



Technical Customer Advisory Committee

AGENDA

Members

Melissa Armijo
Andrew Bernard
Janie Chermak
Robert Fowlie
Dave Hill

Erwin Melis
Amy Miller
Ron Schwarzwald
Scott Verhines

Thursday, November 7, 2019

4:00 PM

OneABQ GC – 7th Floor
Conference Room 7096

- | | |
|---|-----------|
| 1. Call to Order | 4:00-4:05 |
| 2. Approval of Agenda | 4:00-4:05 |
| 3. Approval of September 5, 2019 Action Summary | 4:00-4:05 |
| 4. Presentation on Improving the Online Customer Experience | 4:05-4:30 |
| 5. Presentation on AWWA Partnership Programs | 4:30-5:15 |
| 6. Public Comment | 5:15-5:20 |
| 7. Adjournment | 5:20 |

NOTICE TO PERSONS WITH DISABILITIES: If you have a disability and require special assistance to participate in this meeting, please contact the Water Utility Authority Office, Suite 5012, Albuquerque/Bernalillo County Government Center, phone 289-3100, as soon as possible prior to the meeting date.



Technical Customer Advisory Committee

ACTION SUMMARY

September 5, 2019

Members Present:

Amy Miller
Andrew Bernard
Dave Hill
Erwin Melis
Janie Chermak
Melissa Armijo
Robert Fowlie
Ron Schwarzwald
Scott Verhines

Members Excused:

Water Authority Staff Present:

Carlos Bustos, Water Conservation Program Manager
Denise Rumley, Water Conservation Supervisor
Elizabeth Anderson, Chief Innovation and Performance Manager
Frank Roth

Item 1 – Call to Order - Note presence of quorum

The meeting was called to order at 4:05 pm by Chair Janie Chermak.

Item 2 – Approval of Agenda

Ron Schwarzwald made a motion to approve the agenda. Erwin Melis seconded the motion. The motion passed on a 6-0 vote.

For: 6	Chermak, Fowlie, Melis, Schwarzwald, Bernard, Verhines
Against: 0	
Excused: 3	Armijo, Hill, Miller

Item 3 – Approval of August 8, 2019 Action Summary

Erwin Melis requested that the August 8, 2019 Action Summary be edited to move his vote from “For” to “Abstain”. Consequently, the last sentence of the paragraph was also updated to state “The motion passed on a 3-0 vote.” This edit has been made and the revised action summary has been posted.

Erwin Melis made a motion to approve the action summary, as amended. Robert Fowlie seconded the motion. The motion passed on a 5-0 vote.

For: 5	Chermak, Fowlie, Melis, Schwarzwald, Bernard
Against: 0	
Abstain: 1	Verhines
Excused: 3	Armijo, Hill, Miller

Amy Miller, Dave Hill, and Melissa Armijo joined the meeting at this time.

Item 4 – Presentation on Water Conservation Update & Proposed Awards Program

Carlos Bustos provided an update on water conservation and discussed a proposed awards program that would recognize Water Authority customers for excellence in water conservation. He provided a background on the success of the water conservation program, updates to the rebate program, and goals moving forward. He discussed the new website www.505Outside.com, water conservation program highlights and recent successes. He requested feedback from the TCAC on the proposed customer recognition program and facilitated a group brainstorming session using a feedback capture grid. A summary of feedback received from the TCAC during this brainstorming session is provided in the feedback capture grid in **Table 1**.

