





**Washington County Service Authority Board of Commissioners
December 16, 2019 Regular Board Meeting Minutes**

Agenda Item: 1  COMMUNICATION	Call the Meeting to Order
Presenter(s):	Chairman
Beginning Time:	
End Time:	6:00


Agenda Item: 2  COMMUNICATION	Roll Call
Presenter(s):	Chairman
Beginning Time:	
Present:	Mr. Thayer, Mr. Taylor, Mr. Campbell, Mr. Miller, Mr. McCall and Mr. Orfield
Absent:	Mr. Smith
End Time:	6:01 pm

Agenda Item: 3  COMMUNICATION	Prayer and Pledge of Allegiance
Presenter(s):	Mr. Campbell opened in prayer and lead the Pledge of Allegiance.
Beginning Time:	
End Time:	6:01


Agenda Item: 4  COMMUNICATION	Approval of the Agenda
Presenter(s):	Chairman
Beginning Time:	
Potential Conflict(s) of Interest and Abstention(s):	
Discussion:	
On the Record:	
Actual Motion:	Motion to approve the Agenda.


**Washington County Service Authority Board of Commissioners
December 16, 2019 Regular Board Meeting Minutes**

Motion By:	Mr. Campbell
Second By:	Mr. Orfield
Voting: Ayes:	6
Nays:	0
Abstain:	0
End Time:	6:02 pm

Agenda Item: 5  COMMUNICATION	Public Query and Comment
Presenter(s):	Chairman
Beginning Time:	
Potential Conflict(s) of Interest and Abstention(s):	
Speakers:	None
Discussion:	
On the Record:	
Actual Motion:	
Motion By:	
Second By:	
Voting: Ayes:	
Nays:	
Abstain:	
End Time:	6:02


**Washington County Service Authority Board of Commissioners
December 16, 2019 Regular Board Meeting Minutes**

Agenda Item: 6  COMMUNICATION	Consent Agenda
Presenter(s):	Chairman
Beginning Time:	
Potential Conflict(s) of Interest and Abstention(s):	
Discussion:	Mr. Miller recognized the employees who reached a 5 year milestone in years of service during the month of November 2019.
On the Record:	
Actual Motion:	Motion to improve the Consent Agenda
Motion By:	Mr. Campbell
Second By:	Mr. Thayer
Voting: Ayes:	6
Nays:	0
Abstain:	0
End Time:	6:03

Agenda Item: 6D  EMPLOYER OF CHOICE	Years of Service Awards
Presenter(s):	Chairman
Beginning Time:	
Potential Conflict(s) of Interest and Abstention(s):	
Background:	<p>WCSA's dedicated employees lead the industry and the region by providing excellent, affordable, environmentally responsible water and wastewater service (<i>WCSA Mission Statement</i>).</p> <p>Years of service recognition by the Board is one of three ways WCSA recognizes the long-term commitment of our people to our customers. The following folks achieved a 5-year milestone during November 2019:</p> <ul style="list-style-type: none"> ▪ Robbie Cornett – 30 Years of Service ▪ Nancy White – 20 Years of Service ▪ Shane Hall – 15 Years of Service
Discussion:	

Washington County Service Authority Board of Commissioners
December 16, 2019 Regular Board Meeting Minutes


On the Record:	
Enclosures:	
Recommendation:	Approve the years of service awards.
Proposed Motion:	Move to approve the years of service awards as presented.
Actual Motion:	Approved as part of the Consent Agenda
Motion By:	
Second By:	
Voting: Ayes:	
Nays:	
Abstain:	
End Time:	

Agenda Item: 6E	Consideration of Request to Pursue Funding and Contribute WCSA Funds for a Water Line Extension Along Abrams Falls Road, Fleenor's Memorial Road South, Hobbs Road and Prices Bridge Road.
 GROWTH AND EXPANSION	
Presenter(s):	Ryan Kiser
Beginning Time:	
Potential Conflict(s) of Interest and Abstention(s):	
Background:	<p>Residents along Rich Valley Road, specifically Fleenor's Memorial South and Hobbs Road were solicited with User Agreements with the original Rich Valley Project that is nearing completion. Staff received inquiries from residents of when a possible project may develop for these areas. A few additional User Agreements have been acquired since that time. These areas were included in the Western Washington County Water Study.</p> <p>In the past few months, there has also been interest in a waterline extension project for Abrams Falls Road and also Prices Bridge Road. Staff sent out interest surveys for these areas to gauge the interest in public water. The surveys indicated interest in a project, so staff solicited User Agreements.</p> <p>Participation requirement to apply for VDH funding is a requirement of greater than 50% participation. Typically, it is also WCSA's practice and policy to provide \$1,500 per committed connection. For the (20) committed connections, this would account for \$30,000.</p> <p>The results of User Agreements (participation) are indicated below:</p>

Washington County Service Authority Board of Commissioners
December 16, 2019 Regular Board Meeting Minutes


