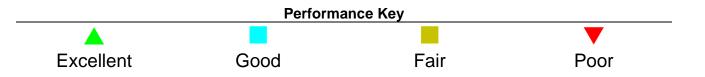
Goal 1 Water Supply and Operations

Guiding Goal Statement

Provide a reliable, safe, affordable, and sustainable water supply by transitioning to renewable supplies and minimizing long term environmental impacts on the community and natural resources while ensuring the ability of the community to grow in a responsible manner.

Ref #	Performance Measure	Status	Trend
1-1	Drinking Water Compliance Rate		
1-2	Distribution System Water Loss		
1-3	Water Distribution System Integrity		
1-4	O&M Cost Ratios: O&M Cost per account		
1-4	O&M Cost Ratios: O&M Cost per MG processed		
1-4	O&M Cost Ratios: Direct cost of treatment per MG		
1-5	Planned Maintenance Ratio		
1-6	Water Use per Capita Consumption		
	Overall Goal Status		

Goal Performance Scorecard



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Linkage of Objectives to Performance Measures

FY19 Objectives	Measure Reference
Complete update to the source water protection plan by the end of the 2nd Quarter of FY19. Begin implementation of the updated plan, including monitoring for new and existing groundwater and surface water contamination and education outreach through the end of the 4th Quarter of FY19. Participate in and provide comments to protect the groundwater aquifer and surface water supplies throughout the Middle Rio Grande; continue work with the Water Protection Advisory Board through administrative, policy, and technical support.	1-1
Continue distribution water loss program by locating water leaks from surveying 650 miles of small diameter water lines through conventional leak detection methods and 2,200 miles of small diameter water lines through acoustic leak detection by the end of the 4th Quarter of FY19. Pilot an acoustic leak detection system with intelligent nodes to monitor and communicate possible leaks to a central data collection hub by the end of the 4th Quarter of FY19.	1-2 1-3
Evaluate the Automated Meter Infrastructure Pressure Monitoring pilot project and assess operation and maintenance costs by eliminating redundant pressure reducing valves by the end of the 4th Quarter of FY19.	1-3
Submit annual distribution and treatment data to the Partnership for Safe Water program for inclusion in the program's annual report of aggregated system water quality data; continue implementing action plans from the self-assessments through the end of the 4th Quarter of FY19.	1-4
Complete Ground Water Plant Preventive Maintenance to Corrective Maintenance ratio to at least 66% of all completed maintenance labor hours by the end of the 4th Quarter of FY19.	1-5
Complete Surface Water Plant Preventive Maintenance to Corrective Maintenance ratio to at least 60% of all completed maintenance labor hours by the end of the 4th Quarter of FY19.	1-5
Maintain water use below 128 gallons per capita per day through the end of the 4th Quarter of FY19.	1-6
Continue implementation of Water 2120: 1) Complete Environmental Plan; 2) Prepare draft of the Groundwater Management Plan; 3) Begin development of the Reuse Plan by the end of the 4th Quarter of FY19.	1-6
Track and report conservation education outreach to service area customers and meet the following targets: 1) 100 Irrigation Audits; 2) 45 Meetings with Landscapers; 3) 30 Meetings with Property Managers; and 4) 2 Water Conservation Open House Meetings by the end of the 4th Quarter of FY19.	1-6

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Performance Measure Division Responsibility

Ref #	Performance Measure	Operations Plant	Operations Field	Operations Compliance	Operations Water Resources, Engineering & Planning
1-1	Drinking Water Compliance Rate	\checkmark		\checkmark	
1-2	Distribution System Water Loss		\checkmark		\checkmark
1-3	Water Distribution System Integrity		\checkmark		\checkmark
1-4	O&M Cost Ratios: O&M Cost per account	\checkmark	\checkmark		
1-4	O&M Cost Ratios: O&M Cost per MG processed	\checkmark			
1-4	O&M Cost Ratios: Direct cost of treatment / MG	\checkmark			
1-5	Planned Maintenance Ratio	\checkmark	\checkmark		\checkmark
1-6	Water Use per Capita Consumption				\checkmark

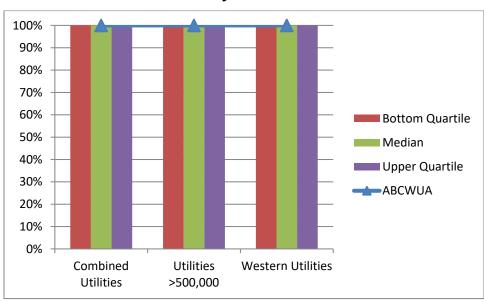
Linkage of Performance Measures to EUM Attributes

Ref #	Performance Measure	Product Quality	Customer Satisfaction	Employee & Leadership Development	Operational Optimization	Financial Viability	Enterprise Resiliency	Infrastructure Strategy & Performance	Community Sustainability	Water Resource Sustainability	Stakeholder Understanding & Support
1-1	Drinking Water Compliance Rate	\checkmark	\checkmark								
1-2	Distribution System Water Loss				\checkmark				\checkmark	\checkmark	
1-3	Water Distribution System Integrity				\checkmark			\checkmark			
1-4	O&M Cost Ratios: O&M Cost per account				\checkmark	\checkmark					
1-4	O&M Cost Ratios: O&M Cost per MG processed				\checkmark	\checkmark					
1-4	O&M Cost Ratios: Direct cost of treatment / MG				\checkmark	\checkmark					
1-5	Planned Maintenance Ratio		\checkmark		\checkmark			\checkmark			
1-6	Water Use per Capita Consumption					\checkmark				\checkmark	

1-1 Drinking Water Compliance Rate

Performance Results

Measure Type	Purpose	Inputs		Outputs					
	Quantify the percentage of time	Number of	Beeeline	Prio	or Year Actu	ials	Current/Est	Projected	Provide safe
	each year that the Water	days in full	Baseline	FY15	FY16	FY17	FY18	FY19	and reliable
Quality	Authority meets all of the health related drinking water standards in the US National Primary Drinking Water Regulations	compliance	100%	100%	100%	100%	100%	100%	drinking water to our customers 100% of the time



Industry Benchmark

Results Narrative

The drinking water compliance rate indicates the percent of time that a drinking water utility is in full compliance with all of the water quality contaminants and treatment techniques mandated for public water systems in the United States. A utility measures its compliance relative only to those primary maximum contaminant levels and treatment techniques that apply to its operations. The drinking water compliance rate uses simple tests of "in compliance" and "not in compliance." As a performance measure for comparative analysis, the drinking water compliance rate allows a utility to gauge its compliance with health-related drinking water parameters relative to other water utilities reporting data into the comparative analysis system.

Measurement Status

The Water Authority has been in 100% compliance for the past three fiscal years and is on-target to meet 100% compliance for the next two fiscal years.

In December 2008, the Water Authority began distribution of treated surface water mixed with ground water resources as part of the San Juan-Chama Drinking Water Project (SJCDWP). For FY11, the Water Authority operated the new surface water treatment plant in phased capacity with a gradual increase to minimize water quality changes. In 2009, the Water Authority directed an independent review of key water quality and treatment issues for the SJCDWP treatment plant. The study was performed by Dr. Kerry Howe, a professor of engineering at the University of New Mexico and a world-renowned expert in water treatment. The study concluded that the new plant will meet or exceed all Safe Drinking Water Act regulations.

For FY12, the Water Authority developed several policy objectives to improve the processes and procedures for water quality compliance reporting. The Water Authority created a new Compliance Division in FY10 to better improve and consolidate all its compliance functions. In FY13, the Compliance Division developed and implemented a reporting system and environmental monitoring program. Since FY14, the Compliance Division measures its progress on key performance indicators.

2018 Customer Opinion Survey

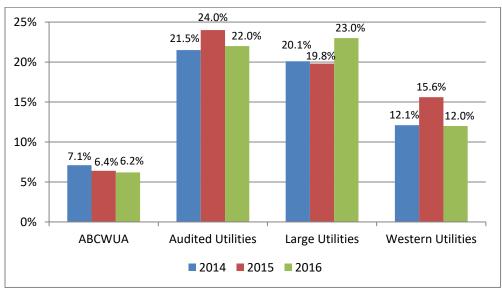
- 97% of customers are either very or somewhat satisfied with the reliability/availability of water
- 71% of customers are either very or somewhat satisfied with the quality of drinking water

1-2 Distribution System Water Loss

Performance Results (Non-Revenue Water)

Measure Type	Purpose	Inputs		Outputs					
	Quantify the percentage of	Total water unbilled,	Baseline	Prio	r Year Act	uals	Current/Est	Projected	Improve
	produced water that is not	meter inaccuracies,	Daseline	2013	2014	2015	2016	2017	water use
Efficiency	properly measured, and percentage of produced water that fails to reach customers and cannot otherwise be accounted for through authorized usage	data handling errors; total water loss from leakages, total water distributed	7.0%	7.5%	7.1%	6.4%	6.2%	6.2%	efficiency and recover lost revenue

Industry Benchmarks



Lower Values Desirable

Results Narrative

Distribution system water loss is the difference between the volume of water distributed for use by all customer classes and the volume of water actually consumed by authorized users. There are many factors contributing to distribution system water loss. The major ones are leakage, metering inaccuracies, and unauthorized consumption. Among these, only leakage is a true loss of water. Metering inaccuracies affect the utility's capability for measuring true loss, but such inaccuracies can lead to both overstatements and understatements of the true loss. Unauthorized consumptions diminish revenues and should be dealt with, but they are not real losses of water. Because water losses impact revenues, it is important that a utility have practices in place to understand the specific causes of losses in its system. Tracking water losses will help the Water Authority understand the condition of distribution system infrastructure and the effects of its operation, maintenance, and replacement practices. This measure provides opportunity for the Water Authority to compare the distribution system water loss against that in the distribution systems of other utilities. Non-Revenue Water (NRW), a term used to define where water losses exist within the distribution system. NRW includes apparent losses, real losses, unbilled metered and unbilled unmetered.

Measurement Status

The Water Authority has had significant success in its performance in this measure. In FY09, the Water Authority began its leak detection program that focused on finding water line leaks before they surface, fixing leaking hydrants, and improving meter inaccuracy. This program will help move the Water Authority's performance in line with utilities in the Western United States where water is a more scarce resource. Since 2010, real losses have decreased from 6 percent to 4 percent.

In the past five years, the Water Authority has utilized the AWWA Water Audit methodology in determining its apparent and real water losses. In addition, the Water Authority participates in annual studies sponsored by the AWWA Water Loss Control Committee. This allows the water audits to be verified by water loss control experts which improves the utility's confidence in its data. For FY19, the Water Authority will continue to set targets for conventional and passive leak detection surveying.

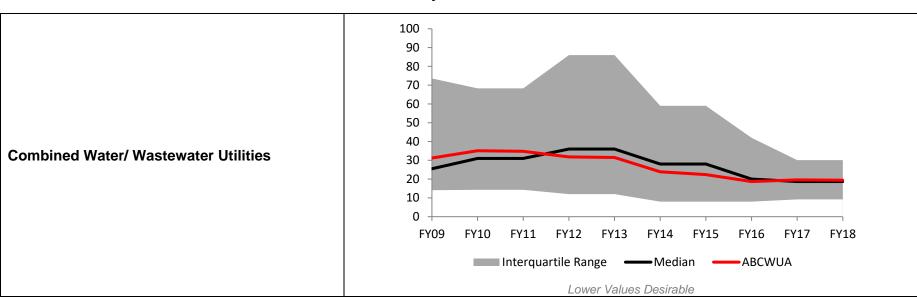
2018 Customer Opinion Survey

70% of customers are either very or somewhat satisfied with the condition of the water lines in the number of leaks that they
may observe surfacing

1-3 Water Distribution System Integrity

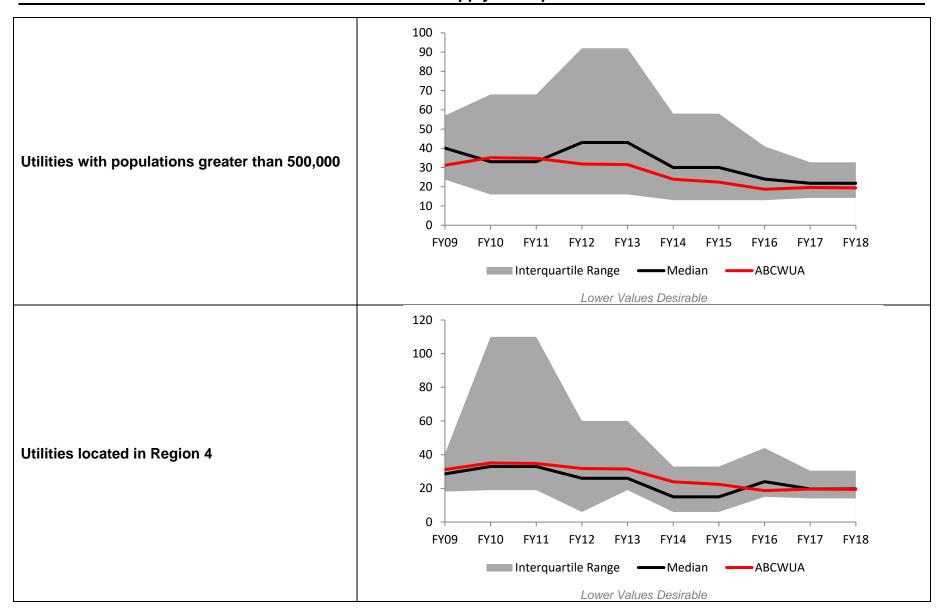
Performance Results

Measure Type	Purpose	Inputs			Outcome					
	Quantify the condition of the	Number of leaks	Basalina	Prior	Year Act	tuals	Current/Est Projected		Improve the condition	
		per 100 miles of	Baseline	FY15	FY16	FY17	FY18 FY19	FY19	and reliability of the water	
Effectiveness	water distribution system	distribution piping	20.2	22.4	18.7	19.6	19.4	19.0	distribution system and reduce emergency repairs and water supply interruptions	



Industry Benchmarks

FY19 Performance Plan Goal 1: Water Supply and Operations



Results Narrative

For a water utility, distribution system integrity has importance for health, customer service, operations, and asset management reasons. Excessive leaks and breaks result in increased costs due to an increased number of emergency repairs. Utilities use operational and maintenance (O&M) procedures designed to reduce the value of this measure. The cost of these (O&M) programs must be balanced against the cost of emergency repairs and the consequences of water supply interruptions. Comparing the value of this measure with other utilities can provide information on the rate that many utilities may find acceptable.

Measurement Status

The Water Authority's performance in this measure has been within the median range for the past three fiscal years. The Water Authority has adopted policy objectives for the past four fiscal years to increase spending on water line rehabilitation which will help reduce emergency repairs and water supply interruptions. Since FY08, the Water Authority has invested \$1 million in steel water line rehabilitation in addition to planned water line rehabilitation spending. The purpose for this objective is to target steel lines because they have a higher frequency of leaks than other material types in the system. The Water Authority included as an objective for FY19 to continue spending an additional \$1 million in steel water line rehabilitation. In the last five years, the Water Authority has seen a decrease in leaks from steel water lines by 50%. In FY11, the Water Authority completed a ten-year asset management plan for its small diameter water lines. This plan has been utilized in its capital planning in order to replace water lines that are past their useful life and have had multiple leaks on the same line segment.

2018 Customer Opinion Survey

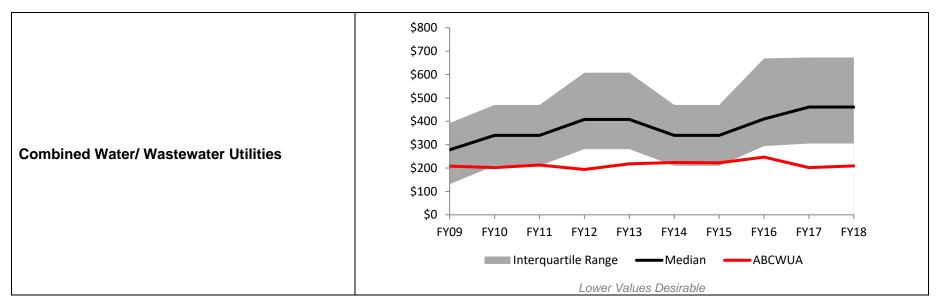
 71% of customers are either very or somewhat satisfied with the effectiveness of the Water Authority to repair leaks and the response time for restoring service

1-4 Operations and Maintenance Cost Ratio

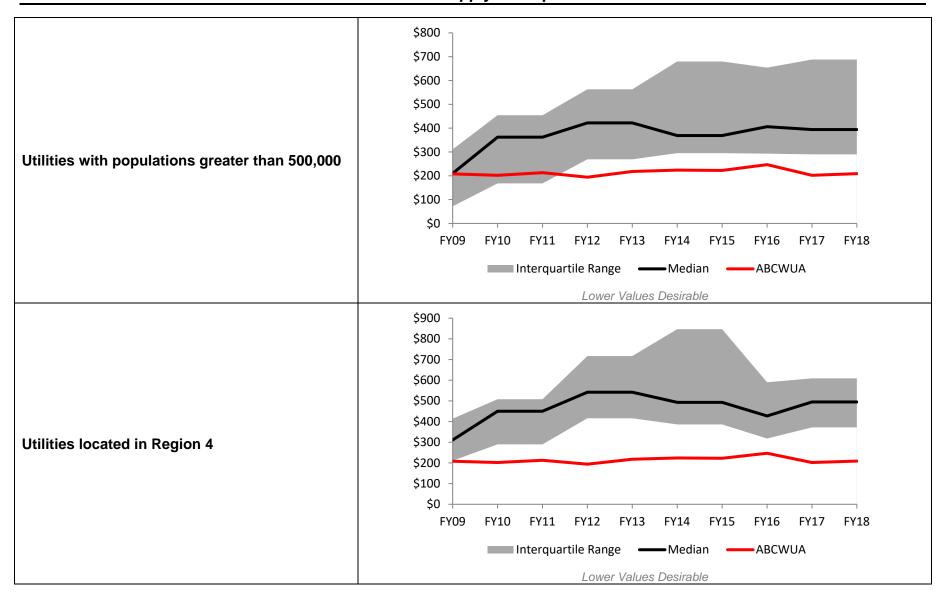
Performance Results for O&M Cost per Account

Measure Type	Purpose	Inputs		Outcome					
	Quantify all utility costs related to	Total O&M	Basalina	Prior Year Actuals		Current/Est	Projected	Maintain lower	
	operations and maintenance	costs and	Baseline	FY15	FY16	FY17	FY18	FY19	O&M costs
Effectiveness	(O&M), with breakouts of those	total number	\$209			\$204	\$202	\$209	without
Ellectivelless	costs related to water treatment, as	of active		\$223	\$201				reducing
	related to volumes processed and customer		φ209	φ223	φ201	φ204	φ202	\$209	customer level
	the number of active customers	accounts							of service

Industry Benchmark for O&M Cost per Account



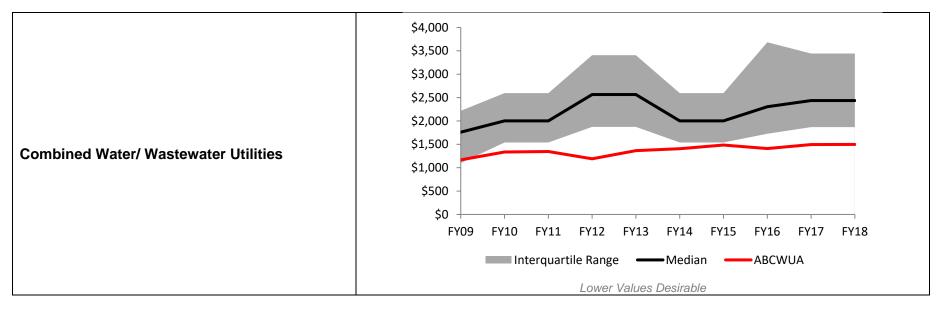
FY19 Performance Plan Goal 1: Water Supply and Operations



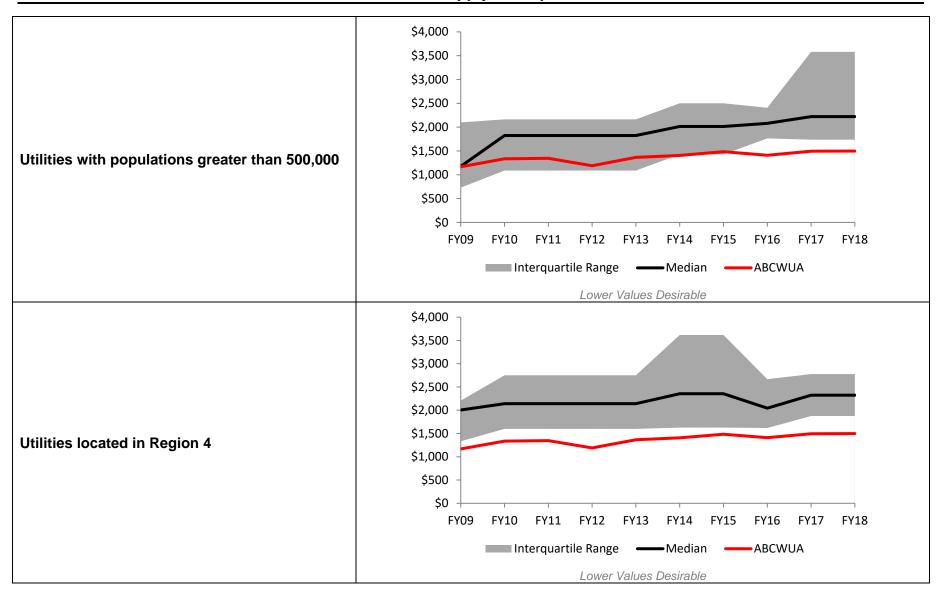
Performance Results for O&M Cost per MG Distributed

Measure Type	Purpose	Inputs	Outputs						Outcome
	Quantify all utility costs related	Total O&M	Basalina	Prior Year Actuals			Current/Est	Projected	Maintain lower
	to operations and maintenance	costs and total	Baseline	FY15	FY16	FY17	FY18	FY19	O&M costs
Effectiveness	(O&M), with breakouts of those costs related to water treatment, as related to volumes processed and the number of active customers	volume of water distributed	\$1,463	\$1,484	\$1,410	\$1,495	\$1,498	\$1,466	without reducing customer level of service

