



Albuquerque Bernalillo County Water Utility Authority

Albuquerque/Bernalillo
County
Government Center
One Civic Plaza
Albuquerque, NM 87102

Agenda

Councilor Klarissa Peña, Chair
Commissioner Debbie O'Malley, Vice Chair
Mayor Richard J. Berry
Councilor Pat Davis
Commissioner Maggie Hart Stebbins
Commissioner Wayne Johnson
Councilor Trudy E. Jones
Trustee Pablo Rael

Wednesday, September 20, 2017

5:00 PM

Vincent E. Griego Chambers

1. **CALL TO ORDER**
2. **INVOCATION/PLEDGE OF ALLEGIANCE**
3. **APPROVAL OF MINUTES - August 23, 2017**
4. **PROCLAMATIONS AND AWARDS**
 - A. **NACWA Peak Performance Silver Award**
5. **PUBLIC COMMENT**
6. **ANNOUNCEMENTS/COMMUNICATIONS**
 - A. **Next Scheduled Meeting - October 18, 2017**
7. **INTRODUCTION (FIRST READING) OF LEGISLATION**
8. **CONSENT AGENDA**
9. **APPROVALS**
 - A. [R-17-15](#) Amendment to the Approved Operating and Capital Implementation Program of the Albuquerque Bernalillo County Water Utility Authority for the Fiscal Year Ending June 30, 2018
 - B. [R-17-16](#) Rescinding Floor Amendment No. One to R-17-9 Appropriating Funds for Operating the Albuquerque Bernalillo County Water Utility Authority for Fiscal Year Beginning July 1, 2017 and Ending June 30, 2018
 - C. [R-17-17](#) Requesting that the Board of County Commissioners of the County of

Bernalillo Place an Advisory Question on the 2018 General Election Ballot
Concerning Adding Supplemental Fluoride to the Drinking Water

- D. [R-17-18](#) Authorizing the Albuquerque Bernalillo County Water Utility Authority to
Submit an Application for Funding to the Water Trust Board for the Los
Padillas Water Systems Improvement Project
- E. [R-17-19](#) Authorizing the Albuquerque Bernalillo County Water Utility Authority to
Submit an Application for Funding to the Water Trust Board for the Uptown
Water Reuse Project
- F. [C-17-26](#) FY2017 Fourth Quarter Performance Indicator Report

10. OTHER BUSINESS

- A. [OB-17-9](#) Water Loss Control Presentation

11. ADJOURNMENT

Visit Our Website at www.abcwua.org

NOTICE TO PERSONS WITH DISABILITIES: If you have a disability and require special assistance to participate in this meeting, please contact the Authority Office as soon as possible before the meeting date at 289-3100 or by the TTY at 1-800-659-8331.

Meeting Date: September 20, 2017
Staff Contact: Charles Leder, Plant Division Manager

TITLE: National Association of Clean Water Agencies Peak Performance Silver Award

ACTION: Information Only

SUMMARY:

The Water Authority was awarded the Silver Peak Performance Award from the National Association of Clean Water Agencies (NACWA) for calendar year 2016. In order to receive the Silver Award, a utility must have five or fewer National Pollutant Discharge Elimination System (NPDES) Permit violations for the calendar year. The goal for the Water Authority is to receive the Gold Award with its NPDES Permit (no violations at all) in a calendar year.

Meeting Date: September 20, 2017
Staff Contact: Mark S. Sanchez, Executive Director

TITLE: R-17-15 – Amendment to the Approved Operating and Capital Implementation Program of the Albuquerque Bernalillo County Water Utility Authority for the Fiscal Year Ending June 30, 2018

ACTION: Approval

BACKGROUND:

The Water Authority stopped adding supplemental fluoride in 2011 based on the lack of agreed upon science at the federal level. During this period only naturally occurring fluoride remained in the drinking water. The naturally occurring levels averaged between 0.4 mg/L and 0.5 mg/L depending on the season and blend of water. In 2015, the United States Environmental Protection Agency (USEPA) and Centers for Disease Control (CDC) finalized the guideline for fluoride in drinking water. Up to this point, there was no consistent science which both agencies agreed upon. In 2015, the United States Public Health Service and the Centers for Disease Control established final guidelines for optimal public water fluoridation.

SUMMARY:

During the adoption of the Fiscal Year 2018 Operating Budget, a policy amendment was adopted by the Governing Board directing staff to resume supplement fluoridation. This legislation provides the necessary appropriations in the FY18 Operating and Capital Implementation Program (CIP) budgets.

FISCAL IMPACT:

This action requests Board approval of the proposed amendment to the FY18 Operating and Capital Implementation Program (CIP) to appropriate funds for fluoride chemicals and accompanying equipment.

The amendment reallocates a combination of excess fund balance and savings from chemical expenses based on power savings by bringing new solar power projects online

The \$500,000 increase includes funding for the following:

- Increase of \$250,000 for chemicals; and
- Increase of \$250,000 in the transfer to CIP; and
- The creation of a CIP special project to purchase fluoride equipment.

Approval of this legislation is consistent with the policy adopted by the Governing Board.

ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY AUTHORITY

BILL NO. R-17-15

1 RESOLUTION
2 AMENDMENT TO THE APPROVED OPERATING AND CAPITAL IMPLEMENTATION
3 PROGRAM OF THE ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY
4 AUTHORITY FOR THE FISCAL YEAR ENDING JUNE 30, 2018

5 WHEREAS, during the adoption of the Fiscal Year 2018 Operating Budget, a policy
6 amendment was adopted by the Governing Board directing staff to resume supplement
7 fluoridation;

8 WHEREAS, the Operating and Capital Implementation Program is governed by
9 the requirements established under Section 2-1-8, 2006, which provides for amendments
10 to the approved program; and

11 WHEREAS, appropriations for the Fiscal Year ending June 30, 2018 that were
12 previously approved under R-17-9 and R-17-10 require an amendment to appropriate
13 additional funds for the cost of fluoride chemicals and accompanying equipment required
14 to supplement the drinking water provided to the general population.

15 THEREFORE, BE IT RESOLVED BY THE WATER AUTHORITY:

16 Section 1. That funds in the amount of Two Hundred Fifty Thousand Dollars
17 (\$250,000) are hereby appropriated in the Chemicals-SJCWTP Program, Fund 21, for
18 Fiscal Year 2018.

19 Section 2. That funds in the amount of Two Hundred Fifty Thousand Dollars
20 (\$250,000) are hereby appropriated in the transfer to the Capital Implementation Program
21 Fund 28 for Fiscal Year 2018.