Item 5 – Public Comment

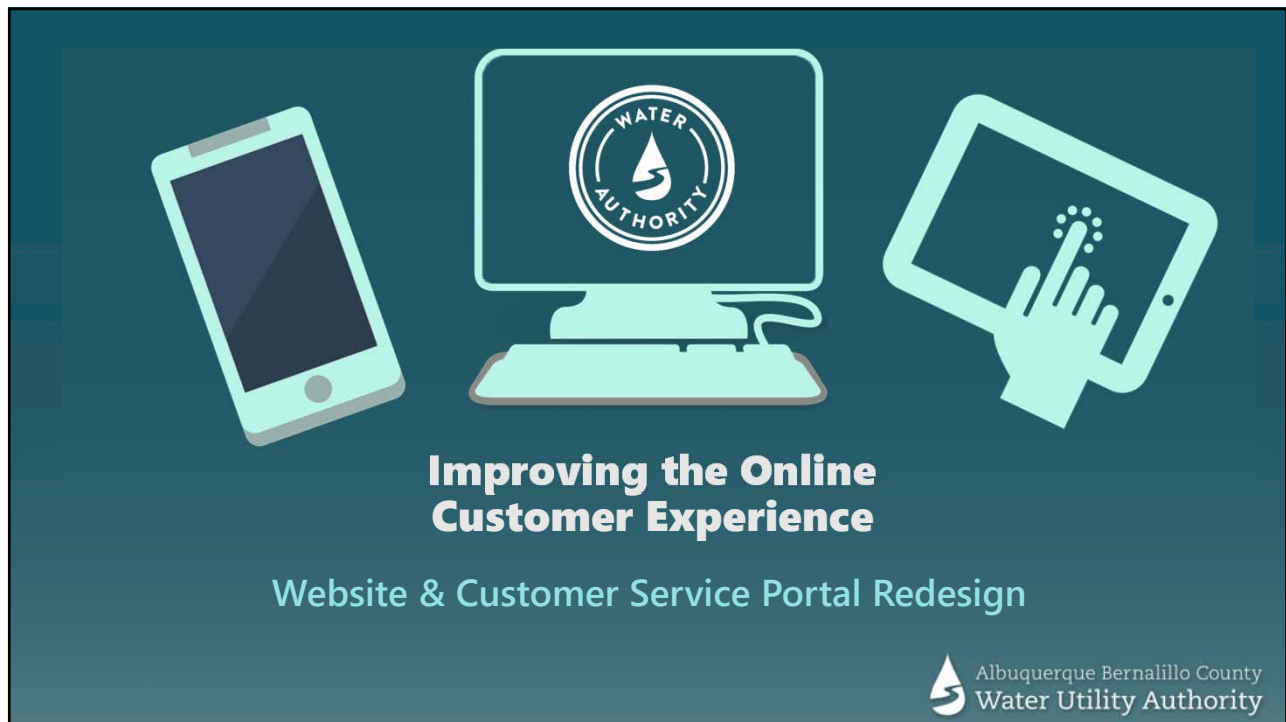
None.

Item 6 – Adjournment

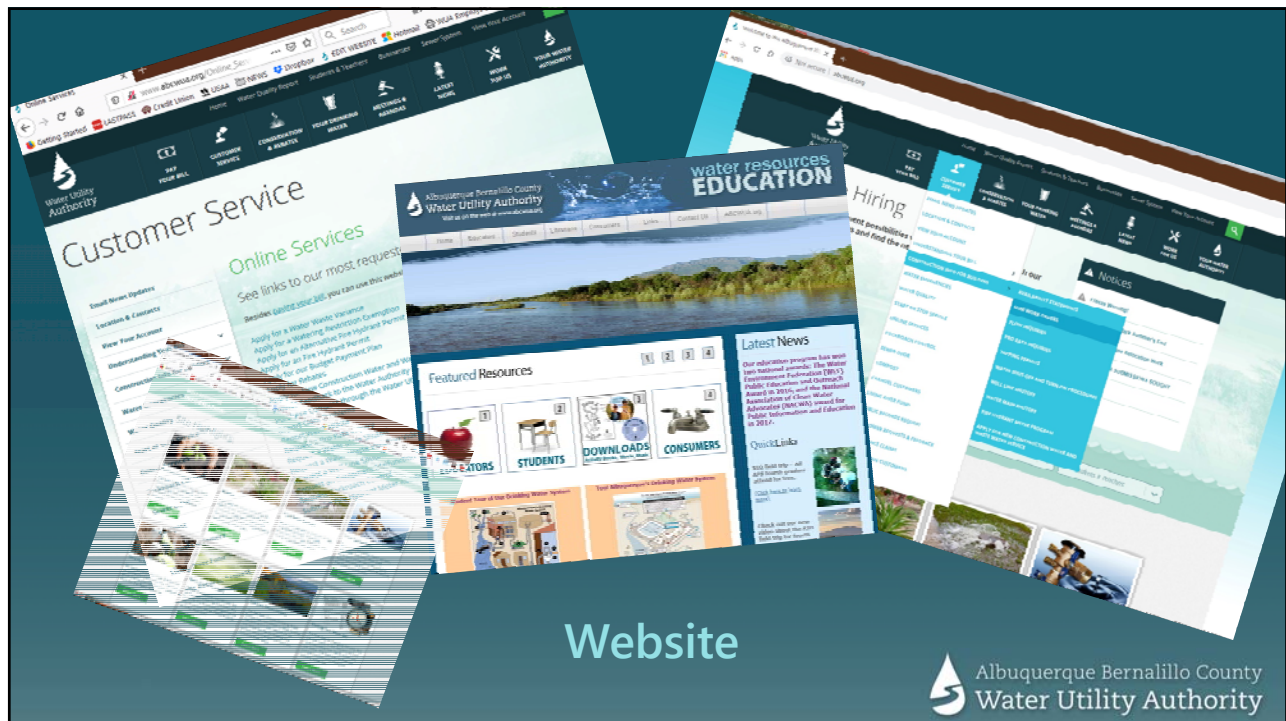
The meeting concluded at 5:28 pm.