Industry Benchmark for O&M Cost per MG Distributed



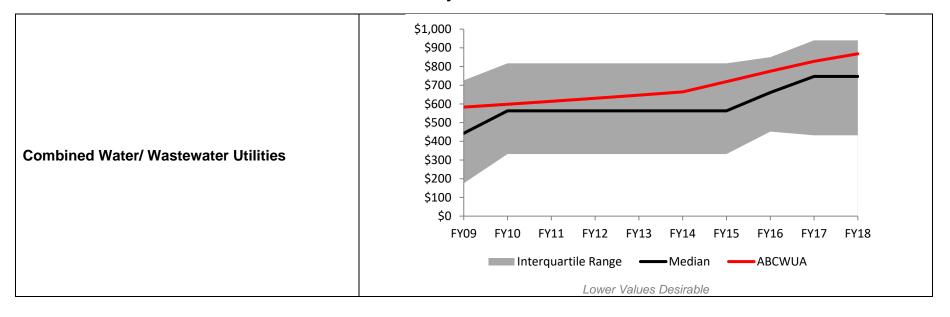
FY19 Performance Plan Goal 1: Water Supply and Operations



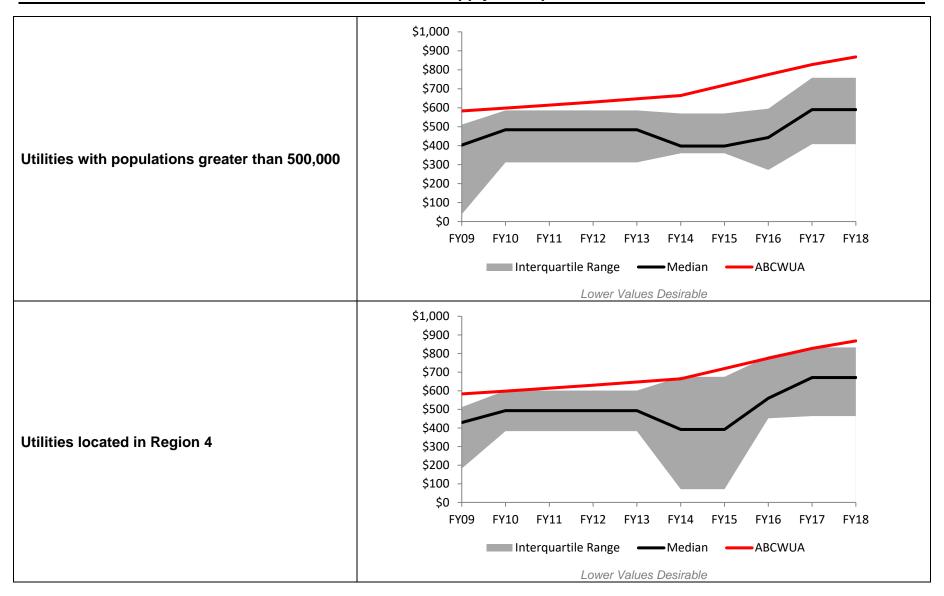
Performance Results for O&M Cost of Treatment per MG

Measure Type	Purpose	Inputs		Outcome					
	Quantify all utility costs related to	Total Direct	Baseline	Prior Year Actuals			Current/Est	Projected	Maintain lower
	operations and maintenance	O&M costs	Dasenne	FY15	FY16	FY17	FY18	FY19	O&M costs
Effectiveness	(O&M), with breakouts of those	and total							without
Ellectivelless	costs related to water treatment, as volume		\$774	\$719	\$775	\$828	\$868	\$817	reducing
	related to volumes processed and	water	Φ//4	φ/19	φ <i>11</i> 5	φοζο	φουο	φο17	customer level
	the number of active customers	treated							of service

Industry Benchmarks



FY19 Performance Plan Goal 1: Water Supply and Operations



Results Narrative

These related measures tally the cost of O&M per account and per million gallons of water processed. Comparing the value of this measure with other utilities can provide information regarding the status of current accepted practices.

Measurement Status

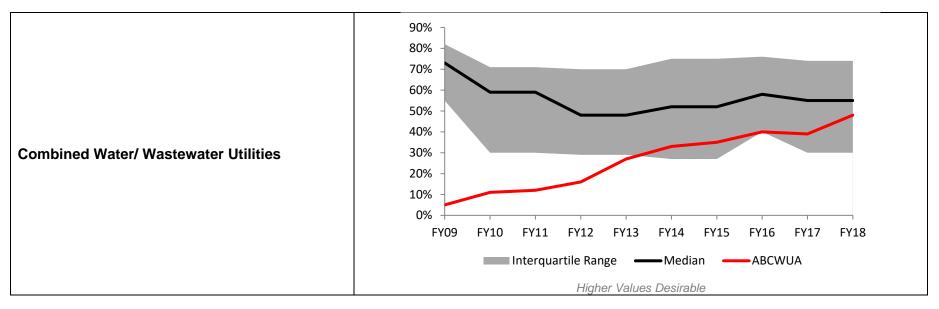
The Water Authority's performance in this measure has been above the median range for the past three fiscal years with the exception of Treatment O&M. Treatment O&M costs have increased with operating both surface and ground water supply systems which provides more sustainability and reliability to customers. In FY17, a 11-acre, 1.5-megawatt solar array was constructed which will provide 10 percent of the power needed to operate the water treatment plant. The array is expected to cut the utility's power costs by \$6 million over 25 years. For FY19, the Water Authority will continue to work on the Partnership for Safe Water program to optimize its system operations and performance.

1-5 Planned Maintenance Ratio

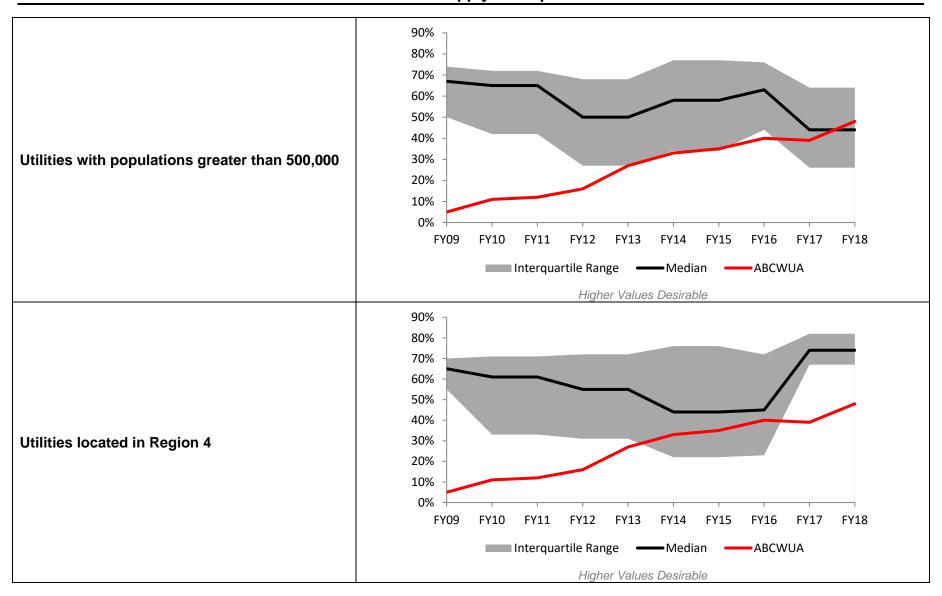
Performance Results

Measure Type	Purpose Inputs			Outcome					
	Comparison of how	Hours of planned	Basalina	Prior Year Actuals			Current/Est	Projected	Reduce
	effectively the Water	maintenance	Baseline	FY15	FY16	FY17	FY18	FY19	emergency
Effectiveness	Authority is in investing in planned maintenance	compared to hours of corrective	38%	35%	40%	39%	48%	50%	maintenance from system
		maintenance							malfunctions

Industry Benchmarks



FY19 Performance Plan Goal 1: Water Supply and Operations



Planned maintenance includes preventive and predictive maintenance. Preventive maintenance is performed according to a predetermined schedule rather than in response to failure. Predictive maintenance is initiated when secondary monitoring signals from activities indicate that maintenance is due. All other maintenance is categorized as corrective (i.e., maintenance resulting from an asset that is no longer providing reliable service such as a breakdown, blockage, or leakage). Planned maintenance is preferable for assets for which the cost of repairs is high relative to the cost of corrective maintenance. The avoided cost includes both the cost of repair and the cost consequences of the service disruption, with the latter including an allowance for customer costs. Many utilities want to increase their percentage of planned maintenance activities and reduce their percentage of corrective maintenance activities. A higher ratio may indicate a reduction in emergency maintenance resulting from system malfunctions (e.g., pipeline breaks or pump failures).

Measurement Status

The Water Authority's performance in this measure has been close to the median range for the past three fiscal years. Since FY08, the Water Authority has used this performance measure to identify gaps in planned/preventative maintenance activities. Over the past five fiscal years, the Water Authority has focused on increasing water operations planned maintenance for its groundwater facilities and the surface water plant. For the distribution system, the Water Authority will be increasing planned maintenance through its leak detection program mentioned in Performance Measure 1-2, Distribution System Water Loss. For FY19, there are three policy objectives with planned maintenance targets for both the ground and surface water facilities and the water distribution system.

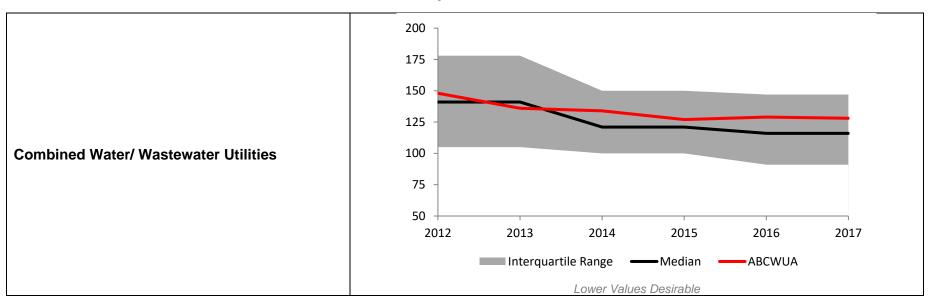
Planned maintenance is a key component to the Water Authority's asset management program. In FY18, the Water Authority upgraded its work order system to integrate with the Water Authority's asset management program in order to collect and track its asset information. The purpose for this upgrade was to obtain better information to make better decisions on the Water Authority's assets.

FY19 Performance Plan Goal 1: Water Supply and Operations

1-6 Water Use per Capita Consumption

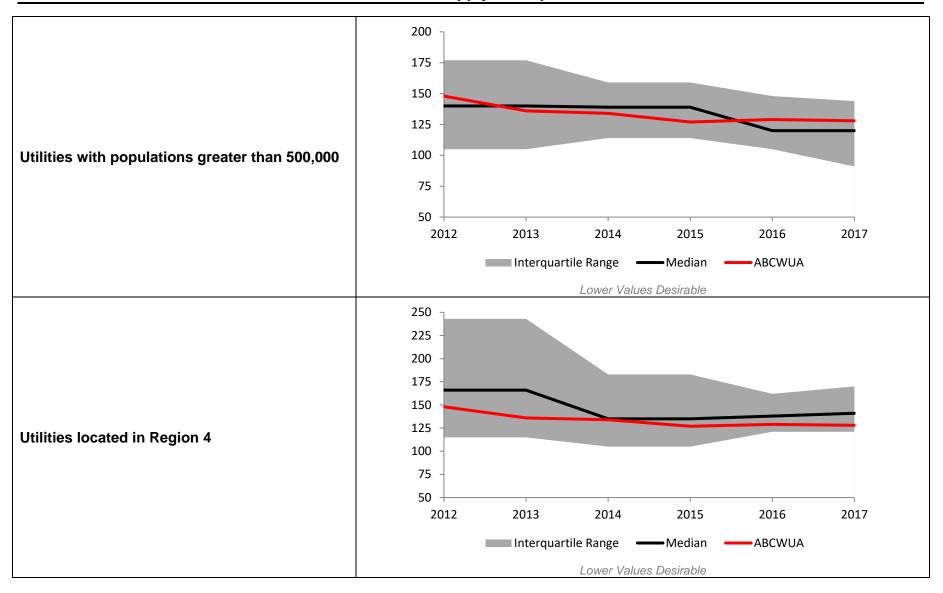
Performance Results

Measure Type	Purpose	Inputs			0	utputs			Outcome
	Measure water savings	Gallons per	Basalina	Prior	Year Act	uals	Current/Est	Projected	Reduce water
	by comparing the	person per	Baseline	2013	2014	2015	2016	2017	consumption to
Effectiveness	annual consumption and account growth by customer class and system-wide per capita usage	day (GPCD)	130	134	127	128	129	128	extend water resources and minimize environment impacts

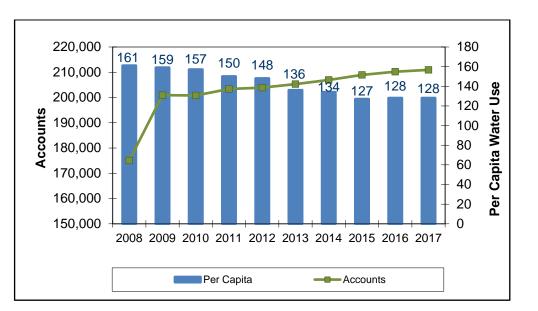


Industry Benchmarks

FY19 Performance Plan Goal 1: Water Supply and Operations



Water use has declined from 40.8 billion gallons in the mid-1990s to 30.2 billion gallons in 2017. Even though accounts have increased, water use declined by 50 percent. The graph to the right compares water use with accounts from 2008 to 2017. There was a sharp increase in customer accounts in 2009 with the acquisition of a private utility, adding about 17,000 accounts; however, most of the customers were are residential whose homes were built in the last decade with low-water conservation fixtures so water use only increased by seven percent.



One reason for the success in water reduction is from the 1-2-3-2-1 "Water by the Numbers" program, which asks Water Authority customers to voluntarily limit their outdoor water usage to one day per week in March, two days a week in April and May and three days a week in the summer before ramping down in the fall. To the right is the diagram used to educate customers on the program.

Water by the Numbers time time times times per week per week times per per MARCH **NOVEMBER** per week week week SEPTEMBER APRIL JUNE, **JULY & & OCTOBER & MAY** AUGUST

2018 Customer Opinion Survey

- 66% of customers are either very or somewhat satisfied with the utility's conservation programs
- 68% of customers either strongly or somewhat agree that they follow the Water by the Numbers program when setting their irrigation schedule

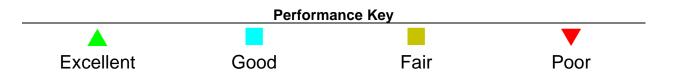
Goal 2 Wastewater Collection & Operations

Guiding Goal Statement

Provide reliable, safe and affordable wastewater collection, treatment and reuse systems to protect the health of the Middle Rio Grande Valley by safeguarding the regional watershed, minimizing environmental impacts, and returning quality water to the Rio Grande for downstream users.

Goal Performance Scorecard

Ref #	Performance Measure	Status	Trend
2-1	Sewer Overflow Rate		
2-2	Collection System Integrity		
2-3	Wastewater Treatment Effectiveness Rate		
2-4	O&M Cost Ratios: O&M Cost per account		
2-4	O&M Cost Ratios: O&M Cost per MG processed		
2-4	O&M Cost Ratios: Direct cost of treatment per MG		
2-5	Planned Maintenance Ratio		
	Overall Goal Status		



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Linkage of Objectives to Performance Measures

FY19 Objectives	Measure Reference
Televise and assess the condition of approximately five percent of the small	2-1
diameter sanitary sewer system by the end of the 4th Quarter of FY19.	2-2
Monitor compliance with the Water Authority's Cross Connection Prevention and Control Ordinance. Obtain a compliance rate goal of 75%. Monitor compliance with the Water Authority's Sewer Use and Wastewater Control Ordinance by continuing to inspect, monitor, and take enforcement action for permitted industrial users, septage waste haulers, food service establishments, and dental offices. Compliance rate goal is 87% for each category.	2-2 2-3
Implement the Fats, Oils, and Grease (FOG) Policy to reduce impacts on the sewer system by inspecting each Food Service Establishment (FSE) once every three years, working with the Collections section with Sanitary Sewer Overflow (SSOs) investigations, and convene FOG Task Force of other governmental entities to coordinate efforts to reduce FOG discharges. Track and report the number of SSOs due to FOG compared with previous years.	2-2 2-3
Limit overall permit excursions to no more than 5 operating discharge permit violations to comply with effluent quality standards through the end of the 4th Quarter of FY19.	2-3
Beneficially reuse biosolids by diverting 30% of the biosolids to compost through the end of the 4th Quarter of FY19.	2-3
Continue implementation of the Reclamation Rehabilitation Asset Management Plan by planning, designing and constructing reclamation facility improvements through the end of the 4th Quarter of FY19.	2-3
Continue work on the Partnership for Clean Water program for the water reclamation treatment to optimize system operations and performance; submit a self-assessment to AWWA by the end of the 2nd Quarter of FY19.	2-4
Complete Waste Water Plant Preventive Maintenance to Corrective Maintenance ratio to at least 60% of all completed maintenance labor hours by the end of the 4th Quarter of FY19.	2-5

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Performance Measure Division Responsibility

Ref #	Performance Measure	Operations Plant	Operations Field	Operations Compliance
2-1	Sewer Overflow Rate		\checkmark	
2-2	Collection System Integrity		\checkmark	
2-3	Wastewater Treatment Effectiveness Rate	\checkmark		\checkmark
2-4	O&M Cost Ratios: O&M Cost per account	\checkmark	\checkmark	
2-4	O&M Cost Ratios: O&M Cost per MG processed	\checkmark		
2-4	O&M Cost Ratios: Direct cost of treatment / MG	\checkmark		
2-5	Planned Maintenance Ratio	\checkmark	\checkmark	

Linkage of Performance Measures to EUM Attributes

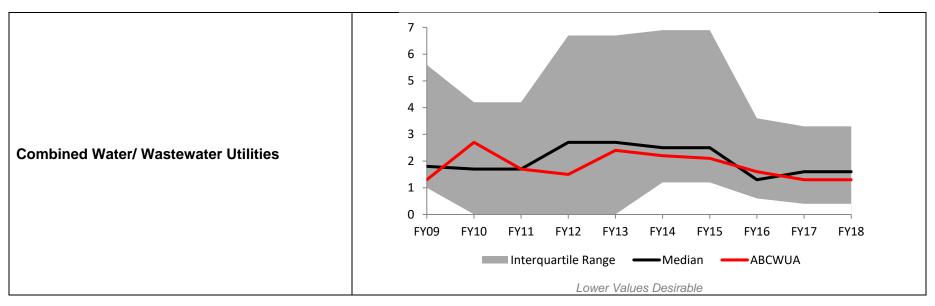
Ref #	Performance Measure	Product Quality	Customer Satisfaction	Employee & Leadership Development	Operational Optimization	Financial Viability	Enterprise Resiliency	Infrastructure Strategy & Performance	Community Sustainability	Water Resource Sustainability	Stakeholder Understanding & Support
2-1	Sewer Overflow Rate	\checkmark	\checkmark								
2-2	Collection System Integrity				\checkmark			\checkmark			
2-3	Wastewater Treatment Effectiveness Rate	\checkmark	\checkmark								
2-4	O&M Cost Ratios: O&M Cost per account				\checkmark	\checkmark					
2-4	O&M Cost Ratios: O&M Cost per MG processed				\checkmark	\checkmark					
2-4	O&M Cost Ratios: Direct cost of treatment / MG				\checkmark	\checkmark					
2-5	Planned Maintenance Ratio		\checkmark		\checkmark			\checkmark			

2-1 Sewer Overflow Rate

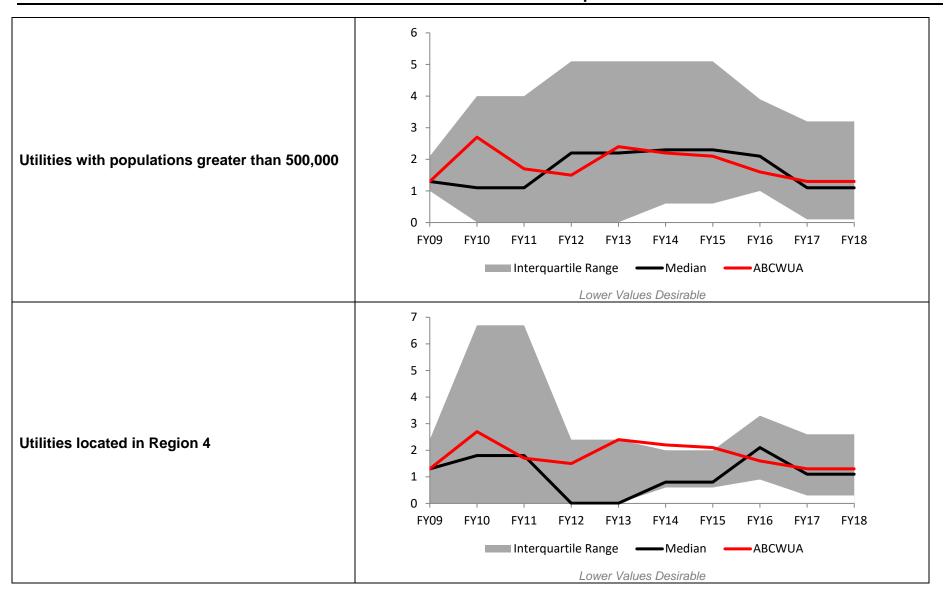
Performance Results

Measure Type	Purpose	Inputs				Outputs	5		Outcome
	Quantify the condition	Number of	Baseline		Year Ac		Current/Est	Projected	Improve the condition
Effectiveness	of the collection system and the	sewer overflows per 100 miles of		FY15	FY16	FY17	FY18	FY19	and reliability of the collection system and
	effectiveness of routine maintenance	collection piping	1.7	2.1	1.6	1.3	1.3	1.2	reduce customer complaints

Industry Benchmarks



FY19 Performance Plan Goal 2: Wastewater Collection and Operations



Results Narrative

Overflows are good measures of collection system condition and the effectiveness of maintenance activities. This measure is intended to measure overflows created by conditions within collection system components under control of the utility. This measure does not include conditions which are deemed outside control of the utility such as general flooding from wet weather conditions.