22 Section 3. That funds transferred from Fund 21 to Fund 28 will be designated
23 for fluoride equipment.

24

25

26

27

[+Bracketed Material+] - New
[-Bracketed Material-] - Deletion



Meeting Date: September 20, 2017
Staff Contact: Mark S. Sanchez, Executive Director

TITLE: R-17-16 – Rescinding Floor Amendment No. One to R-17-9
Appropriating Funds for Operating the Albuquerque Bernalillo
County Water Utility Authority for Fiscal Year Beginning July 1, 2017
and Ending June 30, 2018

ACTION: Approval

SUMMARY:

During the adoption of the Fiscal Year 2018 Operating Budget, a policy amendment was adopted by the Governing Board directing staff to resume supplement fluoridation. This legislation would repeal the amendment and not require supplemental fluoridation. This resolution was requested by Councilor Peña, Board Chair.

FISCAL IMPACT:

This legislation would save \$250,000 in annual operating expenses and \$250,000 in one-time capital spending.

ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY AUTHORITY

BILL NO. R-17-16

1 **RESOLUTION**
2 **RESCINDING FLOOR AMENDMENT NO. ONE TO R-17-9 APPROPRIATING FUNDS**
3 **FOR OPERATING THE ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY**
4 **AUTHORITY FOR THE FISCAL YEAR BEGINNING JULY 1, 2017 AND ENDING JUNE**
5 **30, 2018**

6 WHEREAS, at the May 17, 2017 administrative meeting of the Albuquerque
7 Bernalillo County Water Utility Authority governing board ("Water Authority"), Floor
8 Amendment No. One to R-17-9 ("Appropriating Funds for Operating the Albuquerque
9 Bernalillo County Water Utility Authority for the Fiscal Year Beginning July 1, 2017 and
10 Ending June 30, 2018) was duly passed on a vote of 3-2; and

11 WHEREAS, Floor Amendment No. One, as passed, stated, "On page 3, line 3,
12 insert the following:

13 "Section 6. Based on the savings in power and chemicals, supplemental fluoride
14 will be added to achieve the national guideline established by the Centers for Disease
15 Control and the U. S. Environmental Protection Agency."; and

16 WHEREAS, the Water Authority, having subsequently taken up the issue of
17 supplemental fluoride in R-17-15, deems it appropriate to rescind Floor Amendment No.
18 One to R-17-9;

19 BE IT RESOLVED BY THE WATER AUTHORITY:

20 Section 1. Floor Amendment No. One to R-17-9 be and hereby is rescinded and
21 deemed to be of no effect.

Meeting Date: September 20, 2017
Staff Contact: Mark S. Sanchez, Executive Director

TITLE: R-17-17 – Requesting That The Board of County Commissioners Of The County Of Bernalillo Place An Advisory Question On The 2018 General Election Ballot Concerning Adding Supplemental Fluoride To The Drinking Water

ACTION: Approval

BACKGROUND:

Fluoride has been a contentious issue for decades. In 1970, the City of Albuquerque placed the question before the voters to gauge the public support for adding supplemental fluoridation. The question passed by 57% margin. It has been 47 years since this issue was placed before the voters on whether they support supplemental fluoridation. Additionally, the question was limited to city voters, since then thousands of public water supply connections have occurred in Bernalillo County. This resolution has been requested by Commissioner O'Malley, Vice Chair and Councilor Pat Davis.

SUMMARY:

The U.S. Department of Health and Human Services Federal Panel on Community Water Fluoridation has issued a final recommendation which concludes that the optimal concentration of fluoride in drinking water is 0.7 milligrams/liter (mg/L). According to the report, drinking water with fluoride in concentrations of 0.7mg/L provides the best balance of protection from dental caries while limiting the risk of dental fluorosis.

http://www.publichealthreports.org/documents/PHS_2015_Fluoride_Guidelines.pdf

The drinking water currently served by the Water Authority naturally contains fluoride from ground water sources in an average concentration of 0.5 mg/L. To meet the 0.7 mg/L recommended fluoride standard would require that the Water Authority change current practice and begin to add supplemental fluoride to the drinking water. Funding to allow the Water Authority to begin a supplemental fluoride program was proposed by staff to be included in the FY18. The proposed appropriation for supplemental fluoride generated substantial public interest and controversy concerning the advisability of supplemental fluoride. At its June 21, 2017 meeting and again at its August 23, 2017 meeting, the Board heard public comment on whether to approve the appropriations for both the one-time \$250,000 equipment purchase and the \$250,000 of first year chemical costs necessary for the supplemental fluoride program as an amendment to the FY18 budget appropriation. The Resolution finds that whether or not the majority of the voter's favor or oppose the addition of supplemental fluoride to Water Authority drinking water to meet the 0.7 mg/L

public health recommendation is an unsettled question and of general public interest in Bernalillo County.

Based on this finding, the Resolution requests that the Bernalillo County Commission submit to County voters in the November 2018 general election a ballot question to determine if voters favor or oppose the addition of supplemental fluoride to the drinking water distributed by the Water Authority.

FISCAL IMPACT:

Passage of the Resolution has no fiscal impact to Water Authority. Because it requests the addition of a ballot question to an already scheduled election, it should not have a fiscal impact on State and County budgets.

ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY AUTHORITY

BILL NO. R-17-17

SPONSORED BY: O'MALLEY/DAVIS

1 **RESOLUTION**

2 **REQUESTING THAT THE BOARD OF COUNTY COMMISSIONERS OF THE**
3 **COUNTY OF BERNALILLO PLACE AN ADVISORY QUESTION ON THE 2018**
4 **GENERAL ELECTION BALLOT CONCERNING ADDING SUPPLEMENTAL**
5 **FLUORIDE TO THE DRINKING WATER**

6 WHEREAS, the U.S. Department of Health and Human Services Federal Panel
7 on Community Water Fluoridation has issued a report that contains a final
8 recommendation which concludes that the optimal concentration of fluoride in drinking
9 water is 0.7 milligrams/liter (mg/L); and,

10 WHEREAS, According to the report, which may be found at
11 http://www.publichealthreports.org/documents/PHS_2015_Fluoride_Guidelines.pdf,
12 drinking water with fluoride in concentrations of 0.7mg/L provides the best balance of
13 protection from dental caries while limiting the risk of dental fluorosis; and,

14 WHEREAS, the drinking water served by the Water Authority naturally contains
15 fluoride from ground water sources in an average concentration of 0.5 mg/L; and,

16 WHEREAS, in order to meet the average concentration of 0.7 mg/L
17 recommended fluoride standard, it would require that the Water Authority add
18 supplemental fluoride to the drinking water; and,

19 WHEREAS, the proposal that the Water Authority add supplemental fluoride to
20 the drinking water has generated substantial public interest and controversy; and,

21 WHEREAS, this question as to whether to add supplemental fluoride has been
22 sent to City of Albuquerque voters almost five decades ago, and it is now a county wide
23 question; and,

24 WHEREAS, the Board of County Commissioners of the County of Bernalillo has
25 the authority to place a question on the ballot upon its duly-passed resolution to do so;
26 and,

[+Bracketed/Underscored Material+] - New
[-Bracketed/Strikethrough Material-] - Deletion

1 WHEREAS, while the result of the election on this question would not be binding
2 on the Water Authority, its governing Board believes that permitting the public to
3 express its sentiment on an issue that has significant local impact may well represent
4 the purest form of democracy upon which this nation was founded, and moreover, such
5 results will provide further information to aid in the Board's consideration of the issue.