	<table><tr><th><u>Location</u></th><th><u>No. Committed Connections</u></th><th><u>No. Possible Connections</u></th><th><u>Percentage Participation</u></th></tr><tr><td>Abrams Falls Rd.</td><td>5</td><td>6</td><td>83%</td></tr><tr><td>Fleenor's Memorial S. Rd.</td><td>3</td><td>3</td><td>100%</td></tr><tr><td>Hobbs Rd.</td><td>9</td><td>14</td><td>64%</td></tr><tr><td>Prices Bridge Rd.</td><td>3</td><td>4</td><td>75%</td></tr></table>	<u>Location</u>	<u>No. Committed Connections</u>	<u>No. Possible Connections</u>	<u>Percentage Participation</u>	Abrams Falls Rd.	5	6	83%	Fleenor's Memorial S. Rd.	3	3	100%	Hobbs Rd.	9	14	64%	Prices Bridge Rd.	3	4	75%
	<u>Location</u>	<u>No. Committed Connections</u>	<u>No. Possible Connections</u>	<u>Percentage Participation</u>																	
	Abrams Falls Rd.	5	6	83%																	
	Fleenor's Memorial S. Rd.	3	3	100%																	
	Hobbs Rd.	9	14	64%																	
Prices Bridge Rd.	3	4	75%																		
These potential projects are not in the five-year rate and financial plan and would represent new revenue requirements should they be funded with loan monies and accepted by the Board.																					
Discussion:																					
On the Record:																					
Enclosures:	None																				
Recommendation:	Subject to answering any questions that you may have, staff kindly recommends the Board authorize staff to apply for funding for Abrams Falls Road, Fleenor’s Memorial Road South, Hobbs Road and Prices Bridge Road and contributing \$1,500 of WCSA funds for each committed connection.																				
Proposed Motion:	Authorize staff to apply for funding to funding agencies for Abrams Falls Road, Fleenor’s Memorial Road South, Hobbs Road and Prices Bridge Road and contributing \$1,500 of WCSA funds for each committed connection or \$30,000.																				
Actual Motion:	Approved as part of the Consent Agenda																				
Motion By:																					
Second By:																					
Voting:	Ayes:																				
	Nays:																				
	Abstain:																				
End Time:																					

Washington County Service Authority Board of Commissioners
December 16, 2019 Regular Board Meeting Minutes


Agenda Item: 6F  INFRASTRUCTURE	Consideration of WCSA Russell County Public Service Authority, Contract for Sale of Water, Amendment #1
Presenter(s):	Ryan Kiser
Beginning Time:	
Potential Conflict(s) of Interest and Abstention(s):	
Background:	<p>The Hidden Valley Water Project is comprised of (2) Phases. Phase 1 was completed in December of 2015. Water is supplied to the Phase 1 area from Russell County PSA, by way of a previously approved Contract Sale of Water. This Contract was previously approved in October of 2013. Phase 2 of the Hidden Valley Water Project is under design and will begin construction in early 2020. The original contract identified a normal operating pressure of 42 psi at the takeover point located at the Russell County Line, identified a not to exceed instantaneous 398 gpm flowrate and a not to exceed 12,000 gallons' flow/day. Rates were also established at \$4.18/gallon. Due to VDH regulations and actual pressures from the Russell County system, the Contract necessitated being amended to adequately establish mutual changes to the previously approved contract.</p> <p>The amended Contract will establish normal operating pressures of 105-120 psi at the takeover point, with a new established not to exceed 275 gpm instantaneous flow rate. The maximum daily flow/day will increase to 25,000 gpd. Rates per/1,000 gallon of water will also increase to \$4.45. A provision is also added to the Contract that when WCSA utilizes flushing water from flushing fire hydrants, conducting fire flow analysis or flushing or lines for water quality the quantity of water utilized will be billed at the bulk water rate RCPSA receives from the Town of Lebanon. Normally 10% is added to the bulk water rate by RCPSA, but this percentage will not be added when flushing water is utilized.</p> <p>Russell County PSA has previously approved the amended and restated Contract.</p>
Discussion:	
On the Record:	
Enclosures:	Redline version of the Contract which shows the suggested edits.
Recommendation:	Subject to answering any questions the Board may have, Staff recommends the Board favorably consider Amendment 1 to the Contract.
Proposed Motion:	Move we approve Amendment 1 to the WCSA Russell County Public Service Authority, Contract for Sale of Water.
Actual Motion:	Approved as part of the Consent Agenda
Motion By:	
Second By:	


Washington County Service Authority Board of Commissioners
December 16, 2019 Regular Board Meeting Minutes

Voting:	Ayes:	
	Nays:	
	Abstain:	
End Time:		

Agenda Item: 7  COMMUNICATION	Consideration of Check Numbers 044118 – Misty Mountain Spring Water - \$31.90 (11/8/19) and 044164 – Misty Mountain Spring Water - \$47.85 (11/14/19)
Presenter(s):	Chairman
Beginning Time:	
Potential Conflict(s) of Interest and Abstention(s):	Tim Orfield
Background:	Mr. Orfield is an employee of Mid-Mountain Foods.
Discussion:	Mr. Orfield abstained from voting on this item as he is employed by Food City.
On the Record:	
Actual Motion:	Motion to approve checks as listed above
Motion By:	Mr. McCall
Second By:	Mr. Campbell
Voting: Ayes:	5
Nays:	0
Abstain:	Mr. Orfield
End Time:	6:04