Measurement Status

The Water Authority's performance in this measure has been within the median range for the past three fiscal years and is ontarget to maintain a very low overflow rate for the next two fiscal years. The Water Authority has been using its GIS in connection with its upgraded work order system based on asset management principles to analyze sanitary sewer overflows. For FY14, the Collection Section implemented the CMOM activities from the CMOM report completed in FY13. The FY19 Objectives will help to improve the monitoring, cleaning, and response procedures related to sewer overflows.



Every year, the Water Authority provides bill inserts reminding customers not to pour cooking grease down the drain as this causes backups and overflows in the collection system; this usually occurs during the holidays.

2018 Customer Opinion Survey

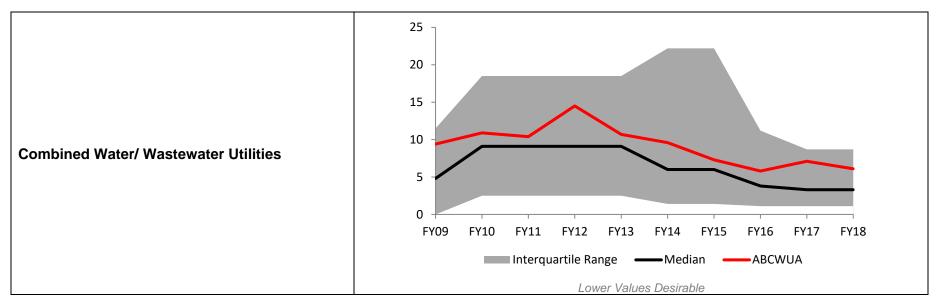
- 69% of customers are either very or somewhat satisfied with the condition of the sewer lines in the number of overflows that they may observe
- 66% of customers are either very or somewhat satisfied with the effectiveness of the Water Authority to respond to overflows
 or backups and the response time for restoring service

2-2 Collection System Integrity

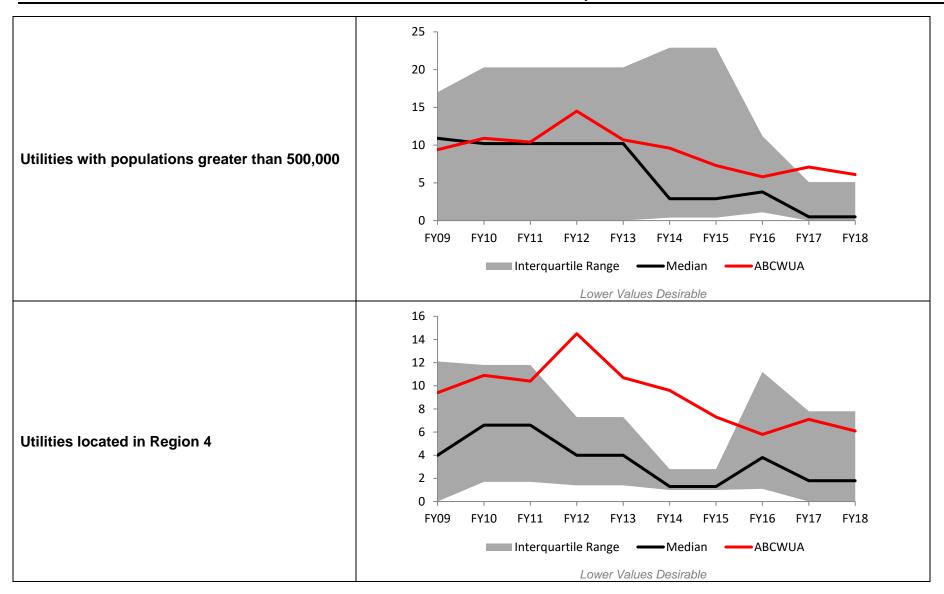
Performance Results

Measure Type	Purpose	Inputs			C	Dutputs			Outcome
	Measure of the	Number of collection	Baseline	Prior	Year Ac	tuals	Current/Est	Projected	Improve the condition
	condition of a	system failures each	Daseillie	FY15	FY16	FY17	FY18	FY19	and capacity of the
Effectiveness	sewage collection	year per 100 miles							collection system and
	system	of collection system	6.7	7.3	5.8	7.1	6.1	6.0	minimize catastrophic
		piping							failures

Industry Benchmarks



FY19 Performance Plan Goal 2: Wastewater Collection and Operations



When tracked over time, a utility can compare its failure rate to those at other utilities and it can evaluate whether its own rate is decreasing, stable, or increasing. When data is maintained by the utility to characterize failures according to pipe type and age, type of failure, and cost of repairs, better decisions regarding routine maintenance and replacement/renewals can be made.

Measurement Status

The Water Authority's performance in this measure has been within the median range for the past three fiscal years. For FY11, the Water Authority completed ten-year asset management plans for both its small and large diameter sewer lines. These plans will be utilized for the utility's capital planning in order to help minimize expensive catastrophic failures. For FY19, there is a policy objective to assess the condition of the unlined concrete large diameter sewer lines.

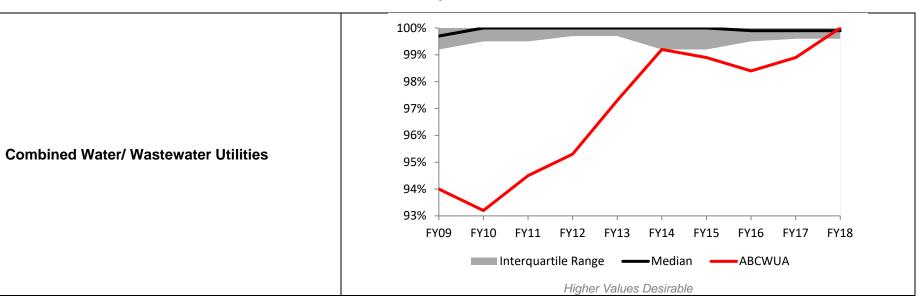
2018 Customer Opinion Survey

- 94% of customers are either very or somewhat satisfied with the reliability of wastewater collection
- 77% of customers are either very or somewhat satisfied with the effectiveness of the Water Authority to control odors form sewer lines or treatment facilities

2-3 Wastewater Treatment Effectiveness Rate

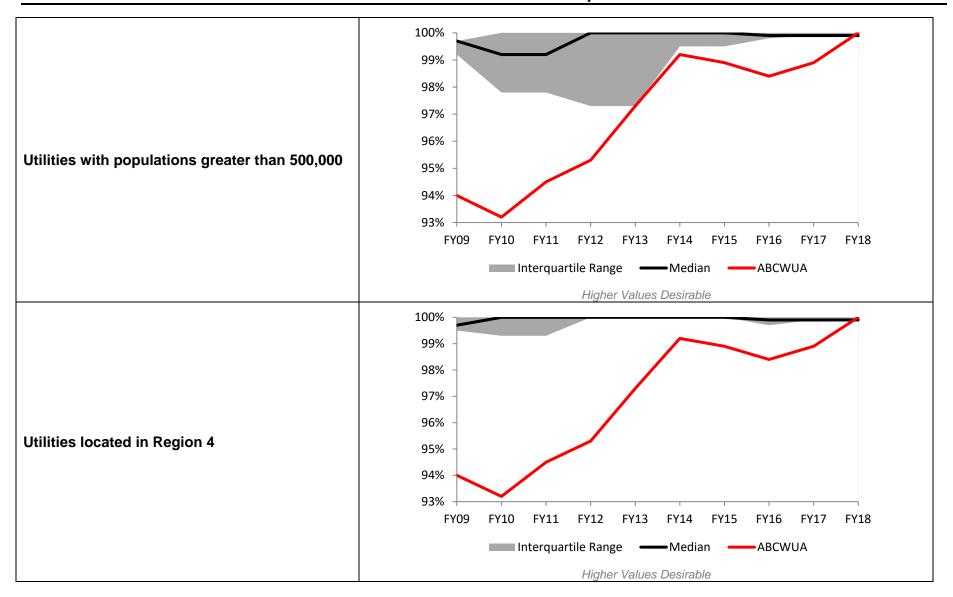
Performance Results

Measure Type	Purpose	Inputs		Outputs						
	Quantify the Water	Percent of time each	Basalina	Prior	Year Ac	tuals	Current/Est	Projected	Minimize	
	Authority's	year that an individual	Baseline	FY15	FY16	FY17	FY18	FY19	environmental	
Quality	compliance with the effluent quality standards in effect at its wastewater treatment facilities	wastewater treatment facility is in full compliance with applicable effluent quality requirements	98.7%	98.9%	98.4%	98.9%	100.0%	99.7%	impacts to the river by returning high quality water to the river	



Industry Benchmarks

FY19 Performance Plan Goal 2: Wastewater Collection and Operations



The wastewater treatment effectiveness rate allows a utility to compare its treatment effectiveness rate for its facility with those at other utilities. It also can track its individual facility performances over time. Ideally, the percentage of days in a year that the treatment facility satisfies all discharge permit requirements should be 100%. A number lower than this indicates that a violation occurred during the year.

Measurement Status

The Water Authority's performance in this measure has been within the median range for last three fiscal years. The Water Authority's goal in for FY18 is to have no more than five non-compliance days. In FY11, the Water Authority completed conversion to ultraviolet disinfection to eliminate use of chlorine for safety, security and to protect river environment. The Water Authority will continue in meeting its performance targets during major rehabilitation activities at the wastewater treatment plant over the next five fiscal years. The utility is about half-way in completing a \$250 million overhaul of the treatment plant.



The Water Authority received the NACWA **Silver** Peak Performance Award in 2013, 2014, 2016 and 2017 which recognizes public wastewater treatment facilities for their outstanding compliance records.

Also, for FY12, the Water Authority developed several policy objectives to improve the processes and procedures for wastewater quality compliance reporting. The Water Authority created a new Compliance Division in FY10 to better improve and consolidate all its compliance functions. For FY19, the Compliance Division will continue to work on the reporting on its performance metrics related to compliance with the Sewer Use Wastewater Control Ordinance.

2018 Customer Opinion Survey

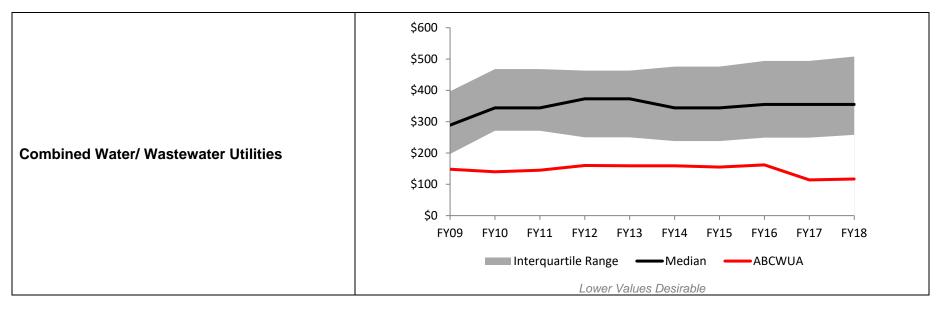
 88% of customers feel that it is very or somewhat important that the Water Authority should return high quality treated water back to the river

2-4 Operations and Maintenance Cost Ratio

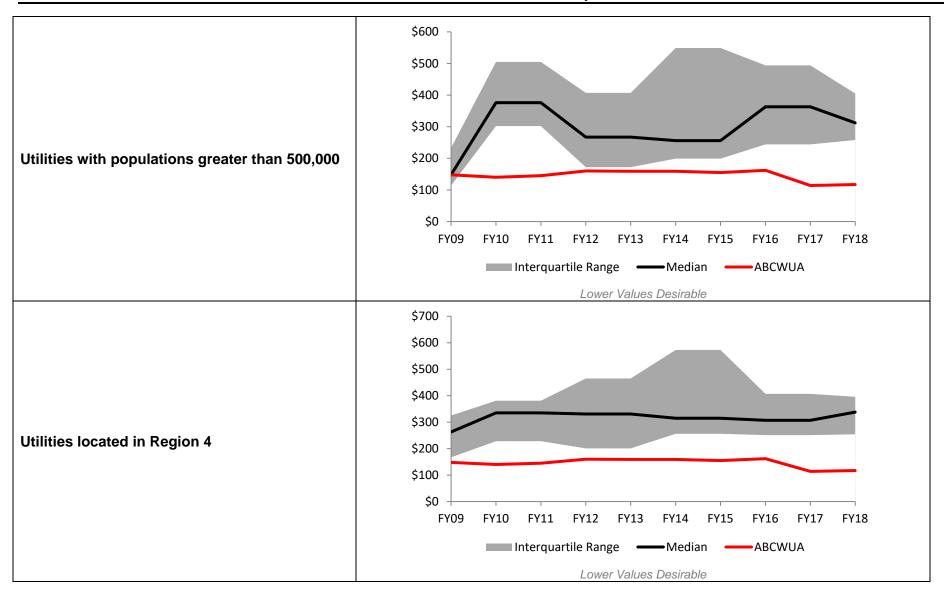
Performance Results for O&M Cost per Account

Measure Type	Purpose	Inputs				Outputs			Outcome
	Quantify all utility costs related to	Total O&M	Baseline	Prior	Year Ac	tuals	Current/Est	Projected	Maintain lower
	operations and maintenance	costs and	Daseillie	FY15	FY16	FY17	FY18	FY19	O&M costs
Effectiveness	(O&M), with breakouts of those costs related to water treatment, as	total number of active	• •	•	• • • •	\$114	\$117	\$122	without reducing
	related to volumes processed and the number of active customers	customer accounts	\$143	\$155	\$162				customer level of service

Industry Benchmark for O&M Cost per Account



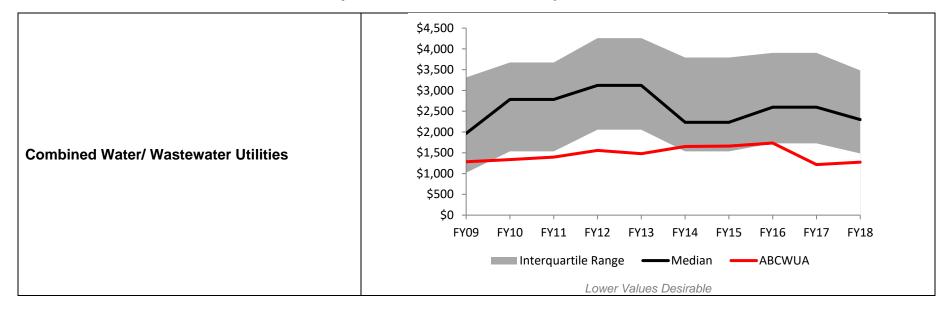
FY19 Performance Plan Goal 2: Wastewater Collection and Operations



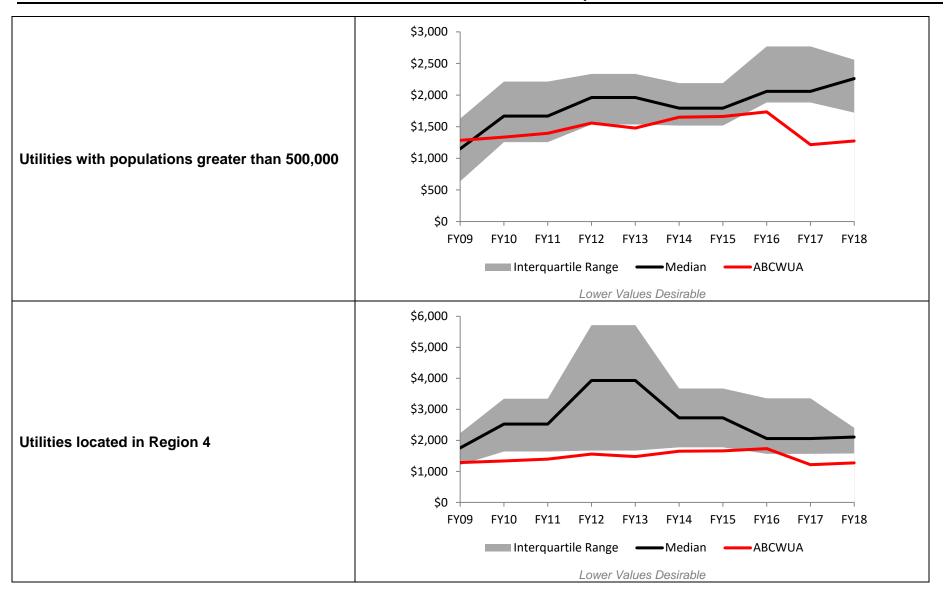
Performance Results for O&M Cost per MG Collected

Measure Type	Purpose	Inputs		Outputs						
	Quantify all utility costs related to	Total O&M	Basalina	Prior	Year Ac	tuals	Current/Est	Projected	Maintain lower	
	operations and maintenance	costs and	Baseline	FY15	FY16	FY17	FY18	FY19	O&M costs	
Effectiveness	(O&M), with breakouts of those costs related to water treatment, as related to volumes processed and the number of active customers	total wastewater collected	\$1,537	\$1,661	\$1,735	\$1,216	\$1,275	\$1,319	without reducing customer level of service	

Industry Benchmark for O&M Cost per MG Collected



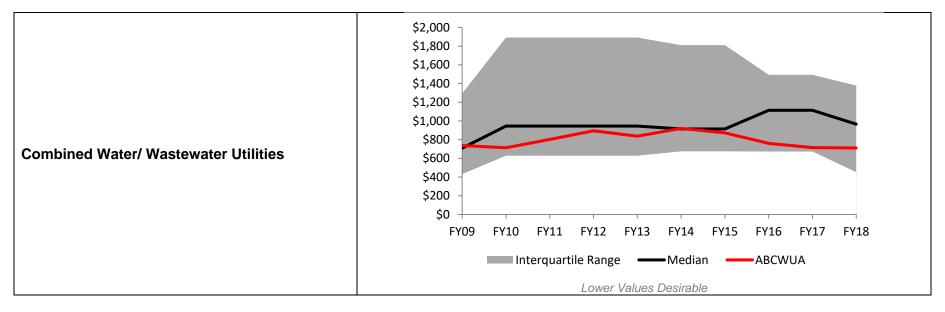
FY19 Performance Plan Goal 2: Wastewater Collection and Operations



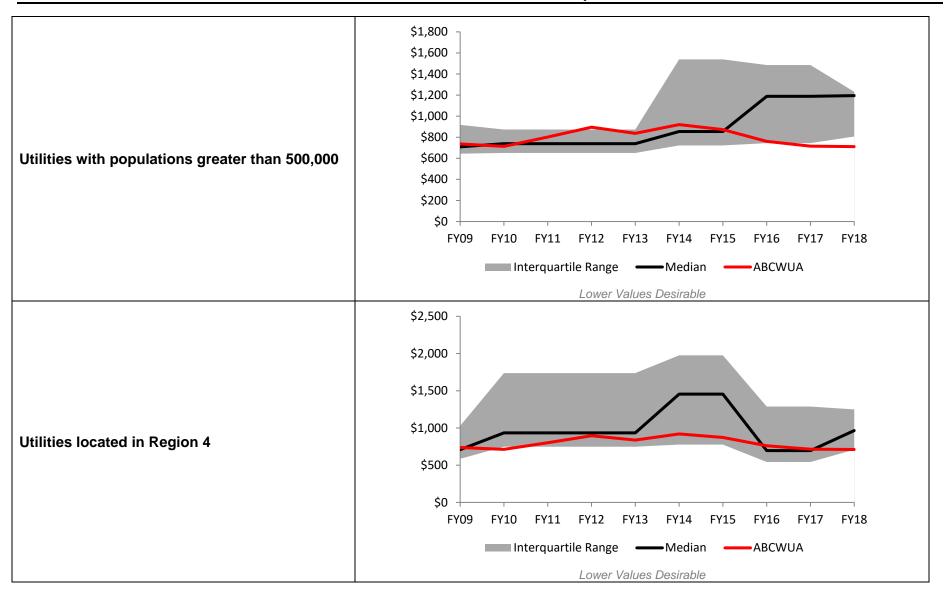
Performance Results for O&M Cost of Treatment per MG

Measure Type	Purpose	Inputs			C	Dutputs			Outcome
	Quantify all utility costs related	Total Direct	Basalina	Prior	Year Ac	tuals	Current/Est	Projected	Maintain lower
	to operations and maintenance	O&M costs	Baseline	FY15	FY16	FY17	FY18	FY19	O&M costs
Effectiveness	(O&M), with breakouts of those costs related to water treatment, as related to volumes processed and the number of active customers	and total wastewater treated	\$688	\$589	\$761	\$715	\$711	\$769	without reducing customer level of service

Industry Benchmark for O&M Cost of Treatment per MG



FY19 Performance Plan Goal 2: Wastewater Collection and Operations



These related measures tally the cost of O&M per account and per million gallons of wastewater processed. Comparing the value of this measure with other utilities can provide information regarding the status of current accepted practices.

Measurement Status

The Water Authority's performance in this measure has been above or within the median range for the past three fiscal years and is on-target to maintain this performance for the next two fiscal years.

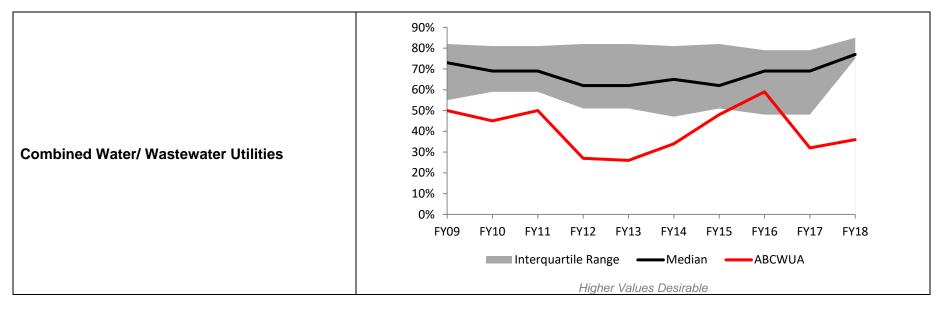
A FY10 policy objective involved constructing ultraviolet disinfection facilities and replacing the current chlorine gas for disinfection and sulfur dioxide gas for dechlorination at the wastewater treatment plant. This project was completed in FY11, and it has helped to reduce operation costs, provide cleaner water that is returned to the river, and meet effluent quality requirements.