6 NOW, THEREFORE, BE IT RESOLVED BY THE BOARD, THE GOVERNING
7 BODY OF THE WATER AUTHORITY:

8 Section 1. The Board finds that whether or not the majority of the voters favor or
9 oppose the addition of supplemental fluoride to Water Authority drinking water to meet
10 the public health recommendation of an average concentration of 0.7 mg/L is an
11 unsettled question and of general public interest in Bernalillo County.

12 Section 2. Based on this finding, the Board respectfully requests that the Board
13 of County Commissioners of the County of Bernalillo place an advisory question on the
14 November 2018 general election ballot to determine if county voters favor or oppose the
15 addition of supplemental fluoride to the drinking water distributed by the Water Authority
16 to meet the recommended fluoride standard average of 0.7mg/L.

Meeting Date: September 20, 2017

Staff Contact: John M. Stomp, Chief Operating Officer

TITLE: R-17-18– Authorizing the Albuquerque Bernalillo County Water Utility Authority to Submit an Application for Funding to the Water Trust Board for the Los Padillas Water Systems Improvement Project

ACTION: Recommend Approval

SUMMARY:

This resolution authorizes the Water Authority to submit an application for funding from the Water Trust Board for the Los Padillas Water Systems Improvement Project. This project will provide clean, reliable water to residents and businesses in the Los Padillas community. This project is Phase 7b of the larger South Valley Drinking Water Project (SVDWP). To date, Phases 1 through 7a have been completed, and Phase 7b is designed and ready to be constructed which will complete the last leg of the water system in the South Valley. This project will address water quality and fire protection issues by providing a reliable public water system to serve existing but unserved developed properties. Phase 7b includes the construction of 6 miles of water distribution lines connecting up to 285 households.

FISCAL IMPACT:

The estimated cost of the project is \$3.5 million. The Water Authority is requesting \$1.4 million in funding from the Water Trust Fund. It is anticipated that the WTB will provide 60% in grant funds for the \$1.4 million funding requesting. Bernalillo County is providing \$1.7 million in funding toward the project.

BILL NO. R-17-18

Section 1. That the Executive Director is authorized to submit an application to the Water Trust Board requesting funds for the Los Padillas Water Systems Improvement Project.

Meeting Date: September 20, 2017

Staff Contact: John M. Stomp, Chief Operating Officer

TITLE: R-17-19– Authorizing the Albuquerque Bernalillo County Water Utility Authority to Submit an Application for Funding to the Water Trust Board for the Uptown Water Reuse Project

ACTION: Recommend Approval

SUMMARY:

This resolution authorizes the Albuquerque Bernalillo County Water Utility Authority (Water Authority) to submit an application for funding from the Water Trust Board (WTB) for the Uptown Water Reuse Project. This project includes the construction of a new on-site wastewater plant which will reduce potable water use by providing reclaimed water for irrigation for the 83 acre Winrock site and for public parks in the surrounding area. The new plant is rated at 60,000 gallons per day but is expandable to meet increased demand in the Uptown and Northeast Heights area. This project provides for a public-private-partnership showcasing cutting edge approach for innovative water conservation techniques and strategies. Winrock's retail and entertainment mix will attract local residents and visitors alike, presenting an excellent opportunity to create awareness of better conservation and utilization of resources.

FISCAL IMPACT:

The estimated cost of the project is \$1.5 million. The Water Authority is requesting \$1.5 million in funding from the Water Trust Fund. It is anticipated that the WTB will provide 60% in grant funds for the \$1.5 million funding requesting. Winrock is providing funding to cover the loan portion of the funding request.

ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY AUTHORITY

BILL NO. R-17-19

1 **RESOLUTION**

2 **AUTHORIZING THE ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY**
3 **AUTHORITY TO SUBMIT AN APPLICATION FOR FUNDING TO THE WATER TRUST**
4 **BOARD FOR THE UPTOWN WATER REUSE PROJECT**

5 WHEREAS, the redevelopment of the Winrock shopping area will create a high
6 density, mixed-use, urban environment; and

7 WHEREAS, Winrock's retail and entertainment mix will attract local residents and
8 visitors alike, presenting an excellent opportunity to create awareness of better
9 conservation and utilization of resources; and

10 WHEREAS, the construction of a new on-site wastewater plant will reduce potable
11 water use by providing reclaimed water for irrigation for the 83 acre Winrock site and for
12 public parks in the surrounding area; and

13 WHEREAS, the new plant is rated at 60,000 gallons per day but is expandable to
14 meet increased demand in the Uptown and Northeast Heights area; and

15 WHEREAS, this project provides for a public-private-partnership showcasing
16 cutting edge approach for innovative water conservation techniques and strategies.

17 BE IT RESOLVED BY THE WATER AUTHORITY:

18 Section 1. That the Executive Director is authorized to submit an application to
19 the Water Trust Board requesting funds for the Uptown Water Reuse Project.

20

21

22

23

24

25

26

27

28

Meeting Date: September 20, 2017
Staff Contact: Frank Roth, Senior Policy Manager

TITLE: C-17-26 – FY2017 Fourth Quarter Performance Indicator Report

ACTION: Receipt be Noted

SUMMARY:

The Fourth Quarter Performance Report provides a snapshot utility performance. The categories reflect key areas of stakeholder interest and are not broken down by Division or according to Goals and Objectives. The Scorecard Indicators are developed through benchmarking and performance assessments to identify performance gaps and to establish targets to address the gaps. The Scorecard Indicators are linked to the Performance Plan measures, Customer Opinion Survey responses, and Effective Utility Management attribute measures. The purpose of this report is to provide a one-page snapshot of the utility's performance so that stakeholders can easily gauge how the utility is performing in these key areas.