Washington County Service Authority Board of Commissioners
December 16, 2019 Regular Board Meeting Minutes


Agenda Item: 8  COMMUNICATION	Legal Counsel Report and Update
Presenter(s):	Thomas Dene
Beginning Time:	
Potential Conflict(s) of Interest and Abstention(s):	
Discussion:	None
On the Record:	
Actual Motion:	
Motion By:	
Second By:	
Voting: Ayes:	
Nays:	
Abstain:	
End Time:	6:04

Agenda Item: 9  COMMUNICATION	General Manager Report and Update
Presenter(s):	Robbie Cornett
Beginning Time:	
Potential Conflict(s) of Interest and Abstention(s):	
Discussion:	<p>Mrs. Edwards requested and Amendment to the Customer Service Budget for Compensation in the amount of \$33,696 in order to fill an upcoming vacancy in Customer Service.</p> <p>Mr. Cornett then made the Board aware of a letter sent from Mr. Alexander of 733 Damascus Drive in Damascus Virginia who is interested in purchasing a section of property owned by WCSA.</p>
On the Record:	
Actual Motion:	Approve Amendment to the Customer Service Budget for Compensation as requested
Motion By:	Mr. Campbell
Second By:	Mr. Thayer
Voting: Ayes:	6
Nays:	0
Abstain:	0

Washington County Service Authority Board of Commissioners
December 16, 2019 Regular Board Meeting Minutes



End Time:	6:10
------------------	------

Agenda Item: 10  COMMUNICATION	Operations Manager Report and Update – Team Presentations A) Energy Efficient Lighting B) Water Quality Update
Presenter(s):	Dave Cheek A) Steve Carter & AC Salyers B) Larry Thomas, James Denton & Drew Langston
Beginning Time:	
Potential Conflict(s) of Interest and Abstention(s):	
Discussion:	
On the Record:	
Actual Motion:	
Motion By:	
Second By:	
Voting: Ayes:	
Nays:	
Abstain:	
End Time:	6:45


Agenda Item: 11  INFRASTRUCTURE	Engineering Report / Construction Projects Update
Presenter(s):	Ryan Kiser
Beginning Time:	
Potential Conflict(s) of Interest and Abstention(s):	
Discussion:	Mr. Kiser reported on: the Sugar Cove pump stations savings, pre-bid for the Rich Valley Road Project, Hidden Valley Phase 2, the Gal Line Phase 3 Project, the Notice of Award for Hall Creek and funding for Mendota Road / Mary's Chapel. Mr. Bill King gave an update on the Lee Highway Sewer Project.
On the Record:	
Actual Motion:	

**Washington County Service Authority Board of Commissioners
December 16, 2019 Regular Board Meeting Minutes**

Motion By:	
Second By:	
Voting: Ayes:	
Nays:	
Abstain:	
End Time:	6:53

Agenda Item: 12  INFRASTRUCTURE  FINANCIAL VIABILITY	Consideration of Sole Source Procurement for Advanced Metering Infrastructure Project
Presenter(s):	Dave Cheek
Beginning Time:	
Potential Conflict(s) of Interest and Abstention(s):	
Background:	<p>WCSA wishes to procure for the Advanced Metering Infrastructure (AMI) Project (the Project) in a manner which provides WCSA with the best value over the life of the Project (15-years). WCSA's primary concerns are coverage (how many water meters can be read by the system), reliability, capital and ongoing operations and maintenance costs.</p> <p>WCSA applied the Virginia Public Procurement Act, Rev 2019 and WCSA Procurement Guidelines, Rev 2017 relative to sole source procurement to the Project.</p> <p>The Project under consideration is unique in that American Electric Power (AEP) is deploying their own AMI network and has offered to allow WCSA to use it. Based on evaluations and estimates by third parties, the shared network infrastructure will reduce WCSA's cost of ownership (construction, operation and maintenance) and result in significantly better coverage.</p> <p>AEP underwent a thorough and competitive selection process to identify and procure a network partner and service provider. Itron was chosen.</p> <p>The AEP/Itron network, offered to WCSA, provides the lowest cost of ownership over the life of the Project and better coverage than anyone else (best value). Accordingly, the Board of Commissioners approved the Project financial analysis at the October 2019 BOC Meeting. This financial analysis utilized the WCSA/AEP/Itron combined network</p>

Washington County Service Authority Board of Commissioners
December 16, 2019 Regular Board Meeting Minutes