2-5 Planned Maintenance Ratio

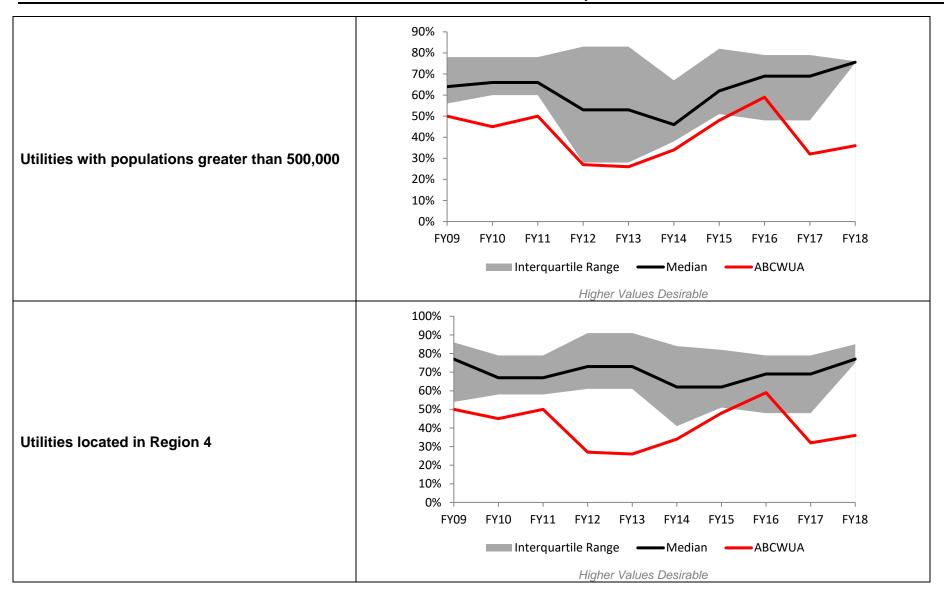
Performance Results

Measure Type	Purpose	Inputs			C	Dutputs			Outcome
	Comparison of how	Hours of planned	Baseline	Prior	' Year Ac	tuals	Current/Est	Projected	Reduce
	effectively the Water	maintenance	Daseillie	FY15	FY16	FY17	FY18	FY19	emergency
Effectiveness	Authority is in investing in planned maintenance	compared to hours of corrective	46%	48%	59%	32%	36%	38%	maintenance from system
		maintenance							malfunctions

Industry Benchmarks



FY19 Performance Plan Goal 2: Wastewater Collection and Operations



Planned maintenance includes preventive and predictive maintenance. Preventive maintenance is performed according to a predetermined schedule rather than in response to failure. Predictive maintenance is initiated when secondary monitoring signals from activities indicate that maintenance is due. All other maintenance is categorized as corrective (i.e., maintenance resulting from an asset that is no longer providing reliable service such as a breakdown, blockage, or leakage). Planned maintenance is preferable for assets for which the cost of repairs is high relative to the cost of corrective maintenance. The avoided cost includes both the cost of repair and the cost consequences of the service disruption, with the latter including an allowance for customer costs. Many utilities want to increase their percentage of planned maintenance activities and reduce their percentage of corrective maintenance resulting from system malfunctions.

Measurement Status

The Water Authority's performance in this measure has been below the median range for the past three fiscal years, but there has been gradual improvement with the Plant Division achieving its planned maintenance targets. For the past five fiscal years, there have been objectives to increase planned maintenance work orders at the wastewater treatment plant. These objectives will also help the Water Authority meets its performance targets mentioned in Performance Measure 2-3, Wastewater Treatment Effectiveness Rate. For FY19, there is a policy objective with planned maintenance targets for the wastewater treatment plant.

Planned maintenance is a key component to the Water Authority's asset management program. In FY18, the Water Authority upgraded its work order system to integrate with the Water Authority's asset management program in order to collect and track its asset information. The purpose for this upgrade was to obtain better information to make better decisions on the Water Authority's assets.

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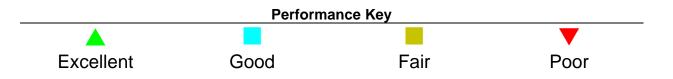
Goal 3 Customer Services

Guiding Goal Statement

Provide quality customer services by communicating effectively, billing accurately, and delivering water and wastewater services efficiently based on understanding the needs and perceptions of our customers and the community at large.

Goal Performance Scorecard

Ref #	Performance Measure	Status	Trend		
3-1	Customer Quality Complaints				
3-1	Technical Quality Complaints				
3-2	Customer Service Cost per Account				
3-3	Billing Accuracy				
3-4	Call Center Indicators				
3-5	Residential Cost of Water & Wastewater Service				
3-6	Stakeholder Outreach Index				
	Overall Goal Status				



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Linkage of Objectives to Performance Measures

FY19 Objectives					
Continue implementation of the Automated Meter Infrastructure (AMI) project by modernizing aging meter infrastructure with smart meters to increase revenue, support conservation efforts, and provide better customer service by the end of the 4th Quarter of FY19.	3-1 3-4				
Improve customer satisfaction by achieving a billing accuracy ratio of less than 8 through the 4th Quarter of FY19.	3-3				
Improve customer satisfaction and operational efficiency in achieving the four call- center targets through the 4th Quarter of FY19: 1) Average Wait Time of less than 1:30 minutes; 2) Average Contact Time of less than 4 minutes; 3) Abandoned Call Ratio of less than 5; 4) First Call Resolution of greater than 90%.	3-4				
Provide communications support for the implementation of the Water Assistance Fund and updates to CC&B billing system through the end of the 4th Quarter of FY19.	3-6				
Complete Customer Conversation meetings to engage customers and obtain input from customers on the Water Authority's activities through the end of the 4th Quarter of FY19.	3-6				
Conduct periodic activities and communication initiatives to engage and educate legislators, stakeholders and neighborhood coalitions regarding Water Authority services, policies and projects through the end of the 4th Quarter of FY19.	3-6				

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Performance Measure Division Responsibility

Ref #	Performance Measure	Operations Field	Operations Compliance	Customer Services	Information Technology	Finance
3-1	Customer Service & Technical Quality Complaints		\checkmark	\checkmark		
3-2	Customer Service Cost per Account			\checkmark		\checkmark
3-3	Billing Accuracy			\checkmark	\checkmark	
3-4	Call Center Indicators			\checkmark		
3-5	Residential Cost of Water & Wastewater Service					\checkmark
3-6	Stakeholder Outreach Index			\checkmark		

Linkage of Performance Measures to EUM Attributes

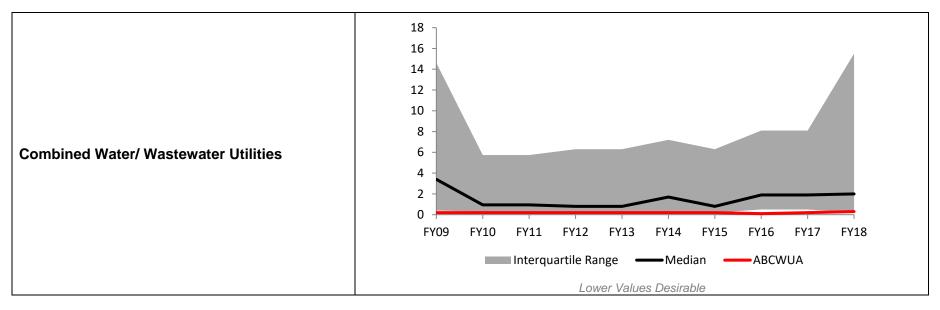
Ref #	Performance Measure	Product Quality	Customer Satisfaction	Employee & Leadership Development	Operational Optimization	Financial Viability	Enterprise Resiliency	Infrastructure Strategy & Performance	Community Sustainability	Water Resource Sustainability	Stakeholder Understanding & Support
3-1	Customer Service & Technical Quality Complaints	\checkmark	\checkmark		\checkmark						
3-2	Customer Service Cost per Account		\checkmark		\checkmark	\checkmark					
3-3	Billing Accuracy		\checkmark		\checkmark						
3-4	Call Center Indicators		\checkmark								
3-5	Residential Cost of Water & Wastewater Service		\checkmark			\checkmark			\checkmark		\checkmark
3-6	Stakeholder Outreach Index		\checkmark								\checkmark

3-1 Customer Service Complaints and Technical Quality Complaints

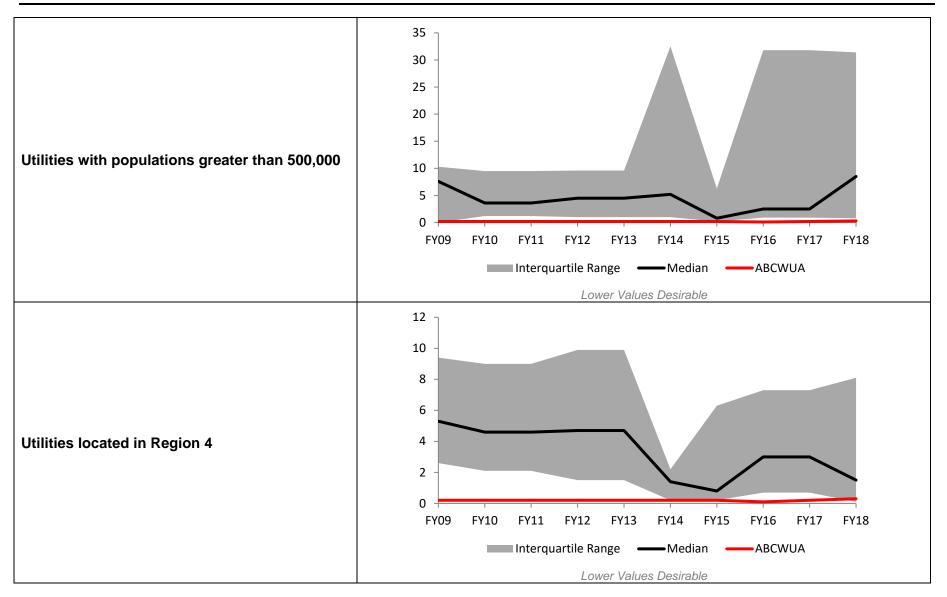
Performance Results (Service Associated Complaints)

Measure Type	Purpose	Inputs		Outputs					
	Measure the complaint rates	Number of	Baseline Prior Year Actuals				Current/Est	Improve	
	experienced by the Water	customer	Daseillie	FY15	FY16	FY17	FY18	FY19	customer
Effectiveness	Authority, with individual quantification of those related to customer service and those related to core utility services	service complaints per 1,000 customer accounts	0.2	0.1	0.1	0.2	0.3	0.3	satisfaction with service and product

Industry Benchmark (Service Associated Complaints)



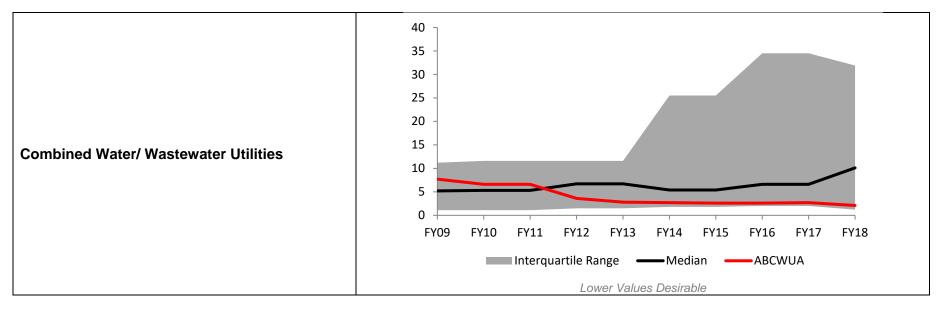
FY19 Performance Plan Goal 3: Customer Services



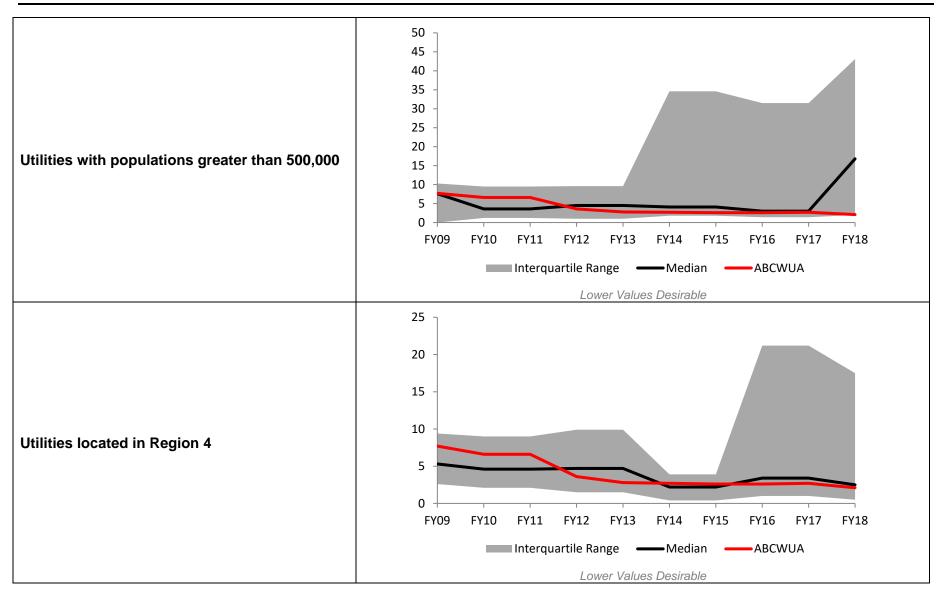
Performance Results (Technical Quality Complaints)

Measure Type	Purpose	Inputs		Outputs						
	Measure the complaint	Number of technical	Basalina	Prior Year Actuals			Current/Est	Projected	Improve	
	rates experienced by the	quality complaints	Baseline	FY15	FY16	FY17	FY18	FY19	customer	
Effectiveness	Water Authority, with individual quantification of those related to customer service and those related to core utility services	per 1,000 customer accounts	2.6	2.5	2.6	2.7	2.1	2.0	satisfaction with service and product	

Industry Benchmarks (Technical Quality Complaints)



FY19 Performance Plan Goal 3: Customer Services



These pair of measures captures all complaints received by the utility, which are reported either as "service associated" or as "technical quality" complaints. The number of complaints is a good measure of customer service. The two categories allow a utility to track those that are people related and those that are product related.

Measurement Status

The Water Authority's performance in this measure has been above the median range for the past three fiscal years for customer service complaints and within the median range for technical quality complaints. The Water Authority adopted a policy objective in FY09 to reduce call wait time to less than 1 minute, 90 percent of the time by use of staffing and technology which will make this closer to the water industry standard. In addition, the Water Authority has upgraded its call center phone systems to effectively track customer service performance; the new phone system also allows customers to pay their bills by phone and provide 24/7 service to billing, emergencies, and reporting water waste. Moreover, the Water Authority has developed and executed a customer-focused marketing and communications strategy with an emphasis on conservation, pollution prevention, and web self-service in FY11.

2018 Customer Opinion Survey

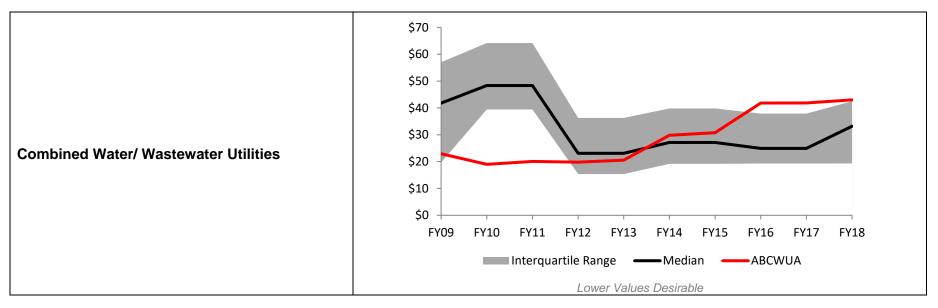
- 71% of customers are either very or somewhat satisfied with the quality of the drinking water
- 88% of customers are either very or somewhat important to returning high quality water back to the river

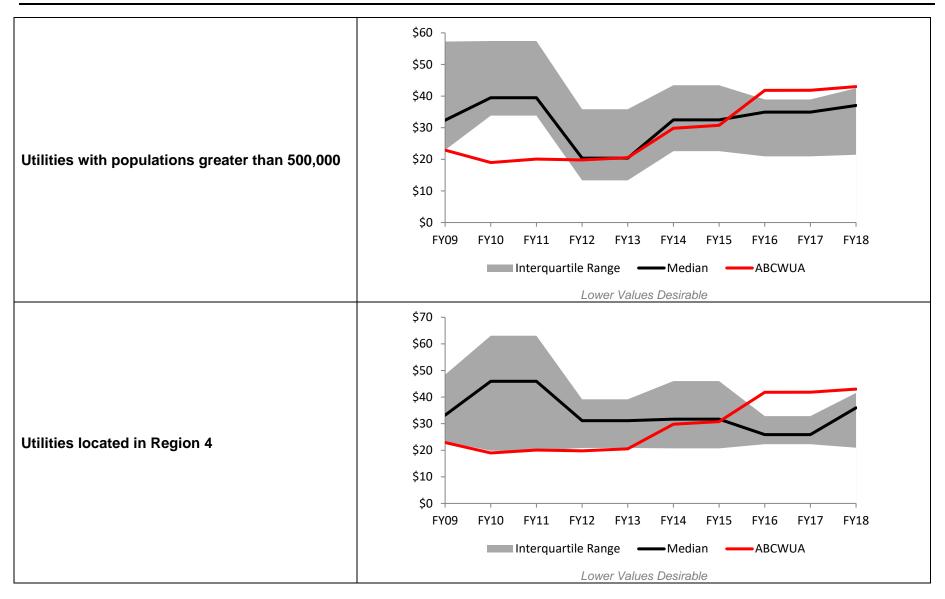
3-2 Customer Service Cost per Account

Performance Results

Measure Type	Purpose	Inputs				Outcome			
	Measure the amount of	Total customer	Baseline	Prio	r Year Act	tuals	Current/Est	Projected	Improve efficiency by
	resources the Water	service cost and	Daseillie	FY15	FY16	FY17	FY18	FY19	reducing customer
Efficiency	Authority applies to its customer service	the number of active accounts	\$38.14	\$30.75	\$41.82	\$41.85	\$43.00	\$42.66	service cost per account while meeting
	program			•			•	·	customer expect

Industry Benchmarks





The measure is expressed as the cost of managing a single customer account for one year. When viewed alone, it quantifies resource efficiency. Viewing in conjunction with other measures such as customer complaints gives the utility more information about operational performance.

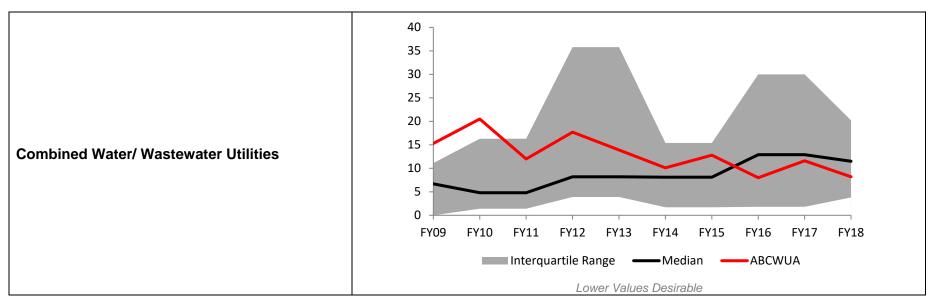
Measurement Status

The Water Authority's performance in this measure has been within the median range for the past three fiscal years. The Customer Service Division's costs have increased in its field division as it transitions to Automated Meter Infrastructure. The Division's Field Section has also taken over the meter replacement program. As a result, estimated meters have dropped significantly improving customer satisfaction and revenue.

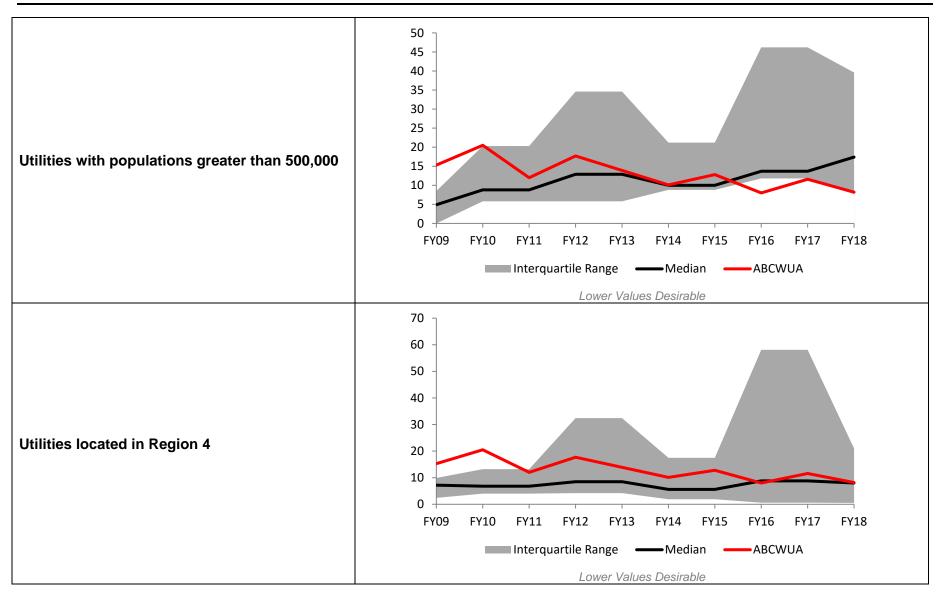
3-3 Billing Accuracy

Performance Results

Measure Type	Purpose	Inputs		Outputs						
	Measure the	Number of error-driven	Baseline	Prior	Year Ac	tuals	Current/Est	Projected	Improve billing	
	effectiveness of the	billing adjustments per	Daseillie	FY15	FY16	FY17	FY18	FY19	accuracy to	
Effectiveness	Water Authority's	10,000 bills generated							minimize	
	billing practices	during the year	9.2	8.0	8.0	11.6	8.2	7.8	customer	
									complaints	



FY19 Performance Plan Goal 3: Customer Services



Customers rarely think about their utility, unless they have a problem with service or billing. This measure helps a utility measure how effective its billing practices are relative to others.