The report identifies the fiscal year-to-date performance compared to the established target. A status of each indicator is provided in three categories: target achieved, work in progress, or target not met. Below is a summary status of the 23 Scorecard Indicators.

Summary Status

On Target / Target Achieved	Work in Progress / Below Target	Target Not Met
21 of 23	2 of 23	0 of 23

FISCAL IMPACT:

None

Quarterly Performance Indicators

FY17 4th Quarter Scorecard

Area	Indicator	FY17 4Q Actual	FY17 Target	Status
Customer Service	Wait Time (minutes)	1:29	< 2 minutes	▲
	Contact Time (minutes)	3:43	< 4 minutes	▲
	Abandoned Call Ratio	5%	<8%	▲
	First Call Resolution	88%	> 90%	■
	Bill Exception Rate (per 10,000 Bills)	11.7	< 10	■
	Water Quality Complaints Rate (per 1,000 customers)	2.7	< 3	▲
Operational Maintenance	Estimated Meters	0.2%	< 1%	▲
	Facility Planned Maintenance Ratios	67% ground water 65% surface water 71% water reclamation	65% ground water 50% surface water 50% water reclamation	▲
	Leak Detection Leaks Located / GPY Water Loss Reduction	747 miles surveyed 3,849 miles monitored 85 leaks found 111 MGY water loss reduced	650 miles surveyed 2,200 miles monitored > 80 leaks found 105 MGY water loss reduced	▲
	Miles of Small Diameter Sewer Line Cleaned	589	Between 500 to 600 miles	▲
	Miles of Sewer Line Televised	100	> 99.6 miles	▲
Environment	% of Biosolids to Compost	31%	> 30%	▲
	Water Consumption Goal	11 BGY GW 20 BGY SW	< 18 BGY GW > 16 BGY SW	▲
	Renewable Energy	21% Bio Gas 7% Solar	20% Bio Gas 5% Solar	▲
Compliance	Reported Overflows	34	< 45	▲
	Number of Permit Excursions	4	<= 5	▲
	Sewer Use/Wastewater Control Ordinance Compliance	89% Permitted Industrial Users 89% Food Service Est. 99% Dental Offices	87% Permitted Industrial Users 87% Food Service Est. 87% Dental Office	▲
Finance	Rehabilitation Spending	\$111 million	\$50 million	▲
	CIP Emergency vs. Planned Spending	88% Planned 12% Emergency	54% Planned 46% Emergency	▲
	Cash Reserves (Days)	292 days	Between 90-179 days	▲
	Revenue to Expenditures	104%	> 100%	▲
	Expenditures to Budget	99%	< 100%	▲
Safety	Injury Time	2,422 hours	< 2,700 hours	▲

Performance Key

▲
On Target/Target Achieved

■
Work in Progress / Below Target

▼
Target Not Met

Water Loss Control

Angelique Maldonado
Water Use Compliance Supervisor
September 2017



Albuquerque Bernalillo County
Water Utility Authority

Water Loss Control

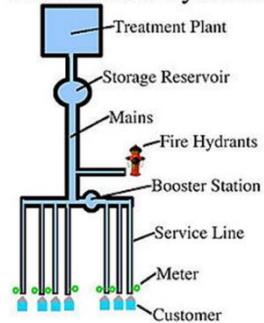
- 💧 State and regional reporting programs aim to evaluate water loss, encourage utilities to proactively pursue water loss control, and allocate financial and educational resources to mitigating water loss.
- 💧 The Office of the State Engineer requires New Mexico drinking water suppliers to assess real water leakage, lost revenue, and conservation potential. The methodology utilized is based on the American Water Works Association, Water Loss Control Committee recommendations and software.
- 💧 As we ask our customers to conserve water, it is important that we set a good example and lead the way in making our water delivery system as efficient as possible.



Scope

- Source Water: Surface water, GW wells
- 3387 miles of Distribution Pipe, 60 storage reservoir tanks, 46,017 valves, 18,563 hydrants
- In excess of 212,000 customer accounts

Distribution System:



Albuquerque Bernalillo County
Water Utility Authority

Methodology

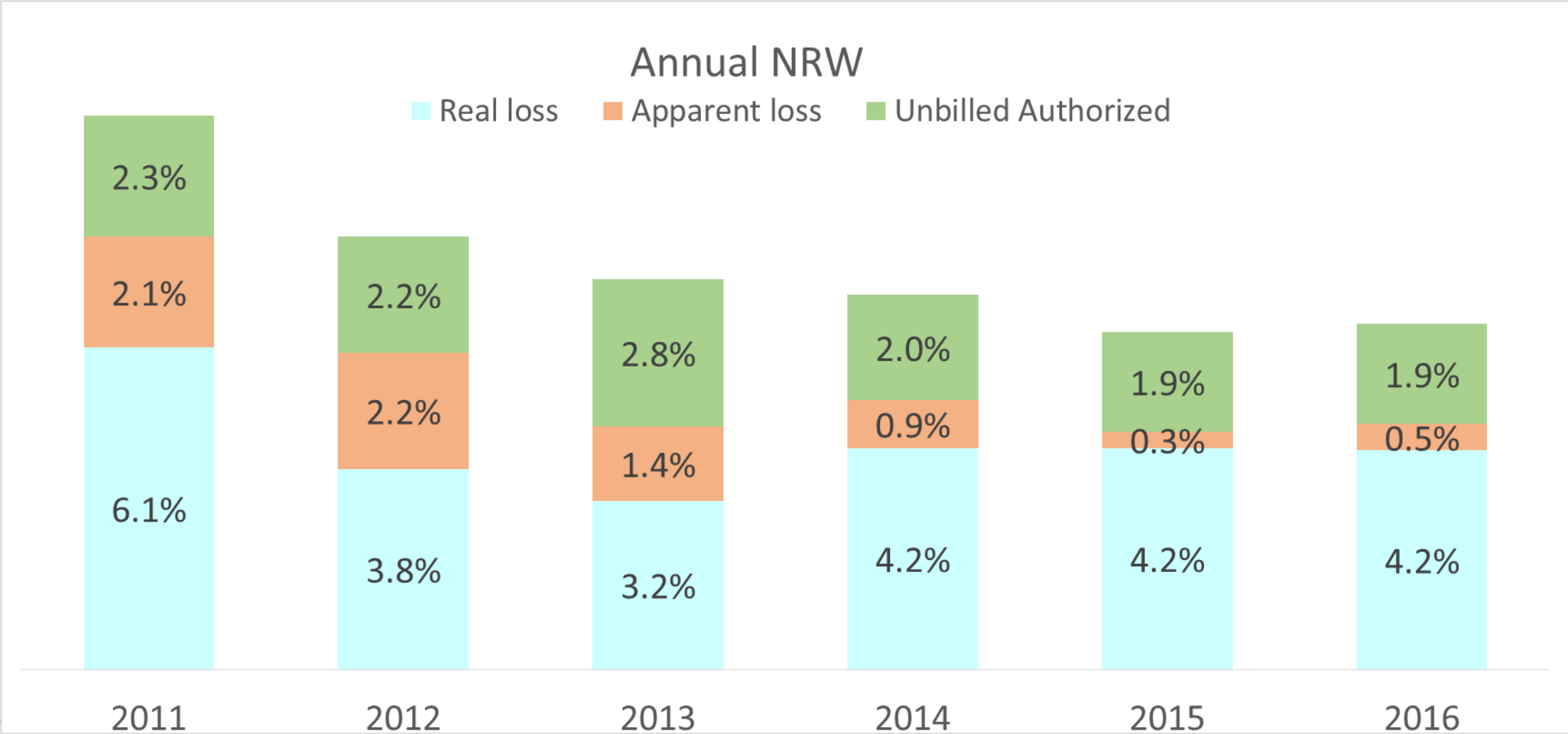
Water Loss Accounting: Standard Water Balance