Agenda Item: 13  FINANCIAL VIABILITY	Consideration of Banking Services Procurement
Presenter(s):	Melinda Jett
Beginning Time:	
Potential Conflict(s) of Interest and Abstention(s):	
Background:	<p>Background: WCSA last issued a Request for Proposals (RFP) for Banking Services in December 2014. A new RFP for Banking Services was advertised on October 8, 2019 and copies of the RFP were hand delivered to every full service bank in Washington County on October 9, 2019. Several criteria were indicated as “required,” while three criteria were indicated as “optional.”</p> <p>Required:</p> <ul style="list-style-type: none"> • Remote Deposit Capture • Ability to accept deposits at branch and make change orders if needed • Merchant Processing Services • Online Banking Services • Financial Strength/Stability of bank • Acceptable level of customer service capabilities • Other services <p>Optional:</p> <ul style="list-style-type: none"> • Accept WCSA payments at branch locations in Washington County • Allow WCSA to place a kiosk in branch banking locations • Be able to provide “Positive Pay” and partial reconciliation of bank statement <p>Five banks responded with proposals. It was determined that one bank’s (New Peoples Bank) proposal was ranked lower than the other four banks as their proposal did not provide full answers/explanation to one of the required criteria and did not address one of the optional criteria included in the RFP; therefore, meetings/interviews were set up with the four remaining banks: Carter Bank & Trust, First Bank & Trust, First Community Bank (HUB) and Powell Valley National Bank.</p> <p>Based on the proposals and the interviews, management will make a recommendation at the December Board meeting regarding a bank to provide banking services for WCSA.</p>
Discussion:	
On the Record:	
Enclosures:	None

**Washington County Service Authority Board of Commissioners
December 16, 2019 Regular Board Meeting Minutes**


	<p>infrastructure as one of the options.</p> <p>Applying the above summarized work to the Virginia Public Procurement Act, Rev 2019 (Article 2 Contract Formation & Administration, 2.2-4303 Methods of Procurement) and WCSA Procurement Guidelines, Rev 2017, it appears that this aligns with non-competitive procurement. Please reference attached chart. This will require two key steps.</p> <p>Step 1: WCSA's Board of Commissioners approved a notice of non-competitive procurement at its November Meeting. This triggered a notice which was posted in the WCSA lobby, WCSA web site and VA Department of General Services central electronic procurement website for 10 days.</p> <p>Step 2: At December Meeting, consideration is to be given to any protests followed by consideration of the agreement with Itron and authorization of the WCSA's General Manager to execute the agreements.</p>
Discussion:	
On the Record:	
Enclosures:	None.
Recommendation:	Scheduled to be made at your December 16, 2019 meeting.
Proposed Motion:	To approve the Sole Source Determination and Intent to Award Contract as presented. See attached.
Actual Motion:	
Motion By:	Mr. McCall
Second By:	Mr. Taylor
Voting: Ayes:	6
Nays:	0
Abstain:	0
End Time:	6:57


**Washington County Service Authority Board of Commissioners
December 16, 2019 Regular Board Meeting Minutes**

Recommendation:	Approve recommendation to move banking services to First Bank and Trust.
Proposed Motion:	
Actual Motion:	As recommended
Motion By:	Mr. Taylor
Second By:	Mr. Campbell
Voting: Ayes:	6
Nays:	0
Abstain:	0
End Time:	7:00

Agenda Item: 14  COMMUNICATION	Closed Meeting
Presenter(s):	Commissioner
Beginning Time:	
Potential Conflict(s) of Interest and Abstention(s):	
Background:	
Discussion:	No Closed Meeting
On the Record:	
Enclosures:	
Recommendation:	
Proposed Motion:	
Actual Motion:	
Motion By:	
Second By:	
Voting: Ayes:	
Nays:	
Abstain:	
End Time:	


Washington County Service Authority Board of Commissioners
December 16, 2019 Regular Board Meeting Minutes

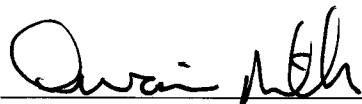
Agenda Item: 15  COMMUNICATION	Return to Open Meeting
Presenter(s):	Commissioner
Beginning Time:	
Potential Conflict(s) of Interest and Abstention(s):	
Background:	NA
Discussion:	
On the Record:	
Enclosures:	
Recommendation:	
Proposed Motion:	
Actual Motion:	
Motion By:	
Second By:	
Voting: Ayes:	
Nays:	
Abstain:	
End Time:	

Agenda Item: 16  COMMUNICATION	Late Items
Presenter(s):	Commissioner / General Manager
Beginning Time:	
Potential Conflict(s) of Interest and Abstention(s):	
Background:	
Discussion:	No Late Items
On the Record:	
Enclosures:	
Recommendation:	
Proposed Motion:	
Actual Motion:	
Motion By:	
Second By:	

**Washington County Service Authority Board of Commissioners
December 16, 2019 Regular Board Meeting Minutes**

Voting:	Ayes:	
	Nays:	
	Abstain:	
End Time:		

Agenda Item: 17  COMMUNICATION	Adjourn
Presenter(s):	Commissioner
Beginning Time:	
Potential Conflict(s) of Interest and Abstention(s):	
Background:	
Discussion:	
On the Record:	
Enclosures:	
Recommendation:	
Proposed Motion:	Motion to Adjourn
Actual Motion:	
Motion By:	Mr. Campbell
Second By:	Mr. Orfield
Voting	Ayes: 6
	Nays: 0
	Abstain: 0
End Time:	7:00



Dwain Miller, Chairman



Carol Ann Shaffer, Assistant Secretary

WRA Monthly Project Status Report

January 17, 2020

Project Name: Mill Creek DWP Environmental Health & Safety Evaluation WRA Work Order #: 46620-001

Recent Activities:

1. On 1/9/20, WCSA requested a scope and fee for design of the Fluoridation and Ventilation systems as recommended in the final Environmental Health & Safety report.