Measurement Status

The Water Authority's performance in this measure has been within the median range for the past three fiscal years. As the utility implements its Automated Metering Infrastructure (AMI) system, performance in this measure will improve. About 52% of the meters are in the AMI system with a goal to achieve sixy percent by the end of FY19. The purpose of the AMI Project is to replace the Water Authority's aging meters with modern smart meters in order to save money, deliver more accurate bills and encourage users to conserve water.

AMI customers will be able to view in real-time exactly how much water they consume and use this information to actively manage and reduce their daily usage and save on their water bill. They also can change their basic account data, create personal goals and budgets with reminders and updates, and download targeted educational material to learn about and enroll in resource-conservation programs. The technology will also allow the Water Authority to remotely review consumption levels across the service area, assisting with conservation and billing and identifying and repairing leaks before they become significant problems.

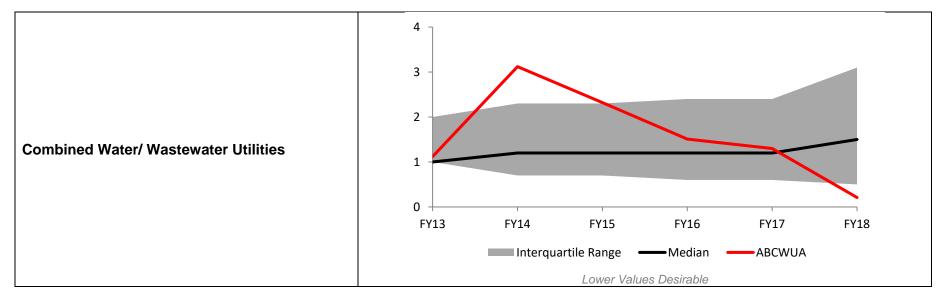
2018 Customer Opinion Survey

- 87% of customers are either very or somewhat satisfied with the accuracy of their bill
- 87% of customers are either very or somewhat satisfied with the bill format and water usage graph
- 89% of customers are either very or somewhat satisfied with the billing payment options

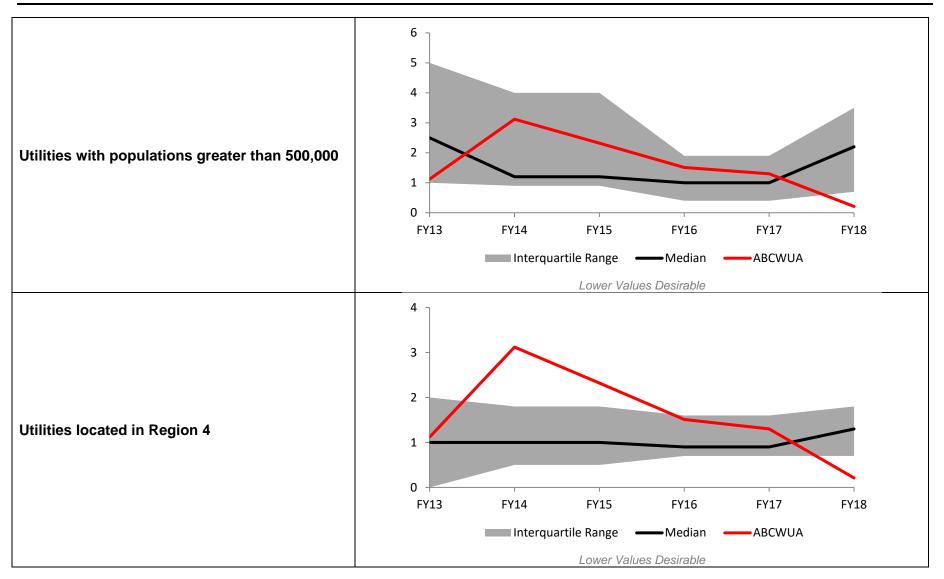
3-4 Call Center Indicators

Performance Results Average Wait Time (minutes)

Measure Type	Purpose	Inputs				Outcome					
	Quantify the call wait time	Average time a caller must wait on hold	Baseline	Prior Year Actuals		Prior Year Actuals Current /Est Projected				Projected	Reduce call wait time and avoid customers
	experienced by	before they can speak		FY15	FY16	FY17	FY18	FY19	hanging up		
Effectiveness	Water Authority customers	to an agent or customer service representative , not including time spent navigating through computerized menu options	1:70	2:32	1:51	1:30	0:21	0:25			

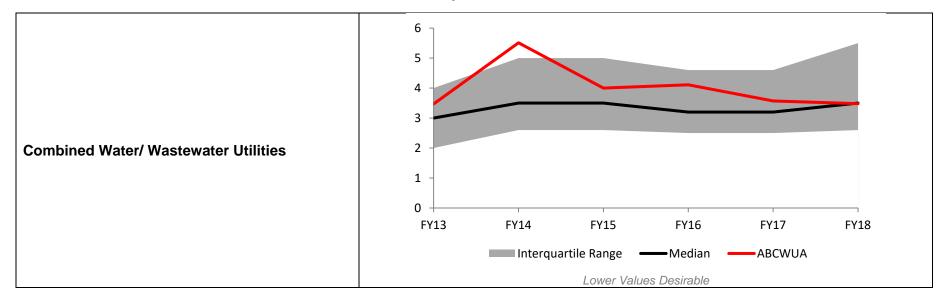


FY19 Performance Plan Goal 3: Customer Services

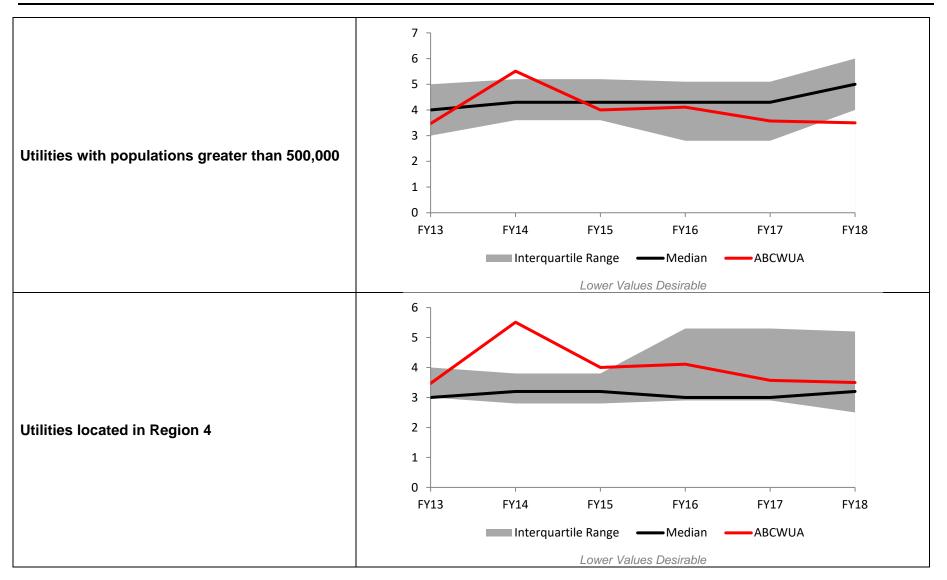


Performance Results Average Total Call Time (minutes)

Measure Type	Purpose	Inputs	Outputs						Outcome
	Quantify the time spent to resolve	Average time spent by an agent or CSR	Baseline	Prior	Year Ac	tuals	Current /Est	Projected	Reduce the average total call time to enable CSRs
Effectiveness	the purpose of the	on the phone with a		FY15	FY16	FY17	FY18	FY19	to handle more customer
Ellectiveness	phone call by Water Authority customers	customer	4:02	4:00	4:11	3:57	3:48	3:45	calls and reduce wait time

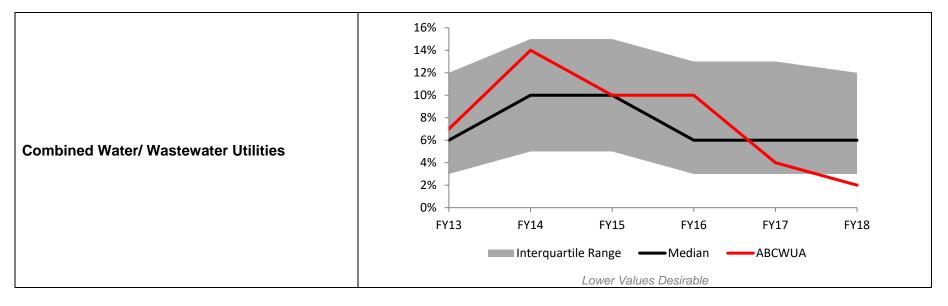


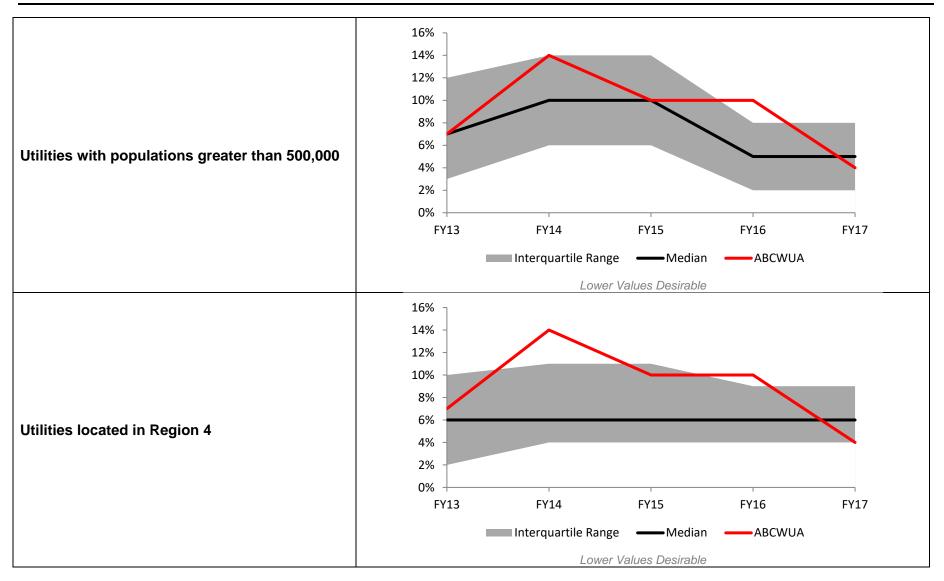
FY19 Performance Plan Goal 3: Customer Services



Performance Results Abandoned Call Ratio

Measure Type	Purpose	Inputs	Outputs						Outcome
	Quantify the number calls	Total number of calls abandoned divided	Baseline	Prior	Year A	ctuals	Current /Est	Projecte d	Allow CSRs to effectively assist customers with
Effectiveness	abandoned from	by the total number of		FY15	FY16	FY17	FY18	FY19	their needs before they
	Water Authority customers	calls received	8%	10%	10%	4%	2%	2%	become impatient and hang up





The efficiency (cost) and effectiveness (outcomes) of call centers can be evaluated in many different ways. Utilities can track and compare their call center's average wait time, average talk time, and abandoned call ratio to better understand if expenses can be reduced while customer satisfaction is improved. Abandoned calls are those terminated by the calling party before being answered by an agent or customer service representative (CSR). The total number of calls received during the reporting period refers to the number of calls attempting to reach the contact center that are not blocked, incomplete, or denied.

Measurement Status

The Call Center Indicators metric was recently included by AWWA in their benchmarking survey. The Water Authority also recently upgraded its call center phone systems to effectively track customer service performance allowing the utility to benchmarking with industry peers. The new phone system also allows customers to pay their bills by phone and provide 24/7 service to billing, emergencies, and reporting water waste.

The Water Authority has begun tracking and setting targets for five customer service metrics. To improve customer satisfaction and operational efficiency, the following targets were established for FY19: 1) Average Wait Time of less than 1:30 minutes; 2) Average Contact Time of less than 4 minutes; 3) Abandoned Call Ratio of less than 5; 4) First Call Resolution of greater than 90%; 5) Billing Accuracy Ratio of less than 8.

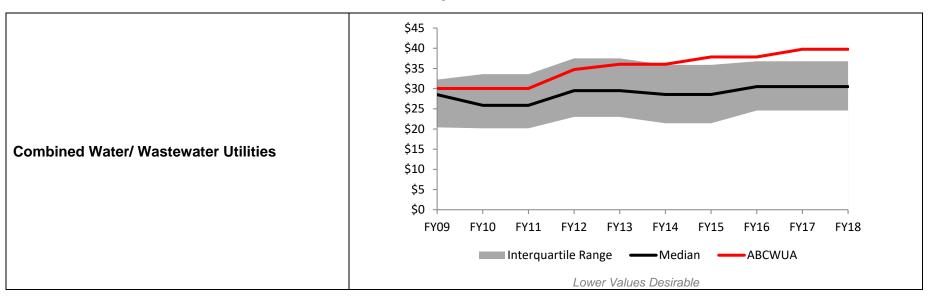
2018 Customer Opinion Survey

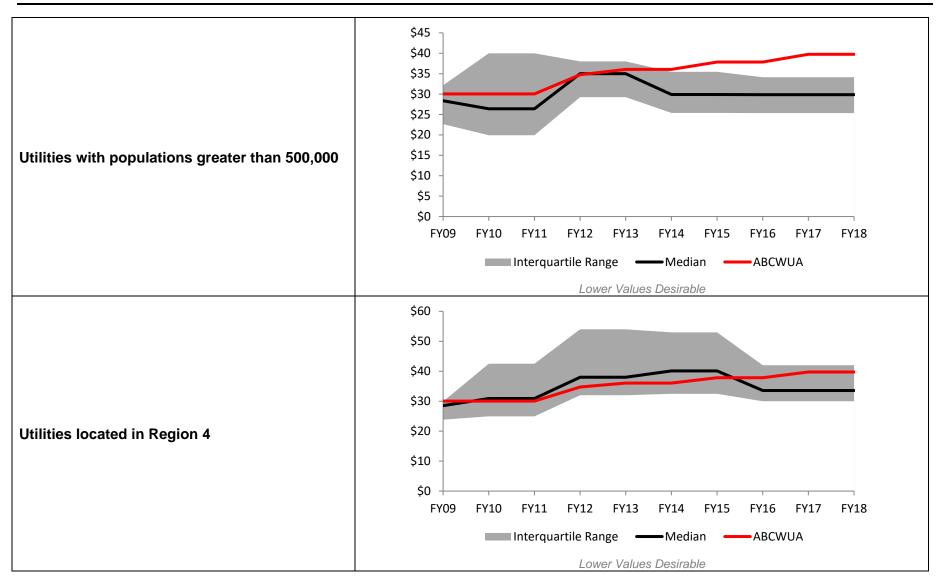
- 66% of customers gave either excellent or good rating on the overall quality of service provided by a customer service representative
- 88% of customers are either very or somewhat satisfied with the courtesy of the customer service representative
- 74% of customers are either very or somewhat satisfied with the knowledge and ability to answer your questions or resolve your issues
- 74% of customers are either very or somewhat satisfied with the length of wait to speak with a customer service representative

3-5 Residential Cost of Water and/or Sewer Service

Performance Results (Average Residential Water Service)

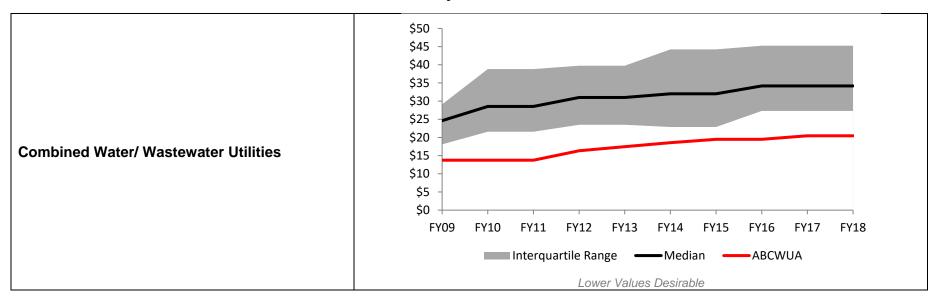
Measure Type	Purpose	Inputs		Outputs					
	Compare the residential	Bill amount for monthly	Baseline	Prior	Year Ac	tuals	Current/Est	Projected	Provide
	cost of water and sewer	residential water/sewer	Daseime	FY15	FY16	FY17	FY18	FY19	affordable water
Efficiency	service based on both a defined quantity of water use and the average residential bill amounts for those services	service and average residential water/sewer bill for one month of service	\$37.25	\$36.05	\$37.85	\$37.85	\$39.75	\$41.73	and legally justifiable rates to our customers



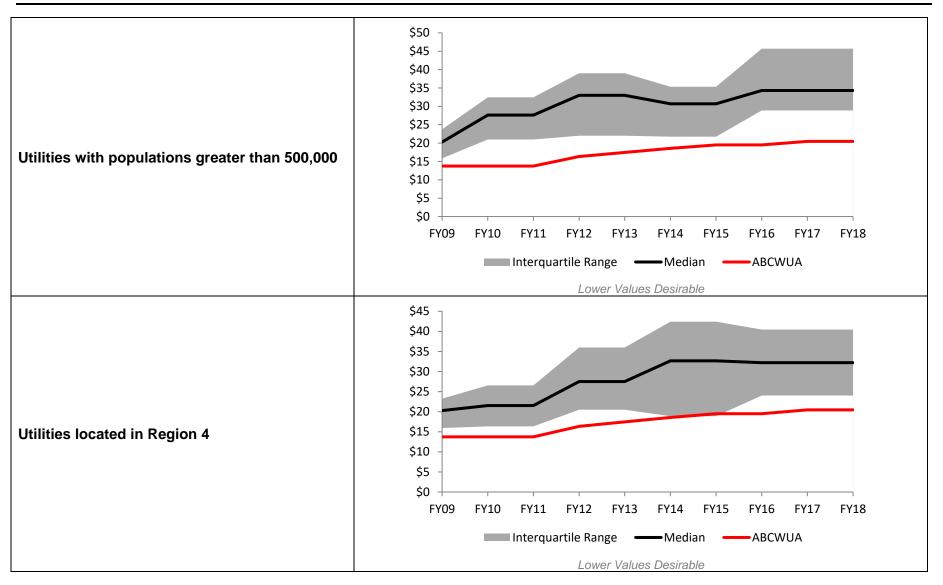


Performance Results (Average Residential Sewer Service)

Measure Type	Purpose	Inputs		Outputs					
	Compare the residential	Bill amount for monthly	Baseline	Prior	Year Ac	tuals	Current/Est	Projected	Provide
	cost of water and sewer	residential water/sewer	Daseime	FY15	FY16	FY17	FY18	FY19	affordable water
Efficiency	service based on both a defined quantity of water use and the average residential bill amounts for those services	service and average residential water/sewer bill for one month of service	\$19.18	\$18.56	\$19.49	\$19.49	\$20.46	\$21.49	and legally justifiable rates to our customers



FY19 Performance Plan Goal 3: Customer Services



This measure shows average residential water bill amount for one month of service for water and wastewater. The data provided is based on a bill amount for a typical residential customer served water through a $3/4 \times 5/8$ -inch meter. Because each utility is unique, this measure is quite complex. In some places, rates may be artificially low or high in order for achieve non-utility objectives. In others, utilities may have rates controlled by public utility commissions.

Measurement Status

The Water Authority's performance in this measure has been below the median range for the past three fiscal years for average residential sewer service. The Water Authority completed a comprehensive water and wastewater rate study in FY05 which had not been conducted since the early 1990s. The Water Authority adopted a policy objective for FY08 to update that rate study in order to include wholesale water rates. Another reason to update the rate study is to include a cost of services model for master planned communities so that these new large developments pay 100% of the cost for building master planned facilities. In FY11, the water and sewer rate structures were evaluated to ensure equity within the structures. The 2010 rate structure evaluation included incorporating former New Mexico Utilities into the Water Authority rate structure. The FY12 rate ordinance also added a 200% tier to the extra use surcharge to promote conservation and increased the Low Use Water Discount from 20% to 30%. A 5% rate revenue increase was implemented in FY12, FY14, FY15, FY16, and FY18; another 5% rate increase is planned for FY20 or FY21. The rate increases are a component of implementing the Finance Plan by incrementing increasing more capital funds to take care of increasing infrastructure needs. The FY15 rate adjustment was on exclusively on the fixed rate in order to meet infrastructure renewal needs. The Water Authority completed a rate evaluation in FY17 for the FY18 rate structure. The rate structure. The rate structure. The rate structure. The rate structure in order to meet infrastructure continues to balance conservation with rate stability and revenue sufficiency by moving more revenue recovery from the base charge than in previous years.

Even with the adopted and planned rate increases, the Water Authority anticipates that it continue to be within the median range over the next five years compared to Western U.S. utilities. Another rate study will be conducted in FY19 in preparation of the FY20 rate increase.

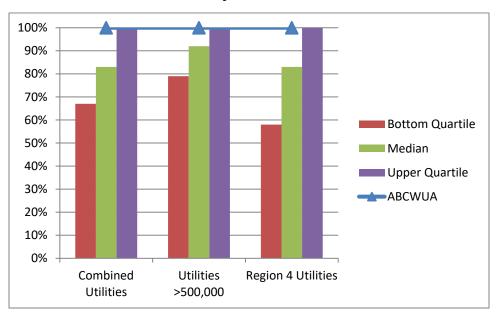
2018 Customer Opinion Survey

- 77% of customers either strongly or somewhat agree that water and sewer services are a good value for the amount of money paid
- 75% of customers either strongly or somewhat agree that because water is a scarce resource, water rates should be designed to reflect the value of water in our daily lives
- 58% of customers either strongly or somewhat agree that water rates should be increased to cover the cost of providing a reliable water supply for future generations

3-6 Stakeholder Outreach Index

Performance Results

Measure Type	Purpose	Inputs				Outcome			
Effectiveness	Quantify the utility's stakeholder	Self-assessment based on Stakeholder	r Baseline Prior Year Actuals /Est Projecte			ine Prior Year Actuals			Assess the utility's outreach efforts with its
Effectiveness	outreach activities	Outreach Checklist		FY15	FY16	FY17	FY18	FY19	stakeholders
			100%	100%	100%	100%	100%	100%	



Generally, higher values are desirable

This indicator provides a measure of a utility's stakeholder outreach activities. It is calculated based on self-assigned points the various categories in the Stakeholder Outreach Checklist. The value assigned to each statement is based on evidence that existed during the reporting period to support the statement, as reviewed and rated by senior utility management. Total scores can range from 0 to 12 and are presented as a percentage of the maximum possible score of 12.