Volume from Own Sources (corrected for known errors)	System Input Volume	Water Exported (corrected for known errors)	Billed Water Exported				Revenue Water
		Authorized Consumption	Billed Authorized Consumption	Billed Metered Consumption			
				Billed Unmetered Consumption			
			Unbilled Authorized Consumption	Unbilled Metered Consumption			
				Unbilled Unmetered Consumption			
Water Imported (corrected for known errors)		Water Supplied	Water Losses	Apparent Losses	Unauthorized Consumption		
					Customer Metering Inaccuracies		
					Systematic Data Handling Errors		
				Real Losses	Leakage on Transmission and Distribution Mains		
			Leakage and Overflows at Utility's Storage Tanks				
Leakage on Service Connections up to the point of Customer Metering							
							Non-Revenue Water (NRW)

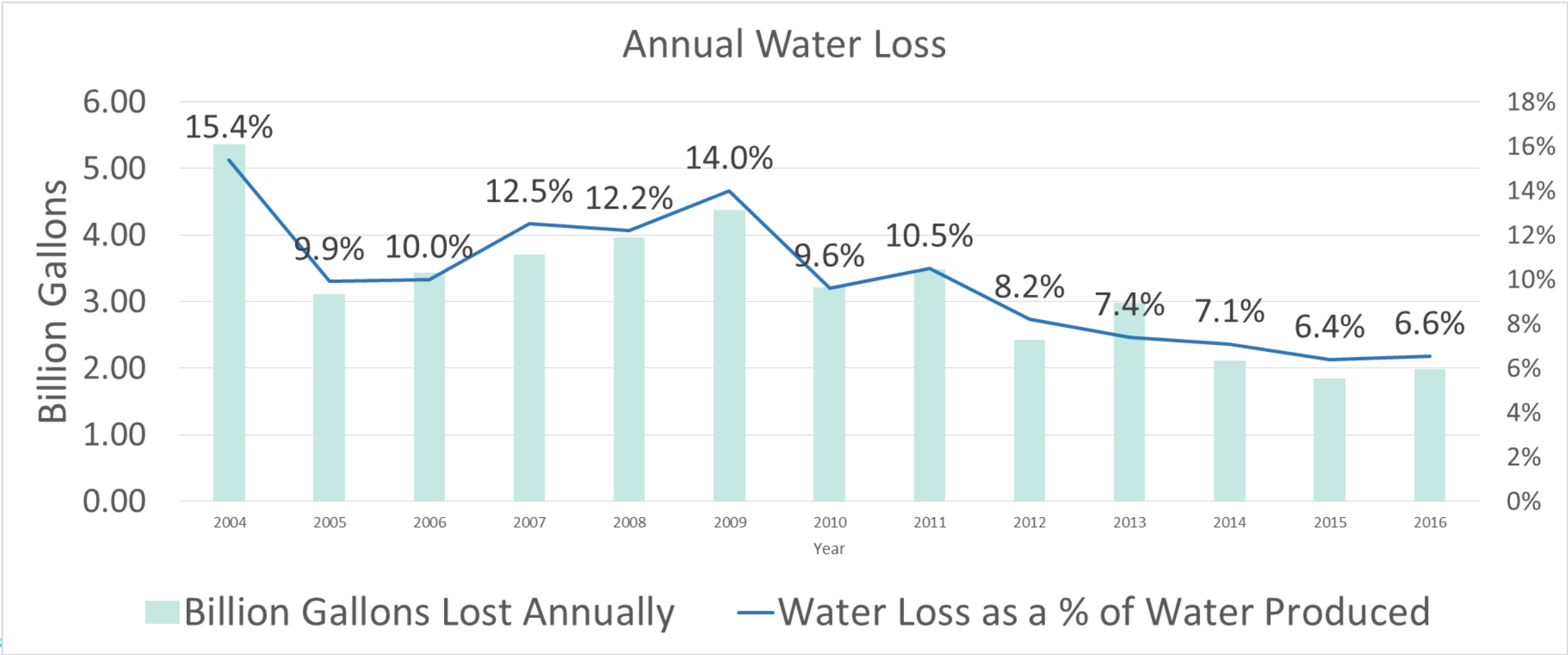
Source: AWWA 2016.

💧 2010-The Water Authority began using the AWWA Standardized water Audit software and participating in the Water Audit Data Initiative data validation process

Non-Revenue Water Trends



Annual Water Loss Reduction



Albuquerque Bernalillo County
Water Utility Authority

Data Initiative NRW Comparison

Key Performance Indicator	# Utilities	Average	Range	ABCWUA
NRW as a % by volume	21	22.60%	6.8% - 45.5%	6.60%
NRW Total Cost (Million Dollars)	21	\$5.81	\$.04 - \$42.97	\$1.24
Water Audit Validity Score	21	74.97%	52.28% - 89.72%	87%