Upcoming Tasks:

1. WRA is preparing the requested scope and fee. Future updates will be provided under a new task order.

Scope Changes:

1. None

Budget Status:

Invoiced thru: December 21, 2019

Original Budget:	<u>\$49,710.00</u>	Invoiced:	<u>\$40,742.00</u>
Supplement 1:	<u>\$0.00</u>	Percent:	<u>82%</u>
Total Budget:	<u>\$49,710.00</u>	Remaining Budget:	<u>\$8,968.00</u>

Schedule Status:

Task	Scheduled Date	Actual Date
Perform EH&S Eval.	6/5/2019	6/5/2019
Review List of Improvements	7/2/2019	7/2/2019
Submit Draft Report	8/1/2019	8/1/2019
Submit Final Report	9/27/2019	9/27/2019

WCSA Input Required:

1. None

Issues WCSA should be aware of:

1. None

WRA Monthly Project Status Report

January 17, 2020

Project Name: Mill Creek DWP Chlorine Contact Tanks Evaluation RA Work Order #: 46620-002

Recent Activities:

1. WCSA inquired on 12/12/19 about options for bidding a tank project using a life-cycle cost calculation in the evaluation of bids. WRA responded on 12/23/19, with an example of how this option was used with a project funded by Rural Development.
2. WCSA requested a scope and fee on 1/9/20 from WRA to prepare a PER for replacmenet of the chlorine contact tanks. The PER is to be reviewed and approved by VDH and RD.

Upcoming Tasks:

1. WRA is preparing the requested scope and fee. Future updates will be provided under a new task order.

Scope Changes:

1. None

Budget Status:

Invoiced thru: December 21, 2019

Original Budget:	<u>\$33,220.00</u>	Invoiced:	<u>\$27,899.00</u>
Supplement 1:	<u>\$0.00</u>	Percent:	<u>84%</u>
Total Budget:	<u>\$33,220.00</u>	Remaining Budget:	<u>\$5,321.00</u>

Schedule Status:

Task	Scheduled Date	Actual Date
Review Documents	Upon Receipt	On-Going
Perform Tank Inspection	7/30/2019	7/30/2019
Submit Draft Report	8/30/2009	9/6/2019
Submit Final Report	Complete	

WCSA Input Required:

1. None

Issues WCSA should be aware of:

1. None

WRA Monthly Project Status Report

January 17, 2020

Project Name: Mill Creek DWP Finished Water Pumps Evaluation WRA Work Order #: 46620-003
No Change

Recent Activities:

1. On-going discussion regarding the scope of the finished water pumping system occurred in September. The current plan is WCSA will perform additional pump tests and will provide this information to WRA for their use in evaluating the pumps and distribution system. WRA will prepare a "skeletonized" hydraulic model to evaluate the distribution system and provide pump design points and a Technical Memorandum as described in an e-mail dated September 30, 2019.
- 2.

Upcoming Tasks:

1. See above.

Scope Changes:

1. See above.

Budget Status: Invoiced thru: December 21, 2019

Original Budget:	<u>\$18,695.00</u>	Invoiced:	<u>\$3,168.00</u>
Supplement 1:	<u>\$0.00</u>	Percent:	<u>17%</u>
Total Budget:	<u>\$18,695.00</u>	Remaining Budget:	<u>\$15,527.00</u>

Schedule Status:	Task	Scheduled Date	Actual Date
	Review Documents	Upon Receipt	On-Going
	Perform Pump Tests	7/31/2019	7/30/2019
	Submit Draft Report	TBD	TBD
	Submit Final Report	TBD Following WCSA review	

WCSA Input Required:

1. RFI submitted via e-mail regarding Chilhowie distribution system and location of pressures recorded during pump tests performed on July 30, 2019.

Issues WCSA should be aware of:

1. None

WRA Monthly Project Status Report

January 17, 2020

Project Name: Mill Creek DWP Plant Control System Study Work Order #: 46620-004
No Change

Recent Activities:

1. Due to on-going construction contract final completion work, WCSA and WRA agreed to postpone the Plant Control System Evaluation workshop. The meeting is to be scheduled at a later date, following resolution of the final change order and final completion of Mill Creek DWP construction project.

- 2.