Measurement Status

The Stakeholder Outreach Index was recently included by AWWA in their benchmarking survey. The Water Authority has been measuring this Index for the last three fiscal years. In FY18, the Water Authority conducted a customer opinion survey in order to assess the Water Authority's performance from the customer's viewpoint from previous surveys. This was the seventh customer opinion survey conducted since the first survey in 2006 which allowed the Water Authority view trends of customer's opinions. The results of the 2018 survey have been incorporated into the Performance Plan as many questions or statements are connected to the benchmarks in the Performance Plan.

Also in last five fiscal years, the Water Authority has conducted quarterly customer meetings called Customer Conversations to engage its customers through topic forums. The Technical Customer Advisory Committee (TCAC) hosted each meeting and TCAC members attended these meetings to observe the process and listen to customers' discussions and comments. The purpose of these forums is to engage customers through interactive activities to allow customers to discuss issues with fellow customers and provide meaningful feedback to the utility. The feedback is very helpful in creating or amending programs, policies, or projects.

In 2016, the Water Authority received the Water Environment Federation's **Public Communication and Outreach Award**. In 2017, the utility receive the National Association of Clean Water Agencies' **Public Information and Education Award**. These awards recognize the scope and achievements of the Water Authority's education program. The primary goal of the education program is to inform and inspire students (and the parents they in turn help educate) to conserve water and protect our limited water resources. The program has contributed to the tremendous progress Albuquerque has made in decreasing its per capita water use. By helping the community save 300 billion gallons of water, the Water Authority's education program – with its puppet shows, classroom activities, field trips, and wastewater plant tours – has played a critical role in supporting the overall mission of the Water Authority.

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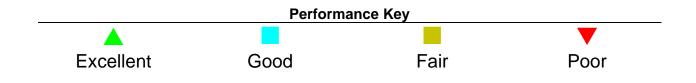
Goal 4 Business Planning & Management

Guiding Goal Statement

Maintain a well planned, managed, coordinated, and financially stable utility by continuously evaluating and improving the means, methods, and models used to deliver services.

Goal Performance Scorecard

Ref #	Performance Measure	Status	Trend
4-1	Debt Ratio		
4-2	Return on Assets		
4-3	System Renewal / Replacement Rate (Water)		
4-3	System Renewal / Replacement Rate (Wastewater)		
4-4	Triple Bottom Line Index		
	Overall Goal Status		



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Linkage of Objectives to Performance Measures

FY19 Objectives	Measure Reference
Expend \$55 million in water and wastewater capital rehabilitation and replacement programs to replace aging, high risk assets that are past their useful life by the end of the 4th Quarter of FY19. \$1 million shall be dedicated and used for identifying steel water pipes in critical or poor condition and rehabilitating or replacing at least 2 miles of small diameter steel water lines by the end of the 4th Quarter of FY19.	4-3
Complete update the Comprehensive Asset Management Plan to determine the condition and criticality of the utility's assets by the end of the 4th Quarter of FY19. Complete vehicle asset management plan to better plan for capital replacement of vehicles by the end of the 2nd Quarter of FY19.	4-3
Begin implementation of recommendations from the vulnerability assessment on utility facilities and systems to reduce risk for physical security, cyber security, and business activities by the end of the 4th Quarter of FY19. Update Emergency Response Plan by the end of the 4th Quarter of FY19.	NA
Complete Phase 2 of the Maximo comprehensive asset management system upgrade which includes asset onboarding and de-commissioning, full life cycle accounting, barcoding, fleet management, and preventive and condition monitoring by the end of the 4th Quarter of FY19.	NA
Complete upgrade to the CC&B billing application by the end of the 3rd Quarter of FY19.	NA
Evaluate water and sewer rate structures to ensure equity within the structures by the end of the 4th Quarter of FY19.	NA
Complete a needs assessment of the Supervisory Control And Data Acquisition (SCADA) system; implement recommendations of the assessment in order for the updated platform to align with the asset management program by the end of the 4th Quarter of FY19.	NA
Complete a Comprehensive Information Technology Security Plan that is aligned with the standards, guidelines, and best practices of the National Institute of Standards and Technology Cybersecurity Framework to protect the utility's critical infrastructure from cyber-attacks by the end of the 4th Quarter of FY19.	
In order to provide a central location for processes and procedures, complete a Utility Development Guide by the end of the 2nd Quarter of FY19. Update System Expansion Ordinance to align to the Guide. Review fee structure for Utility Development deliverables.	
Maintain the Compliance Division Regulatory Compliance Permit Matrix and the Regulatory Matrix Status Report to respectively maintain schedules for permit submittals and monitor and report emerging Safe Drinking Water Act (SDWA) and Clean Water Act (CWA) regulations, New Mexico Water Quality Control Commission and Environmental Improvement Board regulations, and local laws ordinances, etc. to identify and assess potential impacts on the Water Authority. Provide quarterly reports through the end of the 4th Quarter of FY19.	4-4

FY19 Objectives	Measure Reference
Collect, monitor, and report weekly, monthly and quarterly key laboratory performance metrics to include: Water Quality Laboratory results approved and reported for each laboratory section (chemistry, microbiology, metals, and external labs), laboratory productivity (results reported per productive hour), and the percentage of results reported late (turnaround time-TAT). Compare to industry benchmarks.	4-4
Continue collection and analyses of the operational data necessary to determine and document the actual cost of service for laboratory services for the analytical methods within the Water Quality Laboratory scope of accreditation. The status of the data collection and analyses efforts will be reported quarterly. Use the collected data to update the laboratory prices.	4-4
Continue to develop its LIMS, LabVantage, throughout FY19 to increase the automation of data entry to reduce data entry errors and reduce the amount paper used at the laboratory. Develop dashboards to help analysts and management manage samples and workflows entirely in the application. Expand the collection of electronic data to field analytics, balances, probes, and spectrophotometry instruments stored in the Database of Compliance.	4-4
Continue to develop the Environmental Monitoring Program to improve the reliability of results from field instrumentation and sample collection techniques. Develop a program plan based on designated ISO standard to address accreditation requirements to include standard operating procedures, document control and records management plans, and a process for demonstration of staff capability. Implement program plan by the end of the 4th Quarter of FY19.	4-4
Prepare for the New Mexico Environment Department Drinking Water Laboratory Certification audit for microbiological water testing in the 4th quarter of FY19. Prepare for the American Association for Laboratory Accreditation (A2LA) annual assessment of the Water Quality Laboratory including completing required internal audits and annual review and revision of Standard Operating Procedures.	4-4
Gather and report on external subcontract laboratory costs that are processed by the Water Quality Laboratory. Improve how the Laboratory manages requisitions from purchasing and sample ids generated in LabVantage and the corresponding invoices received from the external subcontract laboratories. Utilized the existing Compliance Division 'Database of Compliance' (DOC), and make available the cost of external subcontract laboratory analysis for reporting.	4-4
Monitor for Pharmaceuticals and Personal Care Products (PPCPs) in the source water, drinking water and wastewater. Report the findings of voluntary monitoring by the end of the 4th Quarter of FY19. Compare the results to historical monitoring performed in 2009-2010.	4-4

Performance Measure Division Responsibility

Ref #	Performance Measure	Finance	Operations Water Resources, Engineering & Planning
4-1	Debt Ratio	\checkmark	
4-2	Return on Assets	\checkmark	
4-3	System Renewal / Replacement Rate (Water)	\checkmark	\checkmark
4-3	System Renewal / Replacement Rate (Wastewater)	\checkmark	\checkmark
4-4	Triple Bottom Line Index		\checkmark

Linkage of Performance Measures to EUM Attributes

Ref #	Performance Measure	Product Quality	Customer Satisfaction	Employee & Leadership Development	Operational Optimization	Financial Viability	Enterprise Resiliency	Infrastructure Strategy & Performance	Community Sustainability	Water Resource Sustainability	Stakeholder Understanding & Support
4-1	Debt Ratio					\checkmark					
4-2	Return on Assets					\checkmark					
4-3	System Renewal / Replacement Rate (Water)		\checkmark			\checkmark		\checkmark			
4-3	System Renewal / Replacement Rate (Wastewater)		\checkmark			\checkmark		\checkmark			
4-4	Triple Bottom Line Index							\checkmark	\checkmark		

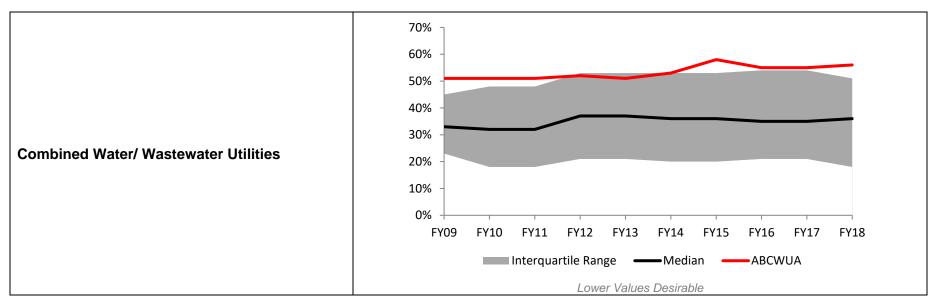
FY19 Performance Plan Goal 4: Business Planning and Management

4-1 Debt Ratio

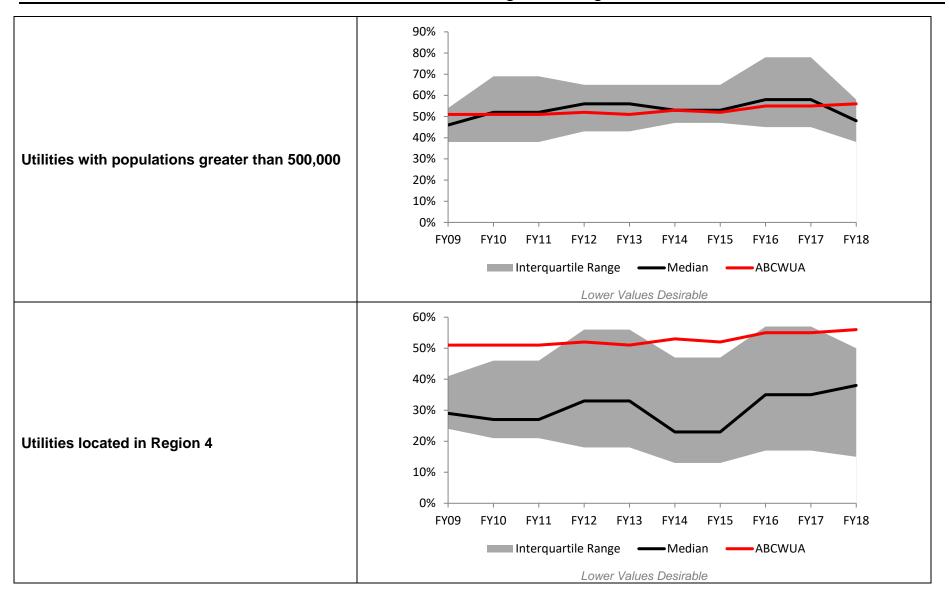
Performance Results

Measure Type	Purpose	Inputs	Outputs						Outcome
	Quantify the	Total liabilities and	Baseline	Prior	· Year Actu	uals	Current/Est	Projected	Maintain low debt
	Water Authority's	total assets	Daseillie	FY15	FY16	FY17	FY18	FY19	burden and
Effectiveness	level of indebtedness		56%	58%	55%	56%	56%	56%	communicate fiscally responsible to our customers

Industry Benchmarks



FY19 Performance Plan Goal 4: Business Planning and Management



The higher the calculated debt ratio, the more dependent the utility is on debt financing. Many utilities use this measure as an internal measure of performance. Debt equity ratio is an important measure because a high debt burden brings larger costs for interest and capital repayments.

Measurement Status

The Water Authority's performance in this measure has been below the median range for the past three fiscal years.

The Water Authority has borrowed a significant amount of funds to pay for a new surface drinking water treatment plant as part of the \$500 million San Juan Chama Drinking Water Project. The Water Authority has approximately \$698 million in outstanding debt which is primarily attributed to carrying out the Water Resources Management Strategy projects, including the San Juan Chama Drinking Water Project. In addition, the Water Authority has secured its water supply for the long term compared to most utilities which must invest a significant amount of capital in securing a water supply. The Water Authority has never managed for a high rating from the three rating agencies. The cost of the new facilities, rehabilitation of existing facilities and asset management plan implementation will continue to require significant capital financing. The only way to improve this category would be to not invest in the required capital improvements and/or have significant rate increases to improve cash on hand. The long term outlook for the Water Authority is above peer given the capital investments which will be made and the rapid retirement of debt. The Water Authority has a bond rating of Aa2 by Moody's and AA by Fitch and AA+ by Standard and Poor's.

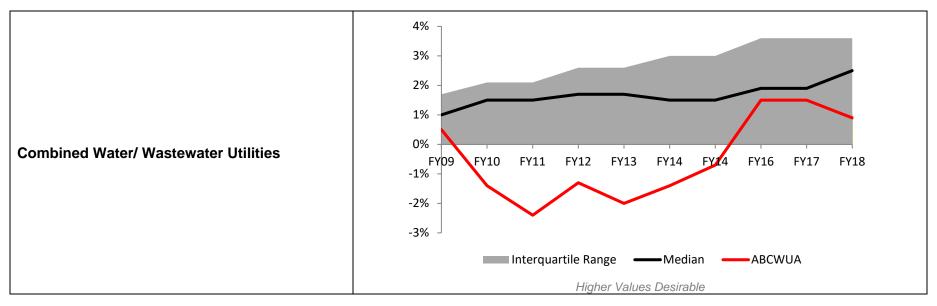
FY19 Performance Plan Goal 4: Business Planning and Management

4-2 Return on Assets

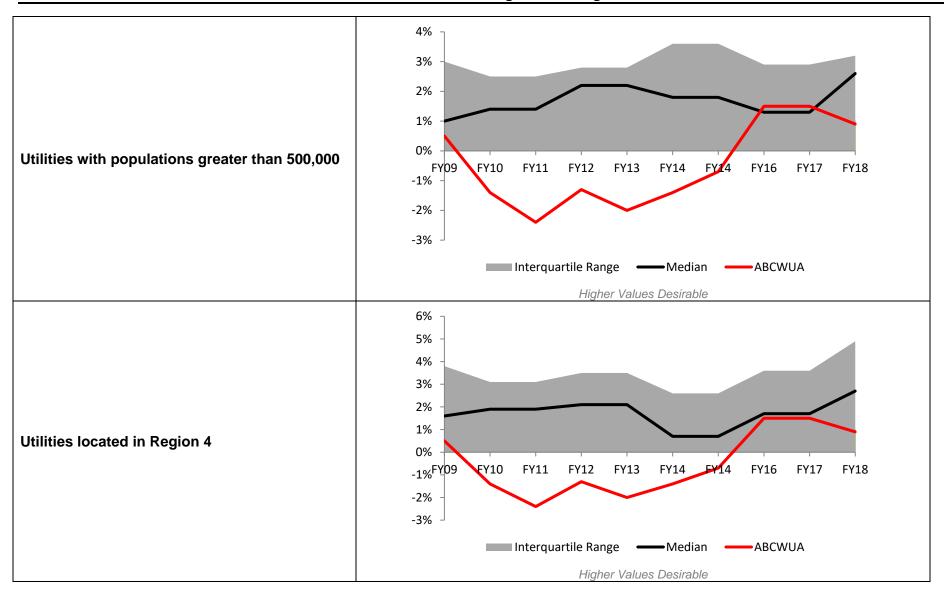
Performance Results

Measure Type	Purpose	Inputs	Outputs						Outcome
	Measure the	Net income and	Baseline	Prior Year Actuals			Current/Est	Projected	Improve the financial
	financial	total assets	Daseillie	FY15	FY16	FY17	FY18	FY19	health of the Water
Effectiveness	effectiveness of the Water Authority		0.6%	-0.7%	1.5%	0.9%	0.6%	0.6%	Authority





FY19 Performance Plan Goal 4: Business Planning and Management



The return on assets ratio measures how well a utility's management team is doing its job. A comparison of net income and average total assets, the return on assets ratio reveals how much income management has been able to squeeze from each dollar's worth of a utility's assets. All utilities are interested in their financial health and are particularly sensitive to this measure, seeking higher ratios where possible.

Measurement Status

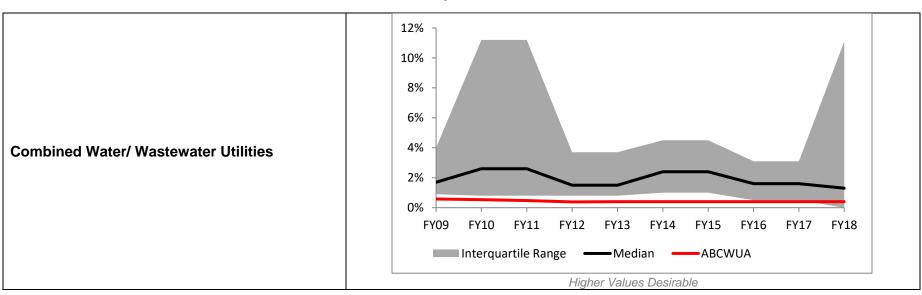
The Water Authority's performance in this measure is within the median range for the last three fiscal years. The San Juan Chama Drinking Water Project has had a major impact on depreciation and interest expenses. In addition, connection charge revenue has been declining over the last five years. Even though building permits for new construction in the Albuquerque metropolitan area have significantly decreased because of the downturn in the economy, the Water Authority has maintained a 2% increase in customer accounts during the same time period not including the acquisition of a private utility in 2009 which added about 17,000 accounts. The 2% increase trend in customer accounts is a result from adding households from developed but unserved areas that were on domestic wells and septic systems to the Water Authority's water and wastewater system as part of the Valley Utilities Project and the South Valley Drinking Water Project.

The Water Authority has developed and implemented a long term financial plan which anticipates revenue needs and allows for financial stability, ongoing system improvements and rate stability for customers. It has also ensured conservative financial policies, including a 12 year financing on basic capital with 50% cash. In addition, \$40 million must be invested in system rehabilitation and replacement. The utility has also established rate reserve fund to mitigate revenue fluctuations and postpone rate increases (\$2 million per year contributed).

4-3 System Renewal / Replacement Rate

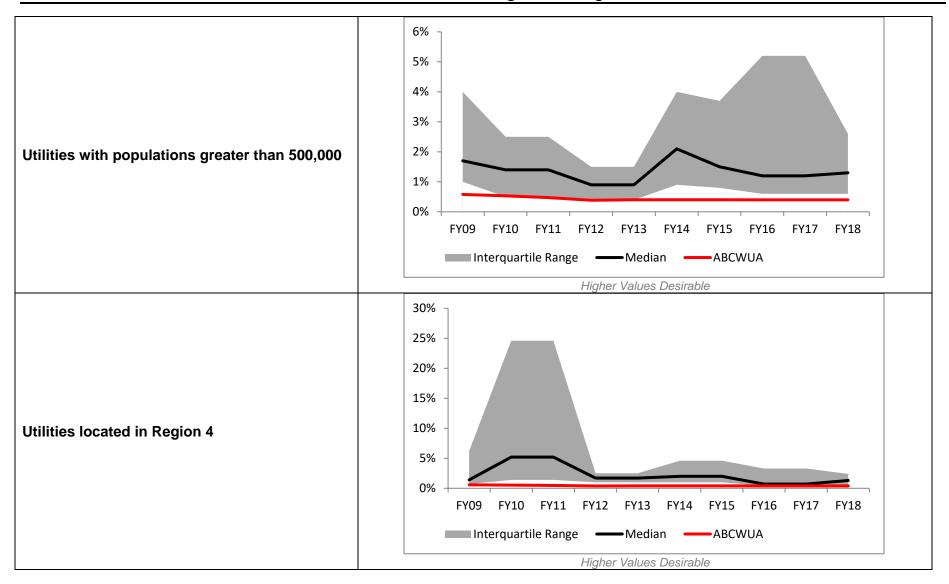
Performance Results (Water Pipeline & Distribution)

Measure Type	Purpose	Inputs				Outcome			
	Quantify the rate at	Total actual expenditures	Baseline	Prior	Year Ac	ctuals	Current/Est	Projected	Reduce corrective
	which the Water	reserved for renewal and	Daseime	FY15	FY16	FY17	FY18	FY19	maintenance by
Effectiveness	Authority is meeting its individual need for infrastructure renewal or replacement	replacement and total present worth for renewal and replacement needs for each asset group	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	investing in infrastructure improvements to the system



Industry Benchmarks

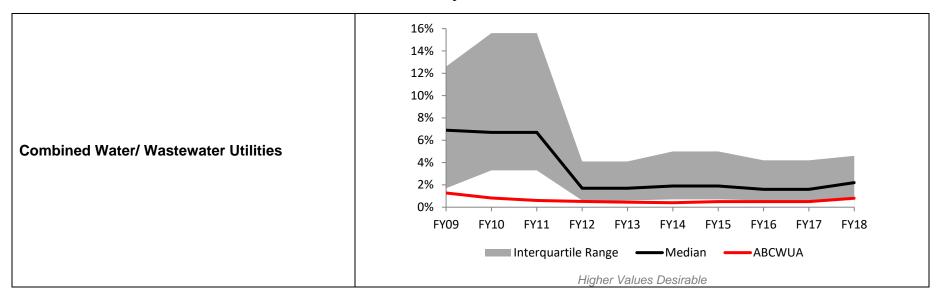
FY19 Performance Plan Goal 4: Business Planning and Management



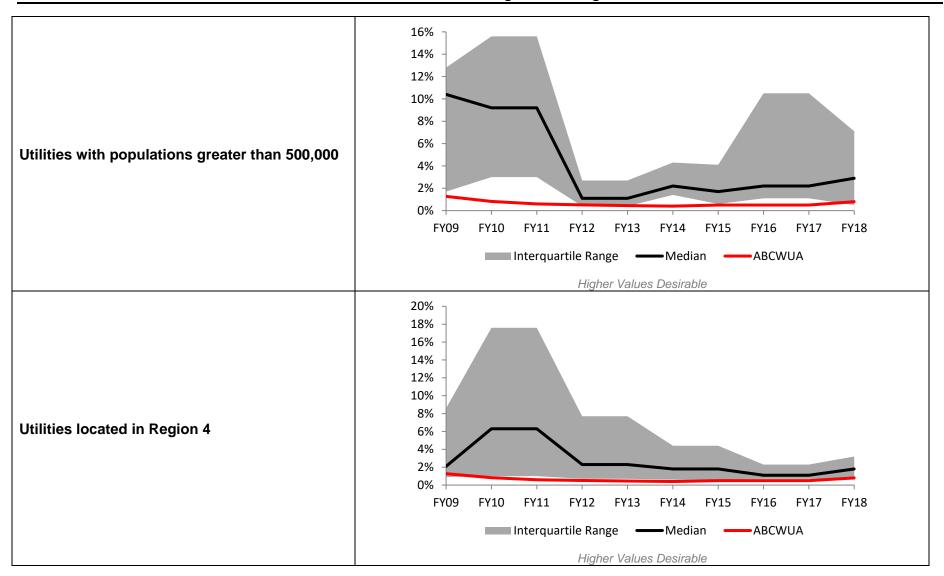
Performance Results (Water Facility & Pumping)