AWWA Data Initiative Data Ranges

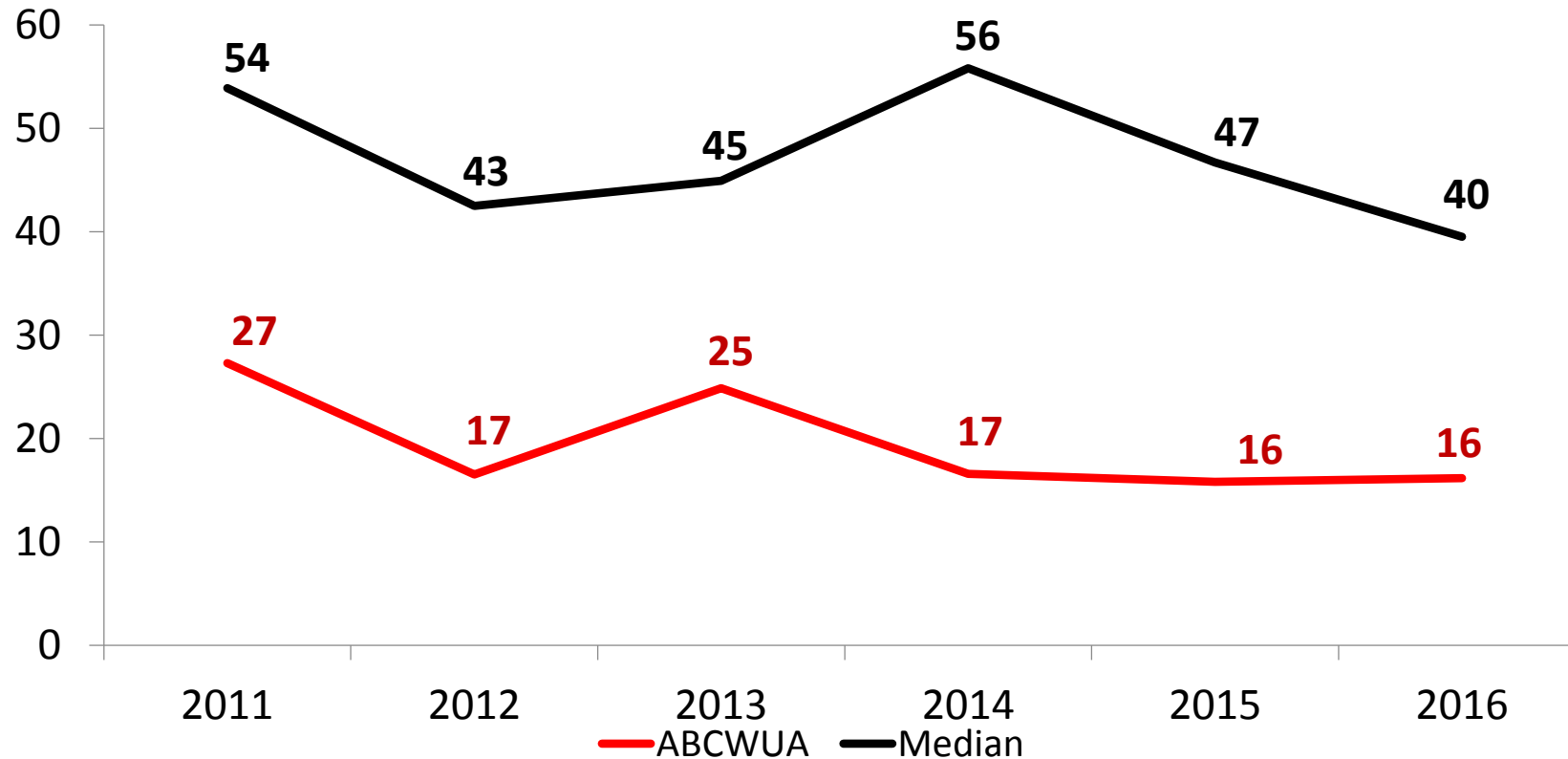
2016 Water
Authority Audit
Results



Albuquerque Bernalillo County
Water Utility Authority

System Leakage Loss

*System Leakage Losses per service connection per day
(gallons/connection/day)*



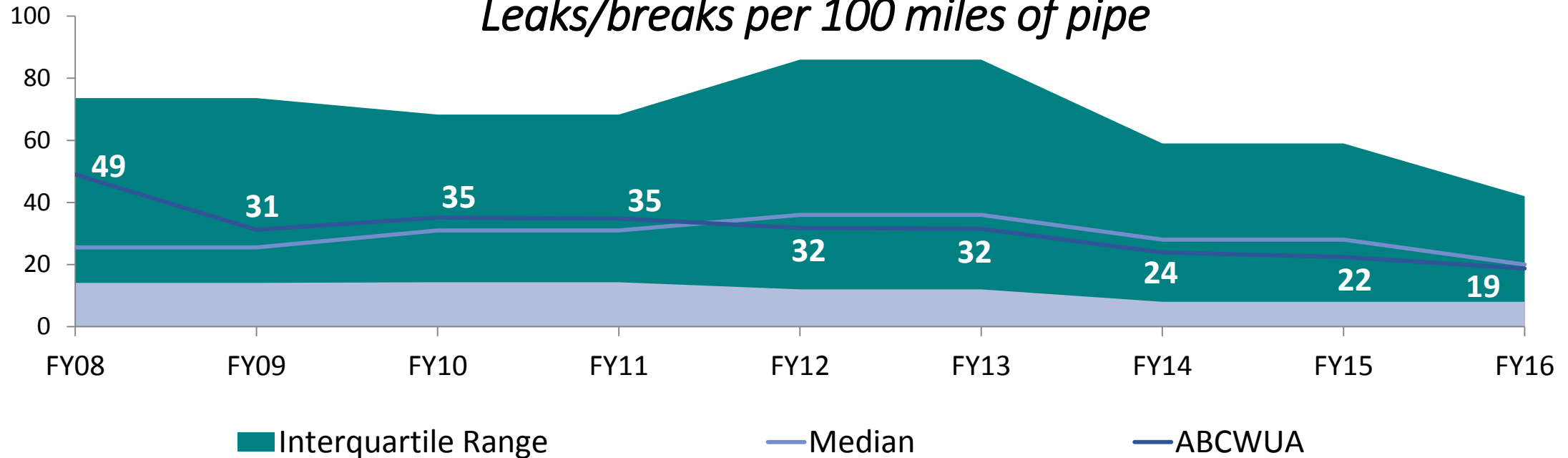
Lower Values Desirable