Table 1: Feedback capture grid containing a summary of feedback received from the TCAC on the proposed customer recognition program

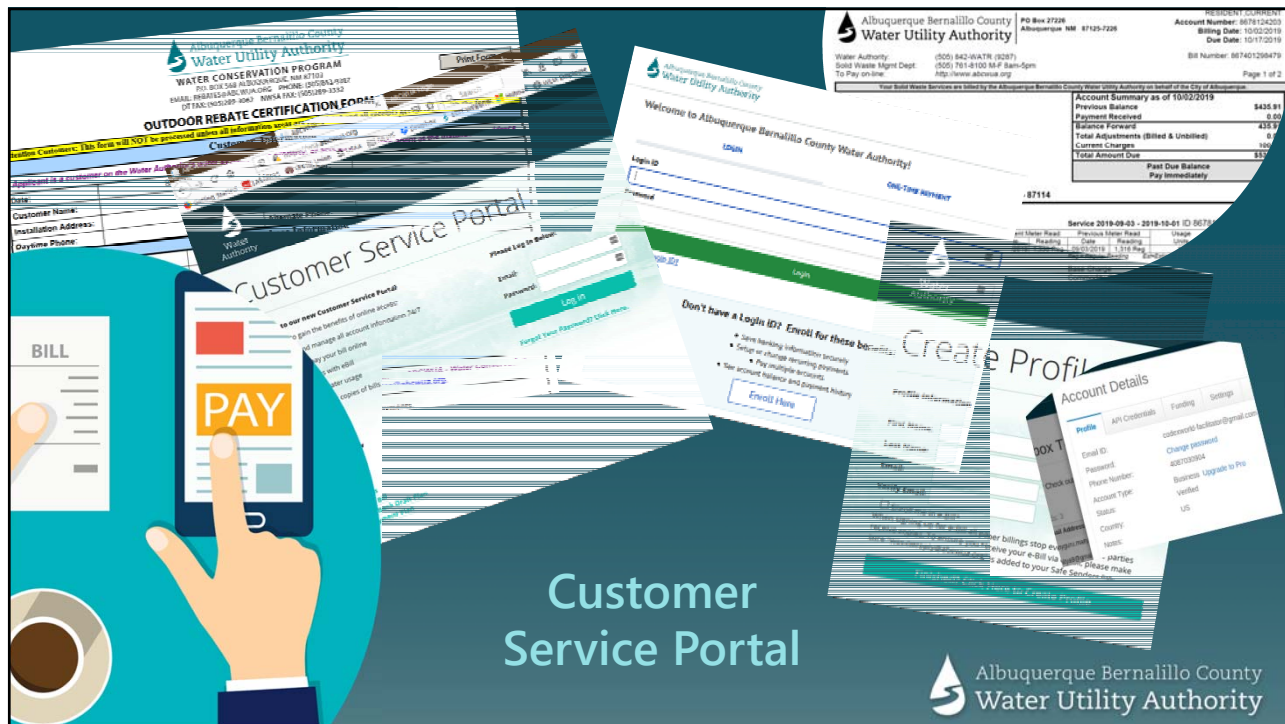
<p><u>Nomination Process...</u></p> <ul style="list-style-type: none"> • Keep the program simple/easy, especially at the beginning and let it evolve gradually • Office of the State Engineer (OSE) Water Use & Conservation Program • Public at Large – individuals nominate themselves or others • Landscape Architects • Landscapers • Property Managers • Professional Associations / Groups <ul style="list-style-type: none"> ○ American Water Works Association (AWWA) ○ New Mexico Rural Water Association (NMRWA) ○ Commercial Real Estate Development Association (NAIOP) ○ Home Owners Associations (HOA's) ○ Neighborhood Associations 	<p><u>Scoring System...</u></p> <ul style="list-style-type: none"> • Matrix approach to application scoring • Measurement Parameters: <ul style="list-style-type: none"> ○ Beautification ○ Before & After Comparison ○ Education ○ Impact ○ Innovation ○ Scale ○ Sustainability ○ Technology ○ Water Savings
<p><u>Types of Awards...</u></p> <ul style="list-style-type: none"> • Stickers / digital award emblem for marketing • Recognition - celebrate recipients • Trophy • Monetary awards / rebates • Potential Awards: <ul style="list-style-type: none"> ○ Median awards ○ Healthy neighborhood awards ○ Residential Champions ○ Best / Most Efficient Park ○ Irrigation awards 	<p><u>How to promote the program...</u></p> <ul style="list-style-type: none"> • Branding • Water innovation – get kids involved • Parade of Homes Type event • Media / Press Release • Social Media • Professional Associations • Developers / Home builders