Measure Type	Purpose	Inputs				Outcome			
	Quantify the rate	Total actual	Basalina	Prior	Year Ac	tuals	Current/Est	Projected	Reduce corrective
	at which the	expenditures reserved	Baseline	FY15	FY16	FY17	FY18	FY19	maintenance by
Effectiveness	Water Authority is meeting its individual need for infrastructure renewal or replacement	for renewal and replacement and total present worth for renewal and replacement needs for each asset group	0.6%	0.5%	0.5%	0.8%	0.8%	0.8%	investing in infrastructure improvements to the system

Industry Benchmarks



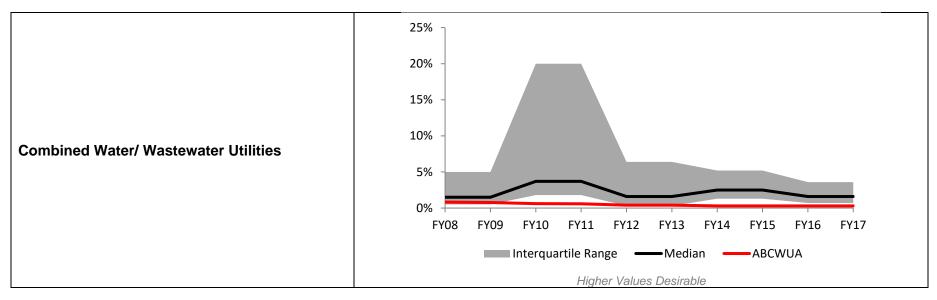
FY19 Performance Plan Goal 4: Business Planning and Management



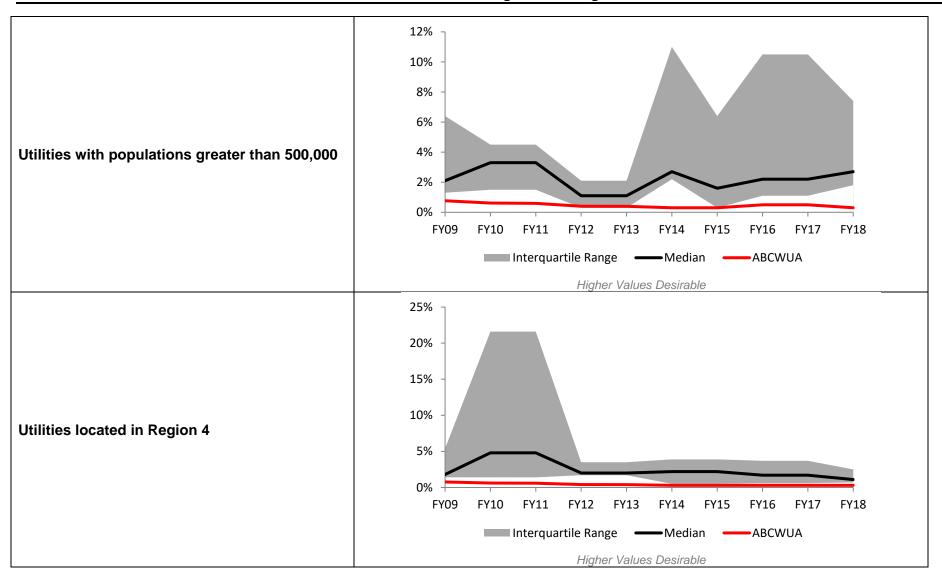
Performance Results (Wastewater Pipeline & Collection)

Measure Type	Purpose	Inputs			C	Dutputs			Outcome
	Quantify the rate	Total actual	Beceline	Prior	Year Ac	tuals	Current/Est	Projected	Reduce corrective
	at which the	expenditures reserved	Baseline	FY15	FY16	FY17	FY18	FY19	maintenance by
Effectiveness	Water Authority is meeting its individual need for infrastructure renewal or replacement	for renewal and replacement and total present worth for renewal and replacement needs for each asset group	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	investing in infrastructure improvements to the system

Industry Benchmarks



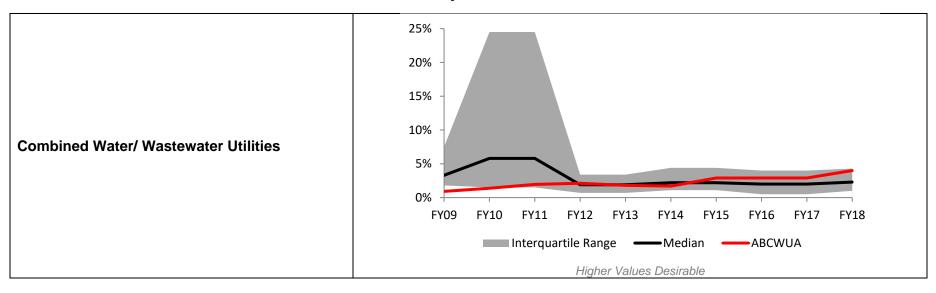
FY19 Performance Plan Goal 4: Business Planning and Management



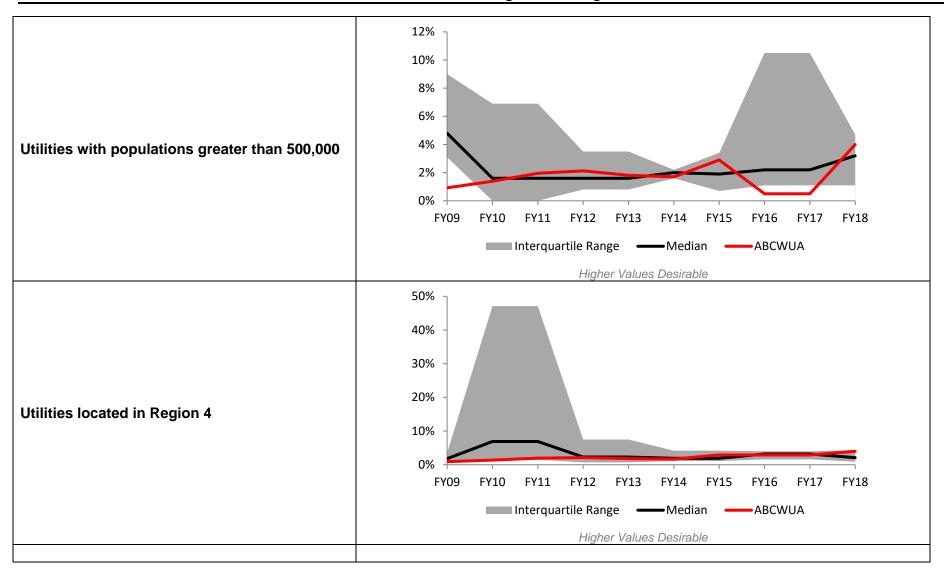
Performance Results (Wastewater Facility & Pumping)

Measure Type	Purpose	Inputs			C	Dutputs			Outcome
	Quantify the rate	Total actual	Basalina	Prior	Year Ac	tuals	Current/Est	Projected	Reduce corrective
	at which the	expenditures reserved	Baseline	FY15	FY16	FY17	FY18	FY19	maintenance by
Effectiveness	Water Authority is meeting its individual need for infrastructure renewal or replacement	for renewal and replacement and total present worth for renewal and replacement needs for each asset group	3.2%	2.9%	2.9%	4.0%	4.0%	4.0%	investing in infrastructure improvements to the system

Industry Benchmarks



FY19 Performance Plan Goal 4: Business Planning and Management



This measure quantifies the degree to which a water or wastewater utility is replacing its infrastructure based on target lives for both water and wastewater asset groups. Data for these asset groups are provided in four categories:

1. Water pipeline/distribution

- 3. Wastewater pipelines and collection
- 2. Water treatment facility and pumping 4. Wastewater treatment facility and pumping

Measurement Status

The Water Authority's performance in this measure has been below the median range for the past three fiscal years in three of the four asset groups. The wastewater treatment performance is within median range because of the significant replacement and rehabilitation program at the wastewater treatment plant. Since FY07, the Water Authority increased its capital program spending from \$30 million per year to \$80 million per year, including significant increases in planned rehabilitation spending from \$22 million to \$56 million. Since FY15, the utility has added \$3 million each year cumulatively to reach an additional \$30 million funding by 2023.

In FY08, the Water Authority formally established its asset management program and established a Steering Committee to implement the program. The Committee's role is to communicate and drive the development and implementation of the asset management program. The program is an extensive, well thought out 'Business Model' that helps the Water Authority make better acquisition, operations and maintenance, renewal, and replacement decisions. In FY11, the Water Authority completed an Asset Management Plan (AMP) as a part of its asset management program. The AMP will be updated in FY19. The AMP provides a 30-year projection that allows the Water Authority to budget for renewals and replacements into the future. In addition, the Water Authority upgraded its work order system in FY18 in a manner that supports asset management business objectives. Moreover, the Water Authority has incorporated asset management principles and management of risk into ten-year Capital Improvement Plan. The Water Authority will continue to develop strategic asset management plans for its critical asset systems.

2018 Customer Opinion Survey

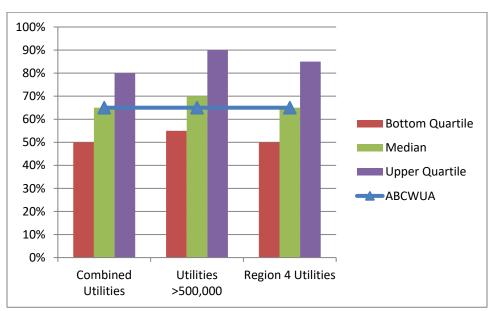
 89% of customers feel that it is very or somewhat important to invest in the repair and replacement of old water and sewer lines

4-4 Triple Bottom Line Index

Performance Results

Measure Type	Purpose	Inputs			Ou	tputs			Outcome
Effectiveness	Quantify the utility's sustainability efforts	Self-assessment based on Triple-	Baseline	Prior	Year Ac	tuals	Current /Est	Projected	Assess the utility's sustainability efforts
Ellectiveness		Bottom-Line		FY15	FY16	FY17	FY18	FY19	
		Checklist	63%	50%	50%	60%	65%	65%	

Industry Benchmarks



Generally, higher values are desirable

Results Narrative

This indicator provides a measure of a utility's sustainability efforts. It is calculated based on self-assessed points assigned in the various categories in the Triple-Bottom-Line (TBL) Checklist. The TBL framework represents a balanced view of environmental, social, and economic considerations. The value assigned to each statement is based on evidence that existed during the reporting period to support the statement, as reviewed and rated by senior utility management. Cumulative scores can range from 0 to 20 and are presented as percentages (total score / 20 × 100%).

Measurement Status

The Triple-Bottom-Line Index was recently included by AWWA in their benchmarking survey. The Water Authority has been measuring this Index for the last three fiscal years. It will continue to track these indicators and benchmark with industry peers and determine targets for its sustainability programs.



The Water Authority received the **2018 Exemplary Source Water Protection Award**. The AWWA distinguished the Water Authority from its peers for its innovative approach for protecting its source waters and the conjunctive management of its water resources to ensure long-term safety and resiliency of our water supply. Source water protection activities highlighted by the AWWA in its selection included the Water Authority's low-income credit program, the monitoring and mapping of potential and know groundwater contamination in the service area, and the comprehensive water planning efforts of Water 2120. The Water Authority also updated its source water protection plan.

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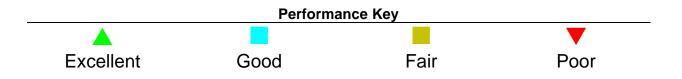
Goal 5 Organizational Development

Guiding Goal Statement

Sustain a well informed, trained, motivated, safe, organized, and competitive work force to effectively meet the expectations of the customers, community, and Board in accordance with adopted policies and mandates.

Ref #	Performance Measure	Status	Trend
5-1	Employee Health and Safety Severity Rate		
5-2	Training Hours per Employee		
5-3	Customer Accounts per Employee (Water)		
5-3	Customer Accounts per Employee (Wastewater)		
5-4	Employee Turnover		
5-5	Retirement Eligibility		
5-6	Organizational Best Practices Index		
	Overall Goal Status		

Goal Performance Scorecard



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Linkage of Objectives to Performance Measures

FY19 Objectives	Measure Reference
Reduce injury hours to 2,650 hours or less to improve productivity and reliability of services provided by employees by the end of the 4th Quarter of FY19.	5-1
Complete two employee wellness challenges per fiscal quarter focusing on nutrition, physical activity and weight loss, and disease and injury prevention to employees by the end of the 4th Quarter of FY19.	5-1
Maintain an average utility-wide vacancy rate of no greater than 5% through the end of FY19.	5-4
Continue updating the Knowledge Management Strategy to assure that the right knowledge is systematically collected, stored, organized, and transferred to the appropriate employee in a timely and effective manner by the end of the 4th Quarter of FY19.	5-5
Align ongoing supervisor training to address issues identified during Employee Connections meetings and from Employee Satisfaction Surveys; modify supervisor training to incorporate employee appreciation, recognition and communication by the end of the 2nd Quarter of FY19.	5-6

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Performance Measure Division Responsibility

Ref #	Performance Measure	Operations	Financial / Business Services	Human Resources
5-1	Employee Health and Safety Severity Rate			\checkmark
5-2	Training Hours per Employee			\checkmark
5-3	Customer Accounts per Employee (Water)	\checkmark	\checkmark	
5-3	Customer Accounts per Employee (Wastewater)	\checkmark	\checkmark	
5-4	Employee Turnover	\checkmark		\checkmark
5-5	Retirement Eligibility	\checkmark		\checkmark
5-6	Organizational Best Practices Index	\checkmark	\checkmark	\checkmark

Linkage of Performance Measures to EUM Attributes

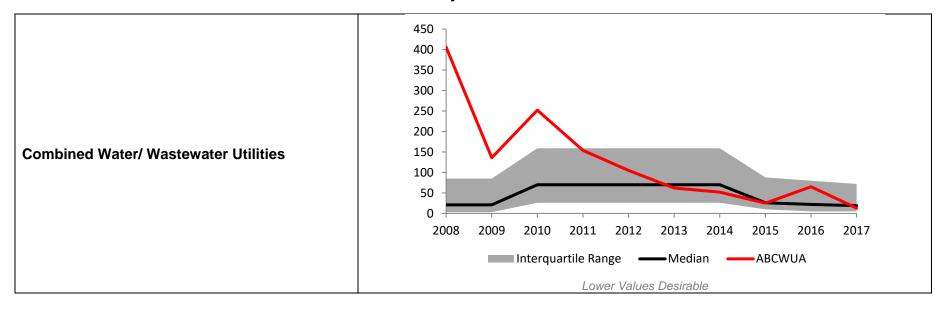
Ref #	Performance Measure	Product Quality	Customer Satisfaction	Employee & Leadership Development	Operational Optimization	Financial Viability	Enterprise Resiliency	Infrastructure Strategy & Performance	Community Sustainability	Water Resource Sustainability	Stakeholder Understanding & Support
5-1	Employee Health and Safety Severity Rate						\checkmark				
5-2	Training Hours per Employee			\checkmark							
5-3	Customer Accounts per Employee (Water)				\checkmark						
5-3	Customer Accounts per Employee (Wastewater)				\checkmark						
5-4	Employee Turnover			\checkmark							
5-5	Retirement Eligibility			\checkmark							
5-6	Organizational Best Practices Index	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark	\checkmark

5-1 Employee Health and Safety Severity Rate

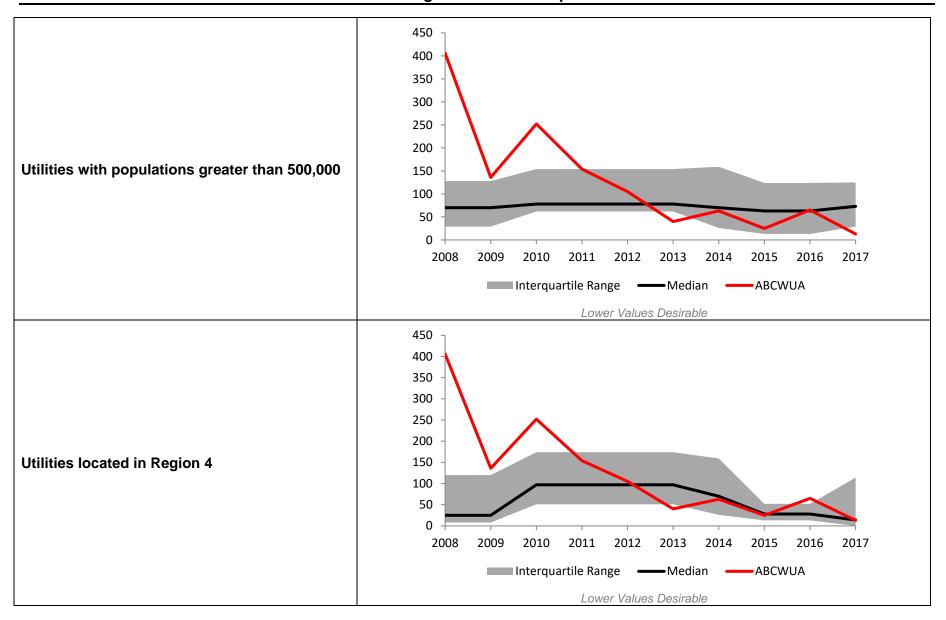
Performance Results

Measure Type	Purpose	Inputs				Outcome			
Effectiveness	Quantify the rate of employee days	Total workdays away from work and total	Baseline	Prior 2014	Year Ac 2015	tuals 2016	Current/Est 2017	Projected 2018	Improve employee health and safety to
Lifectiveness	lost from work due to illness or injury	hours worked by all employees	46	62	52	25	65	13	reduce total workdays from work

Industry Benchmarks



FY19 Performance Plan Goal 5: Organization Development



The Occupational Safety and Health Administration (OSHA) has established accident and illness recording and reporting requirements that affect most organizations. The OSHA standard is recommended because it has broad applicability and most utilities are already recording the needed data. The OSHA lost-days measure quantifies the rate of days lost due to illness or injury per 100 employee-years of work. It was selected as a good measure for water and wastewater utilities because it summarizes a very useful set of data that is readily available at most utilities.

Excessive lost workdays affect productivity and can cost utilities in a number of ways. Health care, insurance premiums, and overtime can all be adversely impacted by lost work due to injury or health reasons.

Measurement Status

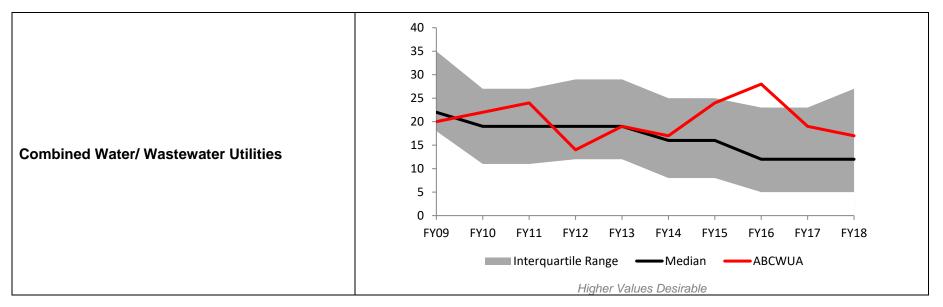
The Water Authority's performance in this measure was below the median range since the Water Authority began measuring its performance in 2005. Since 2006, the Water Authority's performance in this measure has improved every year with a 92% decrease in injury hours over the last ten years. From past policy objectives, the Water Authority has developed safe work incentives and routine employee safety training. In addition, the Water Authority improved its Light Duty Program in order to get workers back to the job safely. This new process has provided a clearer understanding on what needs to take place when an injury occurs including the documentation, payroll coding and expectation and assignment of the employee. Starting in 2009, the Water Authority awarded its employees with a \$300 incentive payment, taxes paid for meeting injury reduction goals. Overall, employees met the target goal 9 out of the 12 years. A policy objective for FY19 is to reduce injury hours to 2,650 hours or less to improve productivity and reliability of services provided by employees; the goal is connected with a \$300 per employee safety incentive program.

5-2 Training Hours per Employee

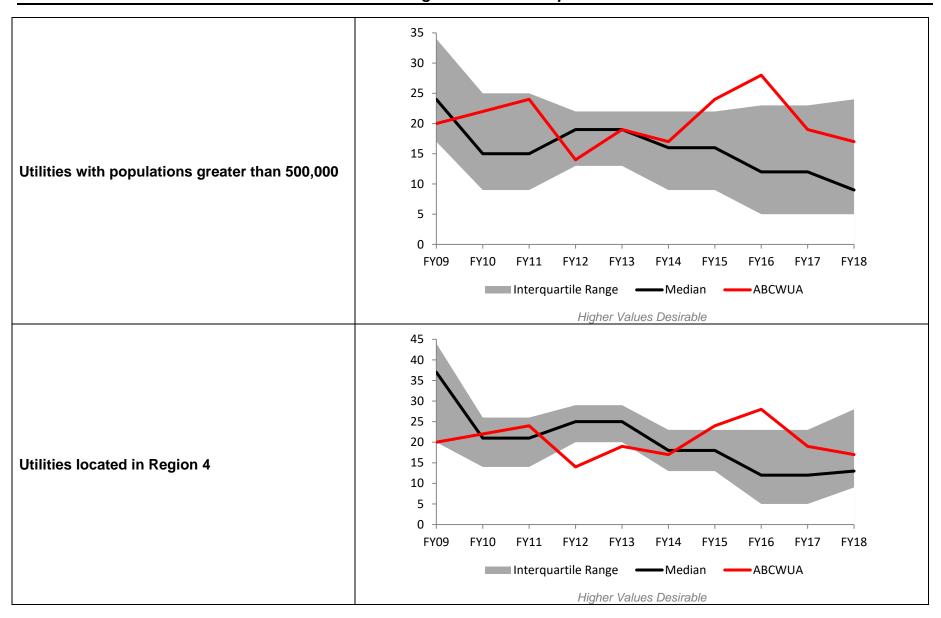
Performance Results

Measure Type	Purpose	Inputs			(Outputs			Outcome
	Measure the	Number of formal	Baseline	Prior	Year Ac	tuals	Current/Est	Projected	Improve employee
	quantity of formal	training hours per	Daseime	FY15	FY16	FY17	FY18	FY19	knowledge and skills
Effectiveness	training Water Authority employees actually completing	employee per year	24	24	28	19	17	18	to maintain a motivated and effective works force

Industry Benchmarks



FY19 Performance Plan Goal 5: Organization Development



This measure is intended to reflect the organization's commitment to formal training as a means of improving employee knowledge and skills. It also does not address the effectiveness or efficiency of the training programs used by the utility.