Albuquerque Bernalillo County
Water Utility Authority

Operational Success Measures

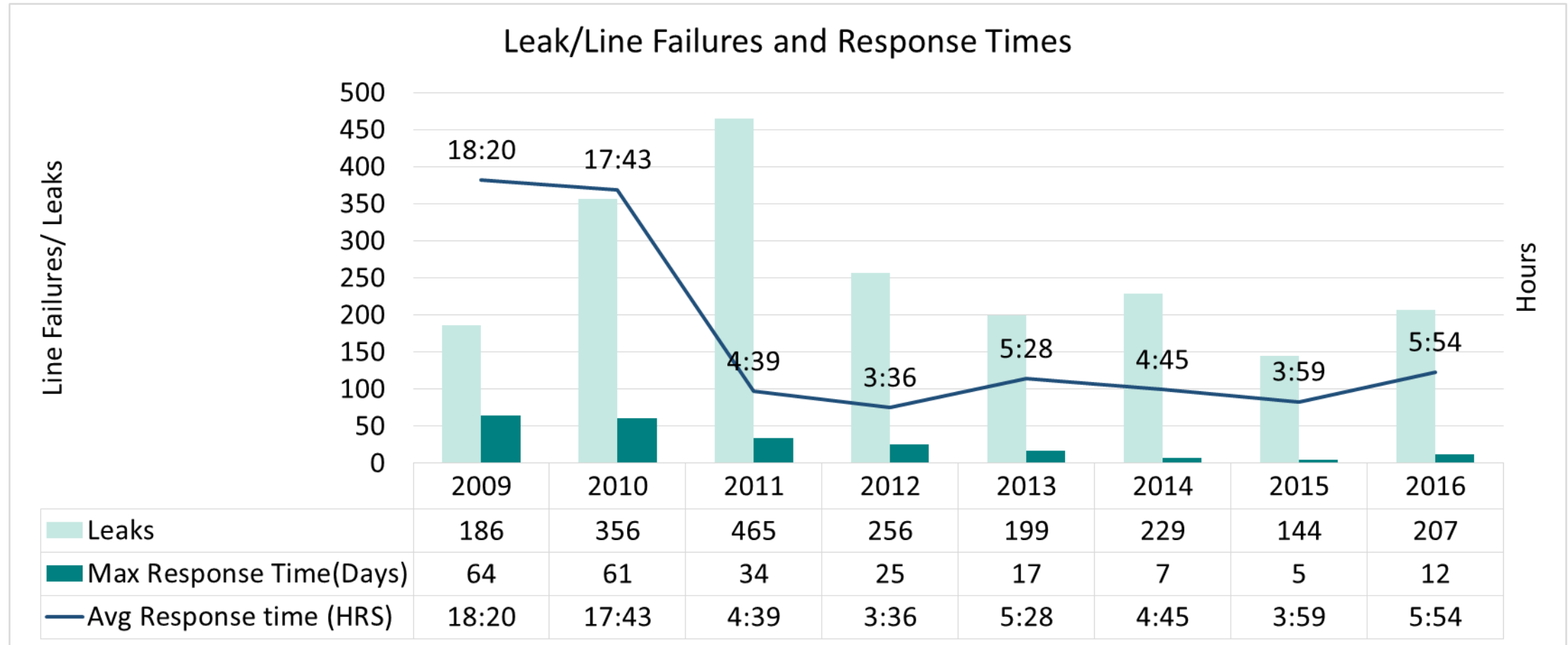
Water Line Integrity *Leaks/breaks per 100 miles of pipe*



Lower Values Desirable

WRF-4109 Distribution Optimization Criteria describes an optimized distribution system as having 15 breaks/100 miles