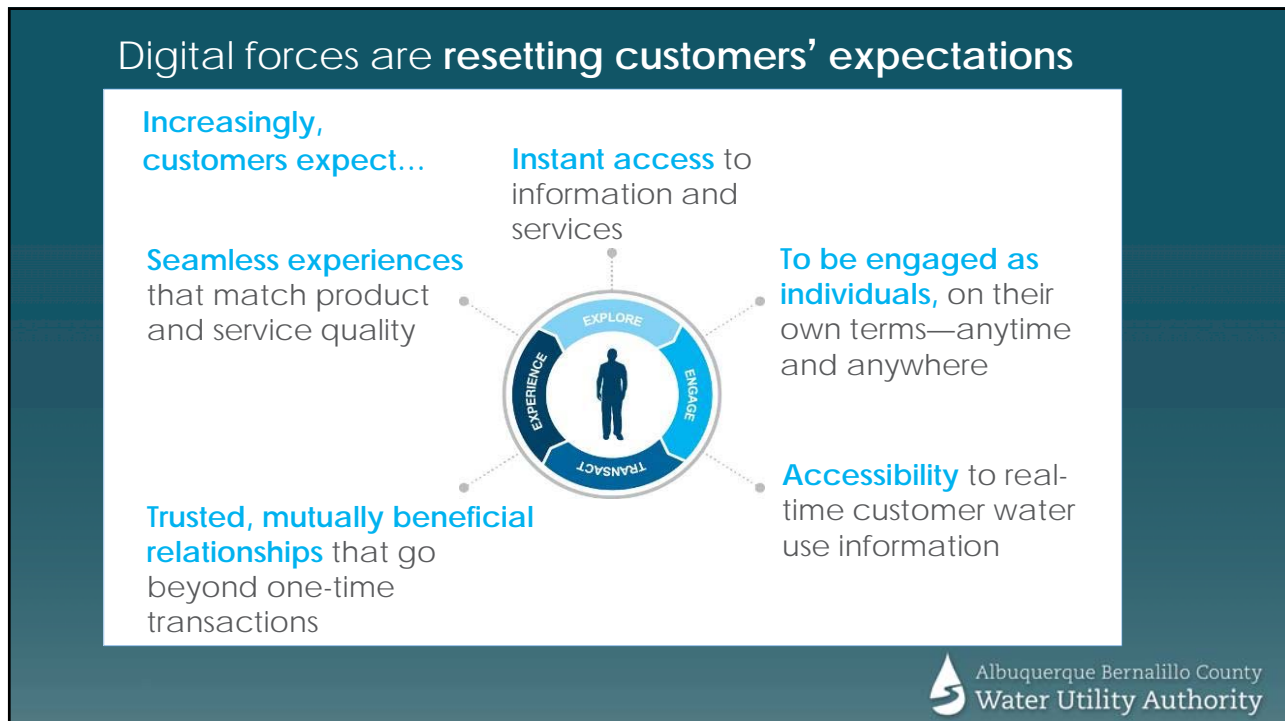
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Design and Build Methodology



Get to know Users and their needs:

- Analytics Review
- Heuristic Review
- User Interviews
- Rapid Visioning Workshop



Get to know the context: What do users want to do: recognize gaps and see opportunity

- User Personas
- User Journeys
- Requirements Prioritization
- Content Assessment