Upcoming Tasks:

1. Schedule the Plant Control System Evaluation workshop.

Scope Changes:

1. None

Budget Status: Invoiced thru: October 26, 2019

Original Budget:	<u>\$41,580.00</u>	Invoiced:	<u>\$0.00</u>
Supplement 1:	<u>\$0.00</u>	Percent:	<u>0%</u>
Total Budget:	<u>\$41,580.00</u>	Remaining Budget:	<u>\$41,580.00</u>

Schedule Status:	Task	Scheduled Date	Actual Date
	Review Documents	Upon Receipt	
	Kickoff Meeting & Workshop	TBD	
	Submit Draft Report	TBD	
	Submit Final Report	TBD Following WCSA review	

WCSA Input Required:

1. Notify WRA upon issuance of final completion of the Mill Creek DWP construction contract.

Issues WCSA should be aware of:

1. None

WRA Monthly Project Status Report

January 17, 2020

Project Name: WCSA Water Model EvaluationWRA Work Order #: 46620-005
No Change

Recent Activities:

1. WRA received a notice to proceed on October 30, 2019 to perform the Water Model Evaluation. We have evaluated the completeness of and system information included in the model, have run the model, identifies any errors, and provided recommendations. WRA's letter report summarizing the findings was submitted on November 8, 2019.

- 2.

Upcoming Tasks:

1. None

Scope Changes:

1. None

Budget Status:

Invoiced thru: December 21, 2019Original Budget: \$6,060.00Invoiced: \$4,848.00Supplement 1: \$0.00Percent: 80%Total Budget: \$6,060.00Remaining Budget: \$1,212.00

Schedule Status:

Task	Scheduled Date	Actual Date
Provide Letter Report	11/11/2019	11/8/2019

WCSA Input Required:

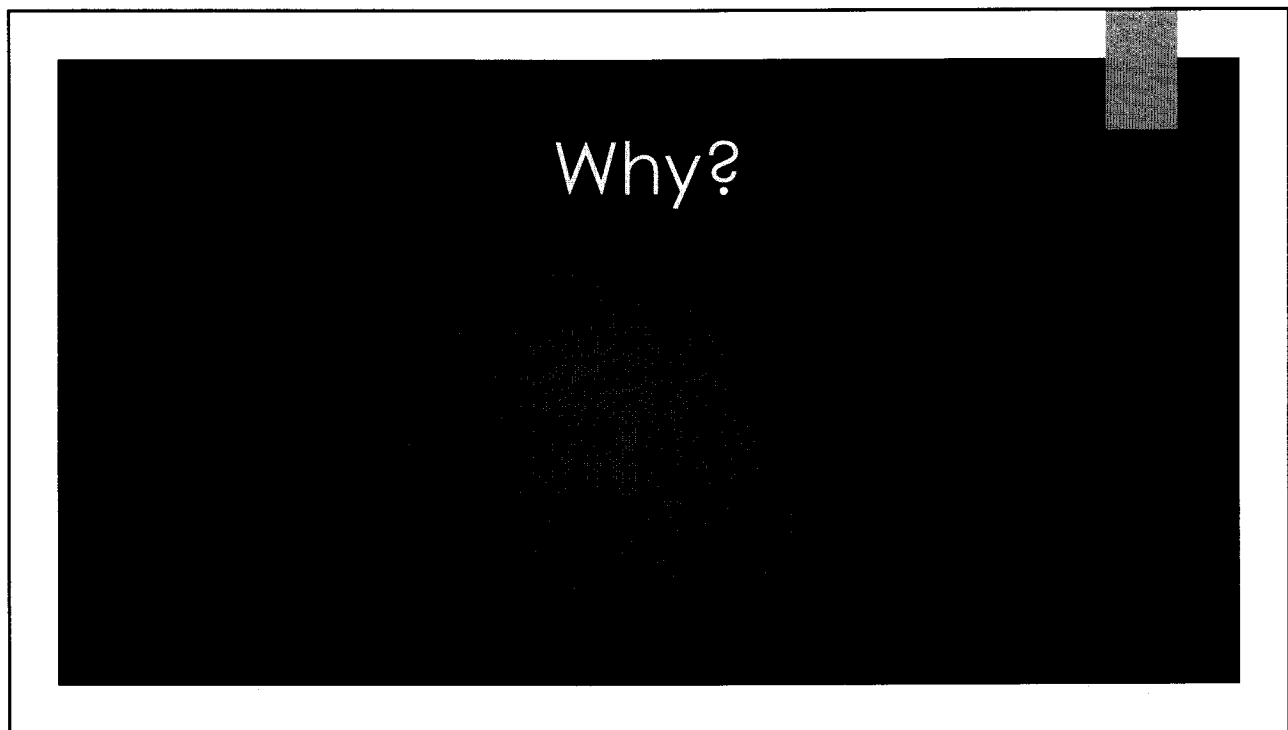
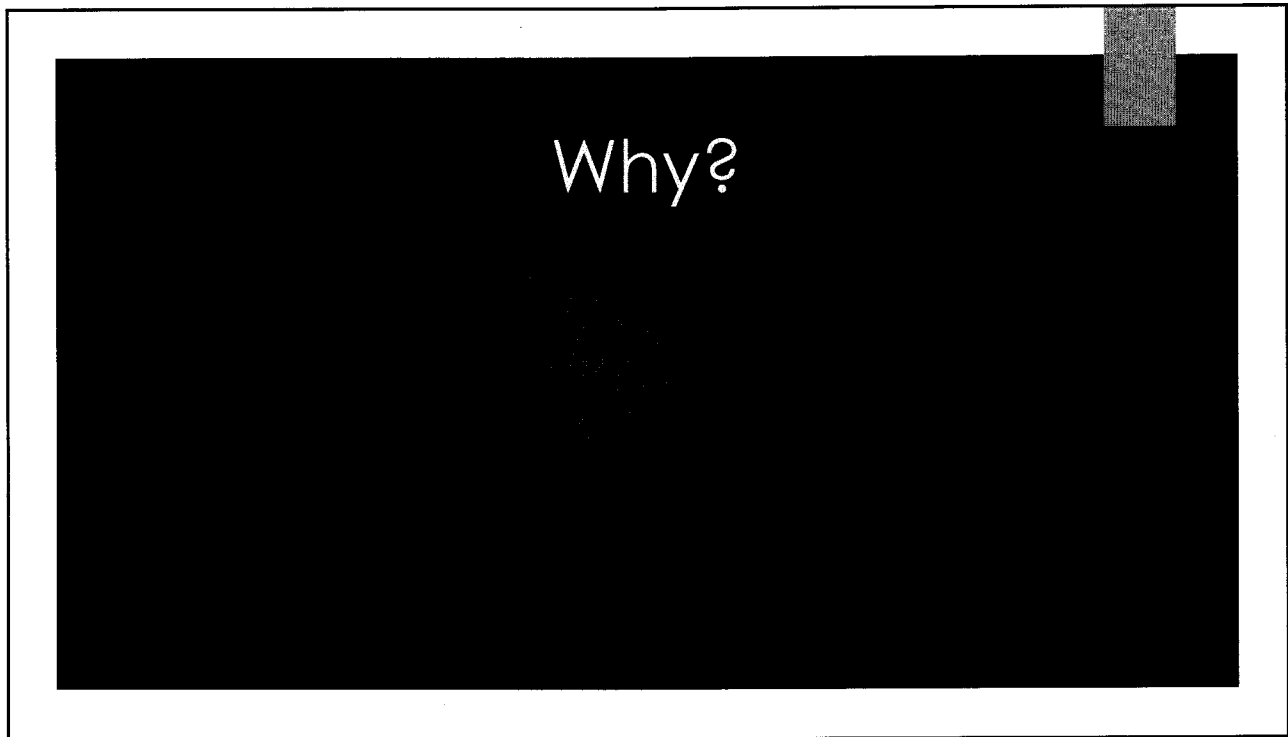
1. None