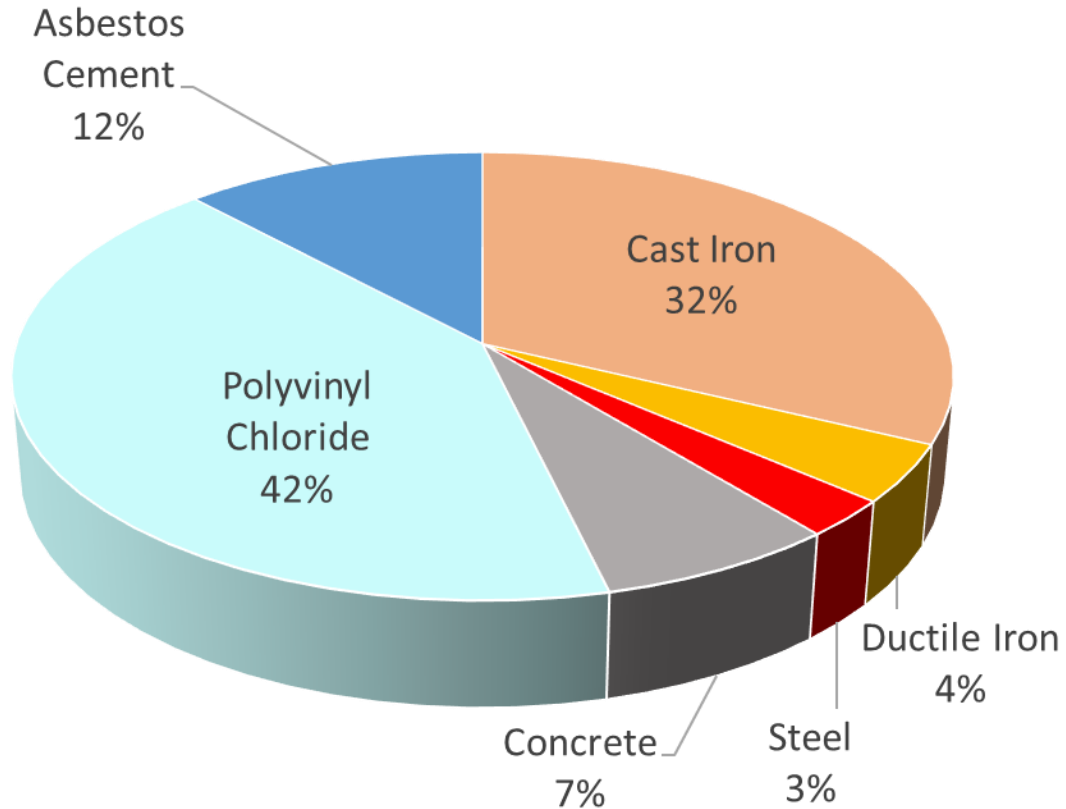
Workforce Success Measures



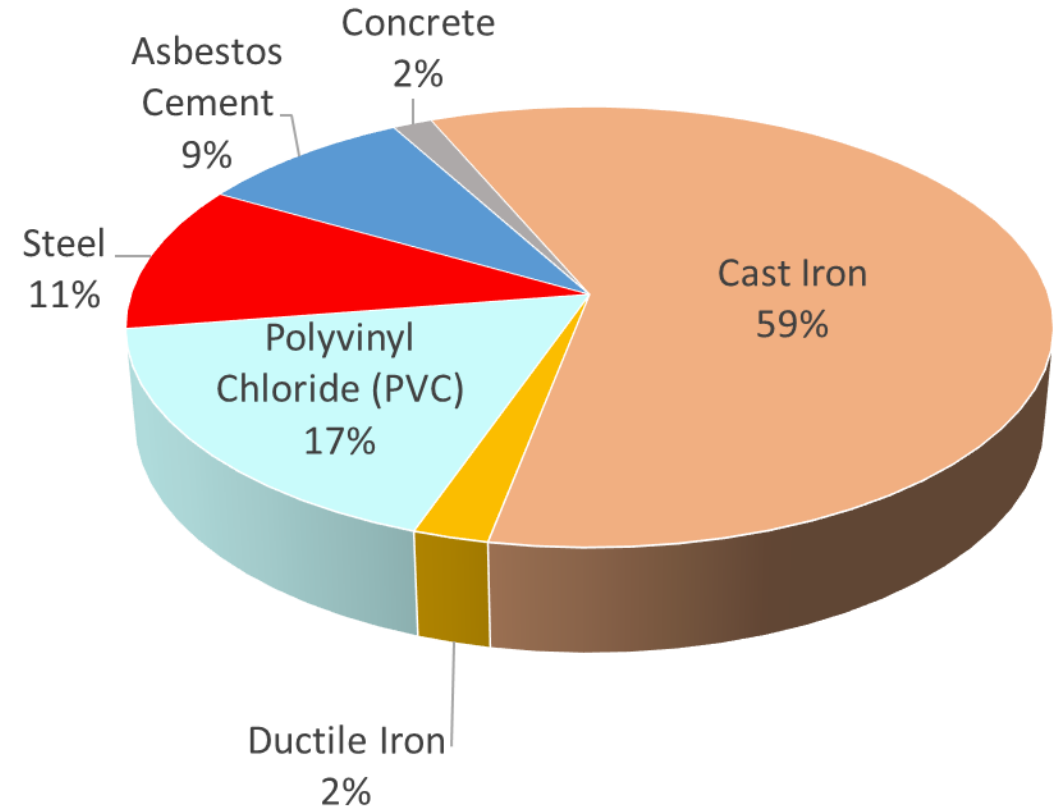
Albuquerque Bernalillo County
Water Utility Authority

Pipeline Rehabilitation and Replacement

Potable Pipe Inventory



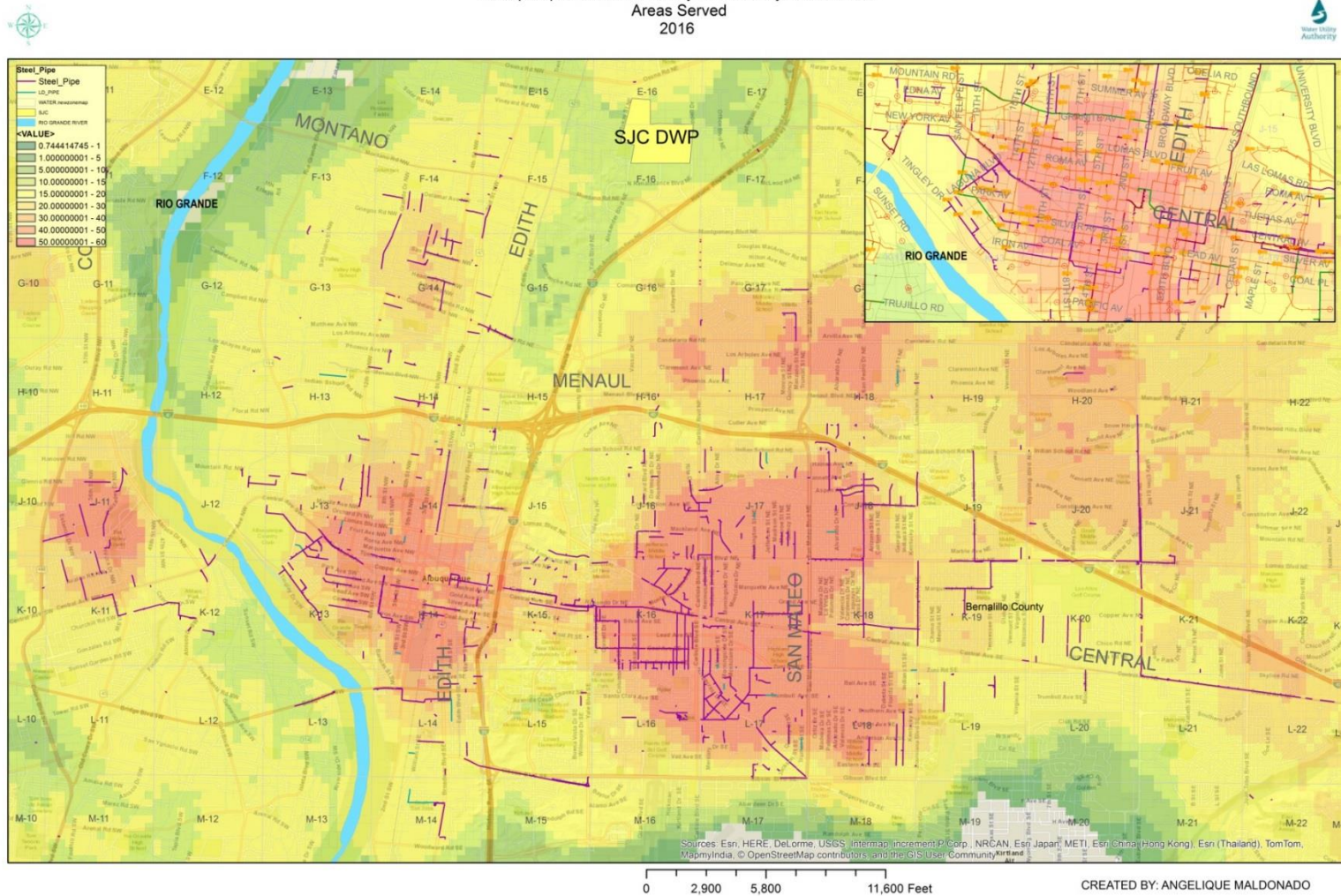
Pipe Failures by Pipe Material



Albuquerque Bernalillo County
Water Utility Authority

Targeted Proactive Leak Detection

Albuquerque Bernalillo County Water Utility Service Area
Areas Served
2016



Conclusions

- 💧 Water Loss Control has reduced water loss by 3.38 billion gallons/year since 2004
- 💧 Water Audit Data validity has increased from 74% to 87% since 2010
- 💧 Field crews have reduced response times to line failures by 30% since 2009