Frame Insights: Analyze data, find patterns and develop a schema

- Wireframes
- Flows
- Visual Design



Foundational Content management System (CMS)

- Responsive
- Easily Maintainable
- Expandable
- Secure



Iterative Feedback:

- Stakeholder Reviews
- User Testing



Water Authority Participation in the AWWA Partnership Programs

Charles Leder, P.E., Plant Division Manager
November 7, 2019



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Agenda

- Cover history & goals of partnership programs
- Connection to continuous improvement goals
- Current status of participation in each program
- Detailed look at how Water Authority scored



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Partnership for Safe Water

Water Treatment & Distribution Optimization

The Partnership for Safe Water is an unprecedented alliance of six prestigious drinking water organizations. The PSW's mission is to improve the quality of water delivered to customers by optimizing water system operations. The PSW offers self-assessment and optimization programs so that operators, managers and administrators have the tools to improve performance above and beyond even proposed regulatory levels.



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Partnership for Clean Water

Wastewater Treatment Optimization

The Partnership for Clean Water is a global optimization and recognition program for wastewater utilities. It is established as a parallel program to the Partnership for Safe Water, which has successfully been helping drinking water utilities optimize performance for more than 20 years. The first Partnership for Clean Water program is for wastewater treatment plant optimization, with programs for the optimization of reuse facilities and collection systems to be launched in the future



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AWWA Partnerships for Safe Water & Clean Water

- Safe Water = potable water production/distribution
- Clean Water = water reclamation & treatment

Tied to the Authority's annual performance objectives



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AWWA Partnerships for Safe Water & Clean Water

- A systematic way to look at performance to find:
 - Issues / concerns that could be hindering production of SAFE WATER or CLEAN WATER
 - Specific measures to consider to further improve performance
- A focus on how to get better performance by optimizing operations (*working smarter, not harder*)



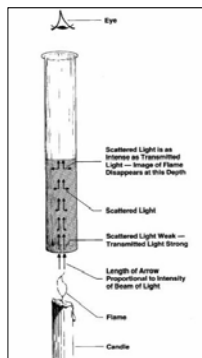
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AWWA Partnerships for Safe Water & Clean Water

- Partnership Phases are:
 - Phase 1: Initial Commitment / sign-up
 - Phase 2: Data collection / submittal & benchmark review
 - Phase 3: Detailed Self-Assessment
 - Thorough grading by AWWA program staff & volunteers
 - Phase 4: Completing prioritized “things to improve”
- A detailed look into operational performance; Are basic benchmarks being met? **If not, why not?**

AWWA PSW-Treatment

- Turbidity and its role in water treatment:



- If water is turbid, then disinfection will **Suffer!**

AWWA Partnership for Safe Water

- In the beginning (1993)....*

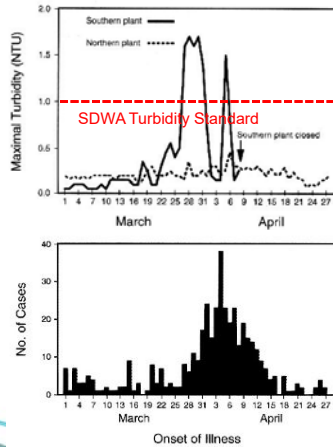


Photo images courtesy of Milwaukee Sentinel archives

AWWA Partnership for Safe Water

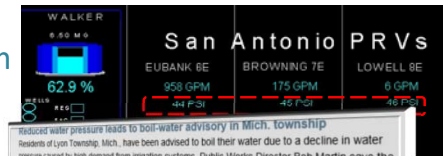
- Of 880,000 customers served by Milwaukee Southern Plant, \approx 403,000 persons got sick (46%)
- Drinking Water Industry Response to Milwaukee Cryptosporidiosis outbreak was....

We've got to do better!

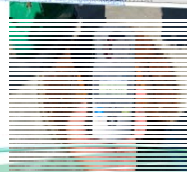
- PSW developed by AWWA, EPA, AMWA & other stakeholders as the path forward to getting better
 - EPA also developed tighter regulations for drinking water treatment

Self-Assessment for PSW-Distribution

- The 3 benchmarks:
 - Line break frequency ≤ 15 per 100 miles of line ?
 - Average monthly system pressure ≥ 35 psi ?
 - Free Cl_2 residual maintained between 0.20 – 4.0 mg/L ?