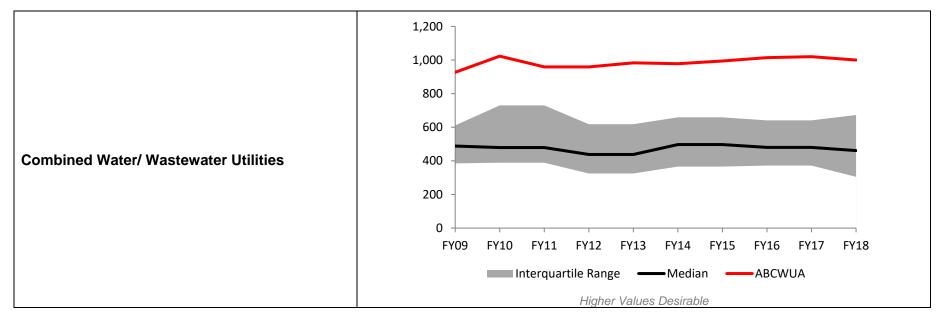
Measurement Status

The Water Authority's performance in this measure has been within or above the median range for the past three fiscal years. The Water Authority adopted a policy objective in FY09 to increase certification training hours and by creating an organizational succession plan by implementing hiring, training and certification programs for mechanics, electricians and electronics technicians. The Water Authority has improved it performance in this measure in FY10 and FY11 from implementation of several training programs. In the past two fiscal years, the utility has developed and implemented a training program for meter replacement program as well as the technicians maintaining the AMI program. The Water Authority will continue to improve its performance in FY19 on continuing to implement its training programs and developing new programs.

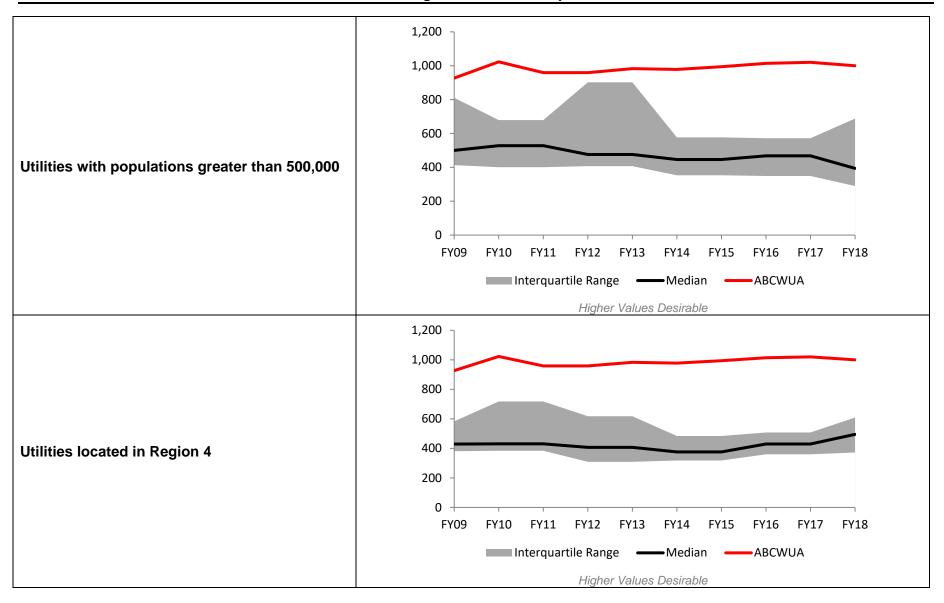
5-3 Customer Accounts per Employee

Performance Results (Customer Water Accounts per Employee)

Measure Type	Purpose	Inputs			C	Dutputs			Outcome
	Measure	Number of active accounts	Baseline	Prior	r Year Ac	tuals	Current/Est	Projected	Provide efficient
	employee	per employee and average	Daseillie	FY15	FY16	FY17	FY18	FY19	service to our
Efficiency	efficiency	million gallons of water delivered and processed per day per employee	1,010	994	1,014	1,020	1,000	1,001	customers to meet their expectations



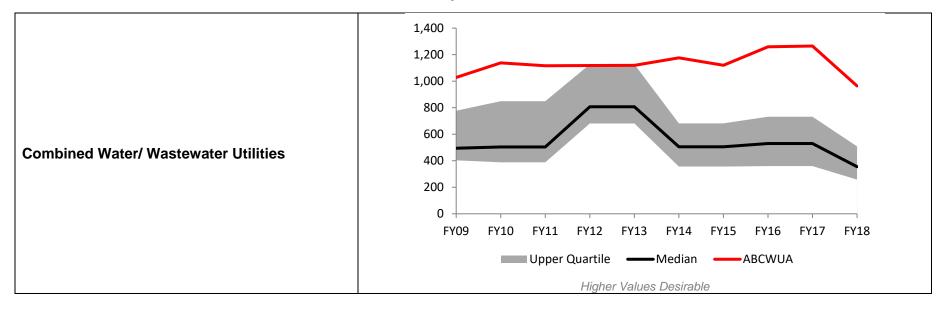
Industry Benchmarks



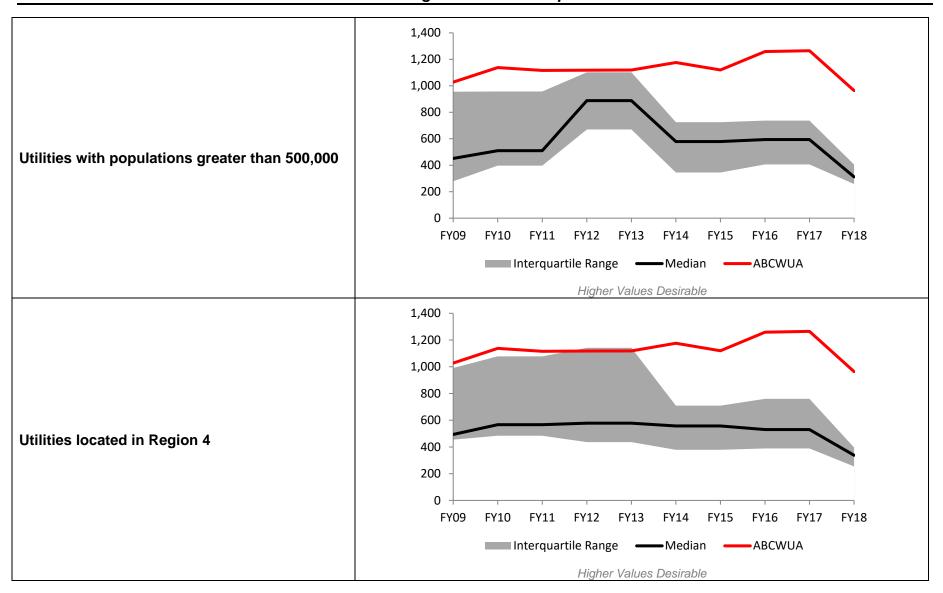
Performance Results (Customer Wastewater Accounts per Employee)

Measure Type	Purpose	Inputs	Outputs						Outcome
	Measure employee	Number of active	Baseline	Prior Year Actuals			Current/Est	Projected	Provide efficient
		accounts per employee		FY15	FY16	FY17	FY18	FY19	service to our
Efficiency	efficiency	and average million gallons of water delivered and processed per day per employee	1,248	1,220	1,259	1,265	964	965	customers to meet their expectations

Industry Benchmarks



FY19 Performance Plan Goal 5: Organization Development



These measures measure employee efficiency expressed by water and wastewater accounts per employee.

Measurement Status

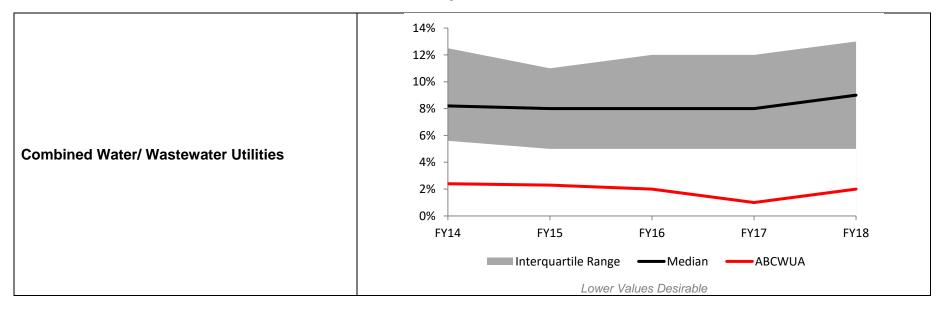
The Water Authority's performance in this measure has been within the top quartile for the past three fiscal years for water and wastewater accounts per employee. The utility anticipates no change in the metric for FY19.

5-4 Employee Turnover

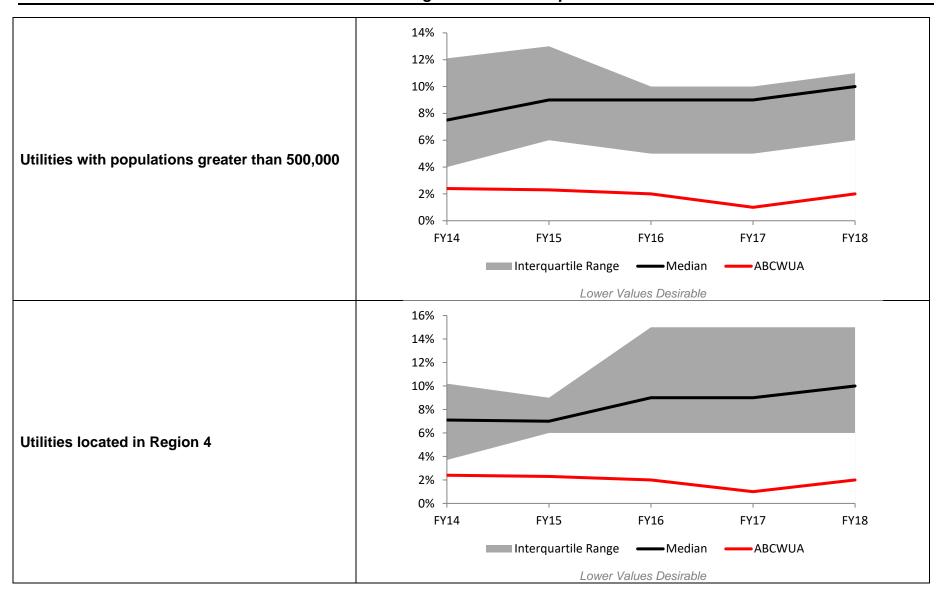
Performance Results

Measure Type	Purpose	Inputs	Outputs						Outcome
	Quantify the annual employee departuresNumber of regular employee departures 	Number of regular	Baseline	Prior Year Actuals			Current/Est	Projected	Determine staffing
Efficiency		employee departures	Daseillie	FY15	FY16	FY17	FY18	FY19	levels for operation
		1.6%	2%	2%	1%	2%	2%	needs and meeting service levels	

Industry Benchmarks



FY19 Performance Plan Goal 5: Organization Development



This indicator quantifies annual employee departures normalized by the utility's workforce (as FTEs) per year. Regular employee departures include employees who leave voluntarily, retire, or are let go during the reporting period. Regular employees are those who worked more than 1,000 hours during the reporting period.

Measurement Status

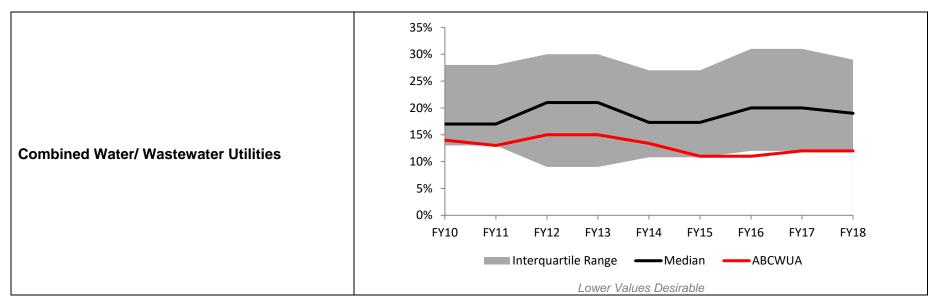
This indicator was recently included by AWWA in their benchmarking survey. The Water Authority has been measuring this indicator for the last four fiscal years. The utility's performance is above the median range. The utility will continue to track this metric to determine staffing levels for operation needs and meeting service levels.

5-5 Retirement Eligibility

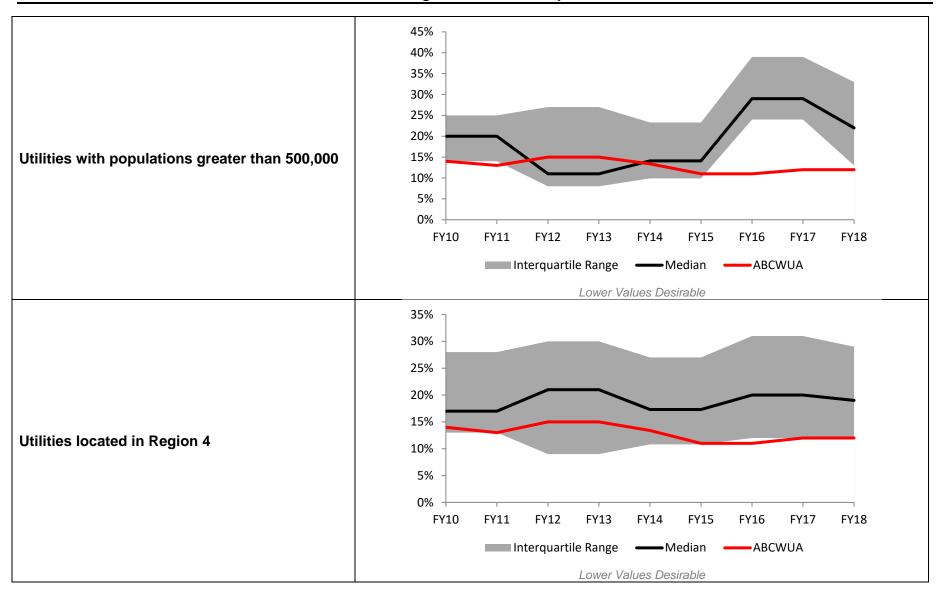
Performance Results

Measure Type	Purpose	Inputs	Outputs						Outcome
	Quantify the Number of regular	Beceline	Prior Year Actuals			Current/Est	Projected	Determine staffing	
Efficiency	number	employees eligible for	Baseline	FY15	FY16	FY17	FY18	FY19	levels for operation
	employees who retirement in the next 5 can retire years / Total number of FTEs	11%	11%	11%	12%	12%	12%	needs and meeting service levels	

Industry Benchmarks



FY19 Performance Plan Goal 5: Organization Development



This indicator provides a measure of the number of regular employees eligible for retirement normalized by the utility's workforce (as FTEs). Regular employees are those who worked more than 1,000 hours during the reporting period.

Measurement Status

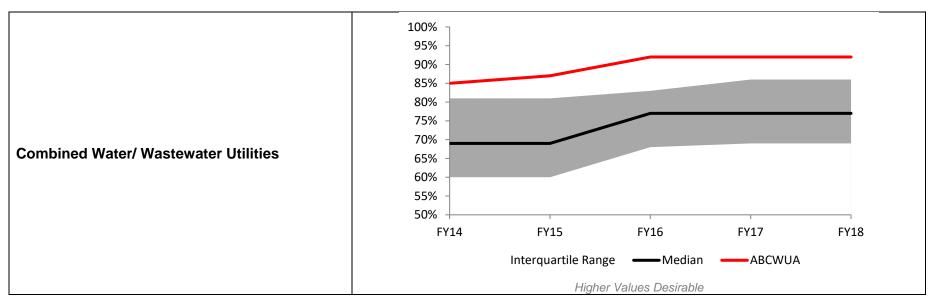
This indicator was recently included by AWWA in their benchmarking survey. The Water Authority has been measuring this indicator for the last four fiscal years. The utility's performance is within the median range. The utility will continue to track this metric to determine staffing levels for operation needs and meeting service levels.

5-6 Organizational Best Practices Index

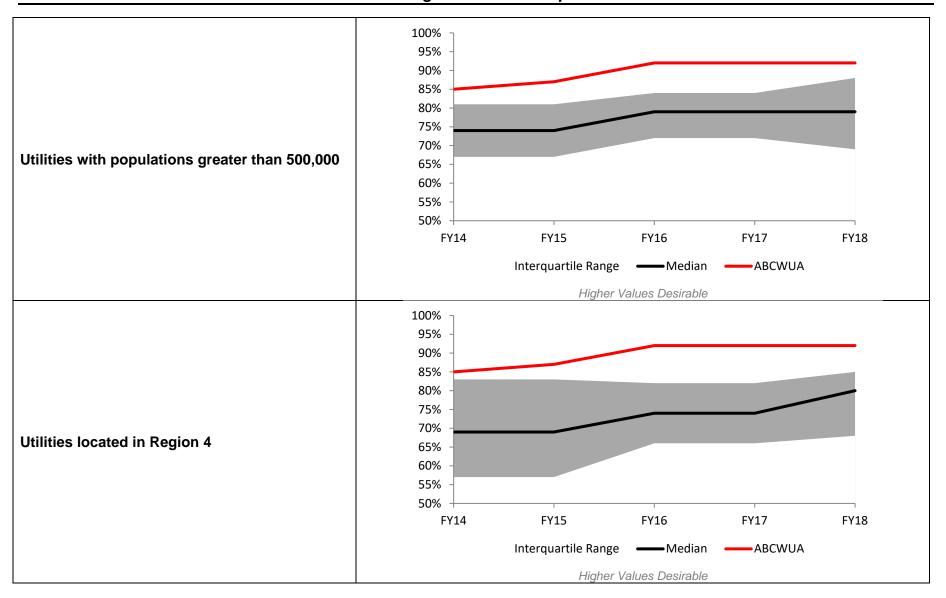
Performance Results

Measure Type	Purpose	Inputs	Outputs						Outcome
	To summarize the	Self-scoring system to	Baseline	Prior Year Actuals			Current/Est	Projected	Implement best
	Water Authority's	identify the degree to	Daseiine	FY15	FY16	FY17	FY18	FY19	management practices to sustain a competitive work force
Quality	implementation of management programs important to water and wastewater utilities	which the Water Authority is implementing the seven organizational best practices	90%	87%	92%	92%	92%	92%	





FY19 Performance Plan Goal 5: Organization Development



This measure summarizes the status of implementation of good management practices at a utility. It is particularly useful for identifying potential benchmarking partners, especially organizations that may have advanced knowledge and experience with applying these tools. Correlations with other measures might show that performance in other areas is related to investments in improved management practices. The Water Authority used a self-scoring system to identify the degree to which each of fourteen important practices are being implemented. The scoring system is based on the results from the QualServe Self Assessments that the Water Authority completed in 2004 and 2011 and the 2017 Effective Utility Management (EUM) assessment. Scores for the fourteen areas are aggregated as a percentage.

The practices included in the index are as follows:

- Strategic Planning & Implementation
- Long-term Financial Planning
- Risk Management Planning
- Performance Measurement System
- Optimized Asset Management Program
- Customer Involvement Program

- Governing Body Transparency
- Drought Response/Water Shortage Contingency Plan
- Source Water Protection Plan
- Succession Planning
- Continuous Improvement Program
- Continuous Improvement Program & Leadership Effectiveness

Measurement Status

The Water Authority's performance in this measure is above the median range for the past three fiscal years. After implementing the areas of improvement from the 2004 QualServe Peer Review and 2017 EUM assessment, the Water Authority anticipates continued progress on this measure. This measure is particularly useful for identifying potential benchmarking partners, especially organizations that may have advanced knowledge and experience with applying these tools. The Water Authority is working on its EUM program which incorporates the benchmarking performance indicators from the AWWA Benchmarking program. The utility will utilize the EUM program to make performance improvements in its operations and service delivery by examining its performance on a quarterly basis.



The Water Authority received the **Gold** Excellence in Management Award in 2015 recognizing the utility's significant achievement in utility management and adopting successful management practices.



In 2016, the Water Authority was been recognized as a Utility of the Future Today. The Utility of the Future (UOTF) Today Recognition Program is a partnership of water sector organizations—the National Association of Clean Water Agencies (NACWA), the Water Environment Federation (WEF), the Water Environment & Reuse Foundation (WE&RF) and the WateReuse Association—with input from the U.S. Environmental Protection Agency (EPA). The program celebrates the progress and exceptional performance of utilities while supporting the widespread adoption of the innovative UOTF business model. Utilities were selected for recognition based upon the adoption of UOTF principles (water reuse, watershed stewardship, beneficial biosolids reuse, community partnering & engagement, energy efficiency, energy generation & recovery, and nutrient & materials recovery) as the "Organizational Culture of the Future."

The Water Authority was recognized for its efforts in transitioning from a traditional wastewater treatment system to a community-based resource recovery center and leader in the overall sustainability and resilience of the community the utility serves. UOTF acknowledged the Water Authority's progress in utility management, beneficial biosolids reuse, and water reuse.

The Water Authority has established a culture of organizational excellence that has created positive change in the management of the utility. It has adopted the tenets of Effective Utility Management and fostered continuous performance improvement to achieve its vision, mission and long-term goals. The utility has committed to improving communication with its stakeholders by engaging its employees and customers, and has proven itself an innovator in managing scarce water resources in its service area.