Issues WCSA should be aware of:

1. None

Cost Savings Initiative

Why?



Why?

The Numbers

The Numbers

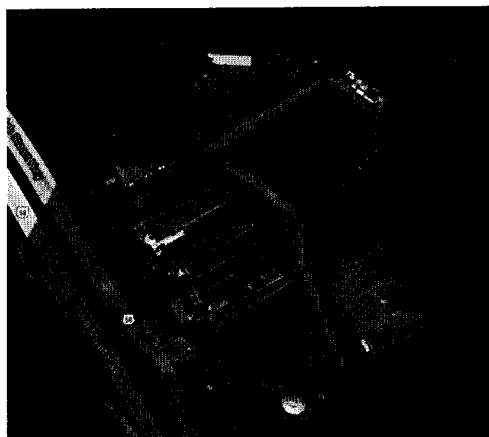
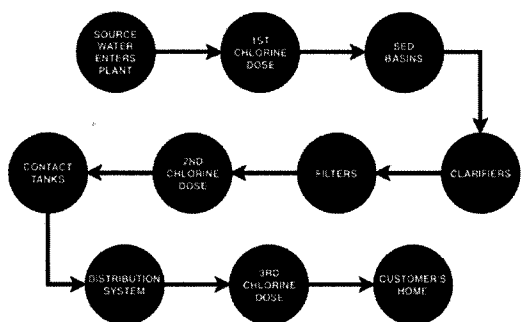
The Numbers