Reduced water pressure leads to boil-water advisory in Mich. township
Residents of Lyon Township, Mich., have been advised to boil their water due to a decline in water pressure caused by high demand from irrigation systems. Public Works Director Bob Martin says the township is constructing the second of two water facilities that will increase water capacity.



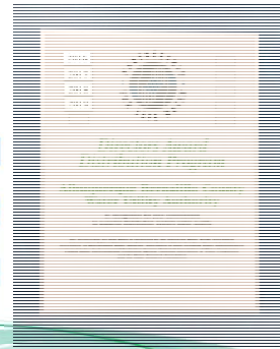
Self-Assessment for PSW-Distribution

- Look at 85 categories of Performance:
 - Administration & financial issues (debt service)
 - Cross Connection control
 - Customer complaints & response
 - Distribution water quality measurement / management
 - Pressure control & energy management
 - Asset management and maintenance
- Began in 2012 & completed in Dec 2015
- A joint effort by Compliance, Field Operations, Plant Operations, and Central Planning & Engineering

Self-Assessment for PSW-Distribution

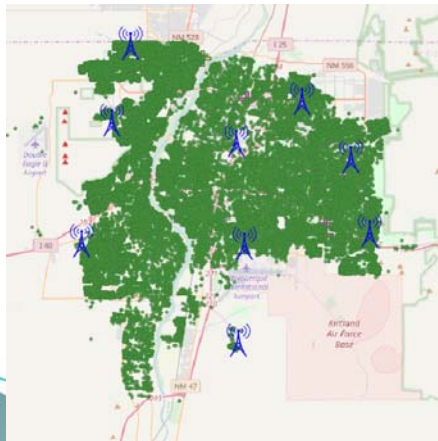
- Scoring each of the 85 categories of performance:
 - Optimized and documented
 - Partially optimized
 - Not optimized
 - Not applicable
 - e.g., we don't chloramine our water
- How did we score in the 85 categories?

Criteria Grade	#	% of total
Not applicable to Water Authority	5	
Optimized and Documented	51	64%
Partially Optimized	26	33%
Not Optimized	3	4%
Total applicable criteria	80	



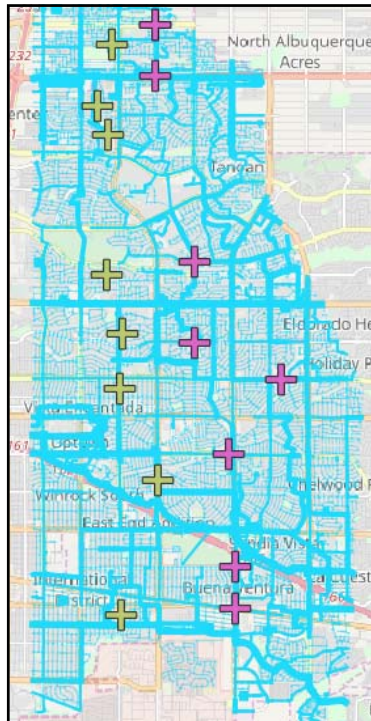
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Example Project Resulting from Partnership Program Findings: Albuquerque Pressure Monitoring



Service Population	670,000
Meters	200K
Base Stations	9
Elevation Change	1600 ft.
Pressure Zones	25
PRVs	300

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Pressure Monitoring Pilot

- Reduced pressure zone (4ER)
- PRVs upstream of area
- Smart Gateway (SGW) and pressure sensors placed at PRVs at entrance to zone
- “Ally” meters placed downstream at service connections in pressure zone
- “Ally” meters collect/transmit pressure data

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Installations

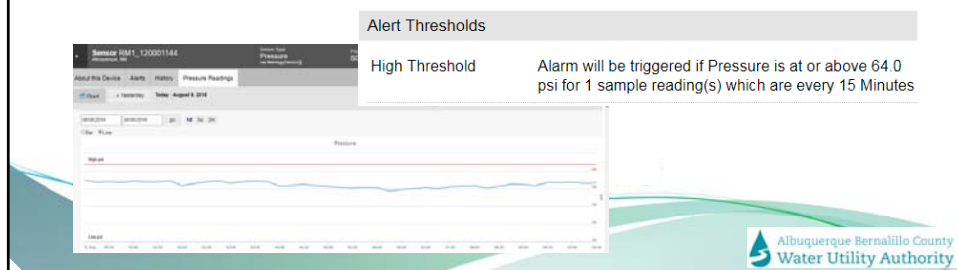
- PRVs below grade in vaults or man holes
- SGW installed below covers or outside vault
- Covers / Lids:
 - aluminum (traffic rated)
 - cast iron man hole covers



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Thresholds and Alarms

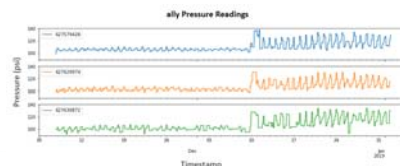
- Calculated and set based on design values
- Actual field values measured
- Threshold adjusted based on measured value
- Change magnitude OR duration when threshold crossed



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Findings

- Zone valves appear to be set properly
- One PRV issue identified and corrected
- High pressure may occur after main break repairs
- Diurnal pattern that defies expected values governed by PRV set points



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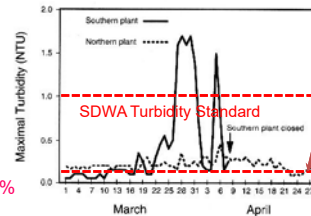
PSW-Treatment

- Basic criteria: Are $\geq 95\%$ of filtered water readings < 0.10 NTU?

SJCWTP results for last quarter:

99.90% !

19 out of 20 = 95% versus 9,990 out of 10,000 = 99.90%



- Initial filter turbidity data submittal made in 2016 and is made each year
- Noteworthy question from Phase 3 Assessment:
Does a culture of learning/continuous improvement exist at all levels of staffing?

Self-Assessment for PSW-Treatment

- Phase 3 Self Assessment submitted in July 2018
- Our scoring for the 155 categories of performance:

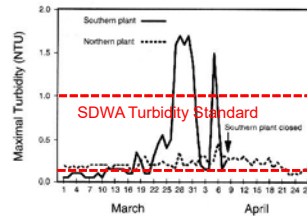
Criteria Grade	#	% of total
<i>Not applicable to SJCWTP</i>	9	
Optimized and Documented	134	92%
Partially Optimized	11	8%
Not Optimized	1	<1%
Total applicable criteria	146	

- Qualified for Director's Award



PSW-Treatment

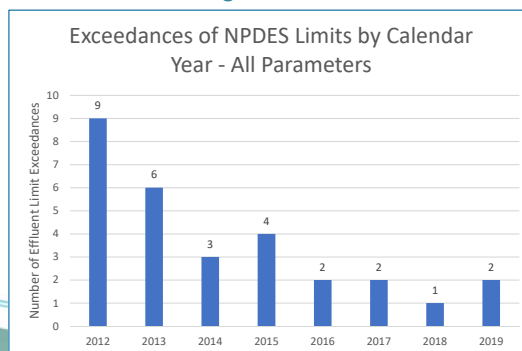
- Next steps for us:
 - Complete work on the 12 areas from Phase III so they can be considered as O&D
 - Demonstrate that 95% of turbidity readings from EACH of 12 FILTER CELLS < 0.10 NTU
 - Demonstrate we have SOPs / Policies in place to do this even if raw water quality gets bad
- Goal: Phase IV – Excellence in Treatment



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Partnership for Clean Water

- Our effluent could be someone's water supply
- Phase III Self-Assessment completed June 2018; We were the 1st utility to have assessment graded!
- Basic criteria: Does SWRP routinely meet its NPDES Permit limits for NH₃, BOD, and TSS?



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Partnership for Clean Water

- Phase 3 Self Assessment looked at 247 categories of plant performance
- Our scoring from Phase III Self-Assessment:

Criteria grade	#	% of total
<i>Not applicable to Water Authority</i>	74	
Optimized and Documented	148	86%
Partially Optimized	17	10%
Not Optimized	8	5%
Total applicable criteria	173	



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Self-Assessment for PCW

- Room for improvement at SWRP!

"TO DO" List; Items scored in 2018 as Partially or Not Optimized	
Section 4 - Optimize sludge dewatering process	2
Section 5 - Energy management & optimization	15
Section 6 - Instrumentation calibration & SCADA	2
Section 7 - Administration & Management	6
Total applicable criteria	25

- "Continuous improvement is better than delayed perfection"

-Mark Twain

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AWWA Partnerships for Safe Water & Clean Water

- Just adding more money is usually NOT the answer
- Complacency is the ENEMY!