The Numbers

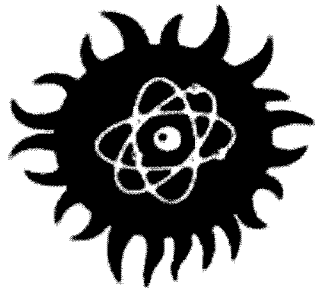
WATER QUALITY IMPROVEMENT STORY

WATER QUALITY 101

DISINFECTION PROCESS



WATER QUALITY 101



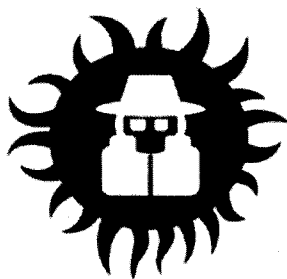
DISINFECTION BY-PRODUCTS

TTHM – TOTAL TRIHALOMETHANE

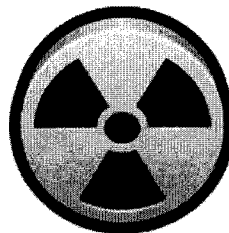
HAA5 – HALOACETIC ACIDS

WATER QUALITY 101

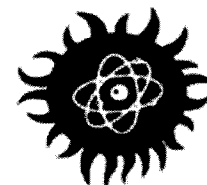
DISINFECTION BY-PRODUCTS



+

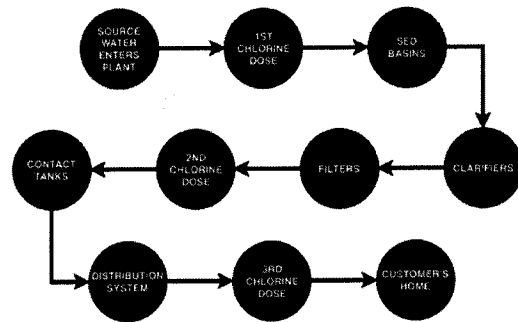
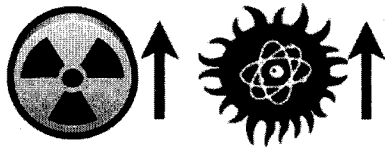


=

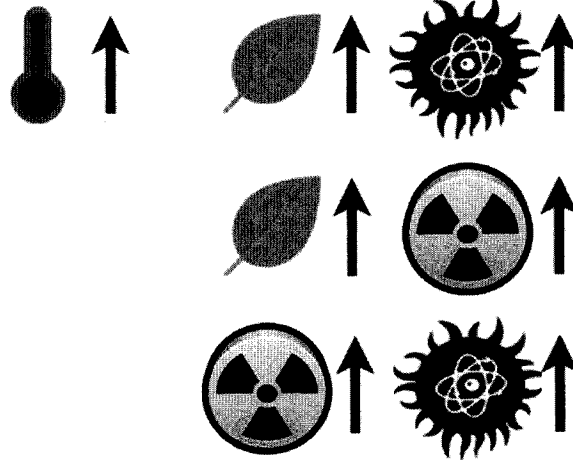


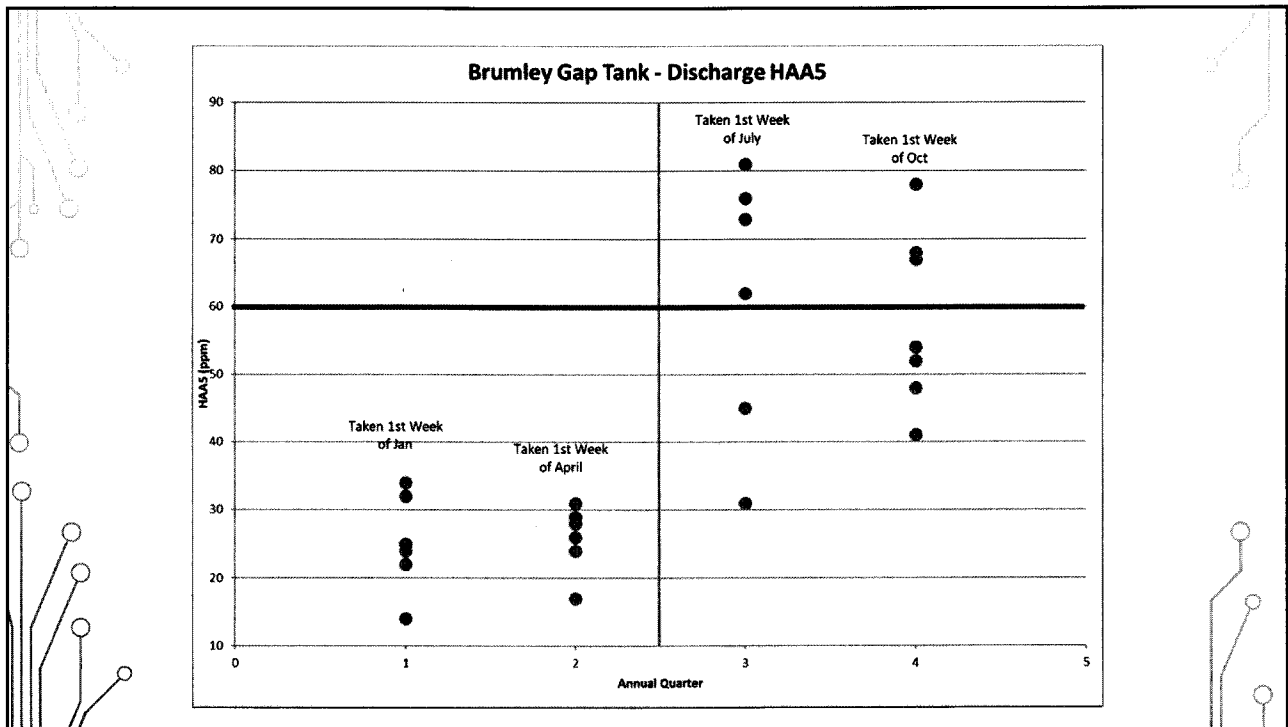
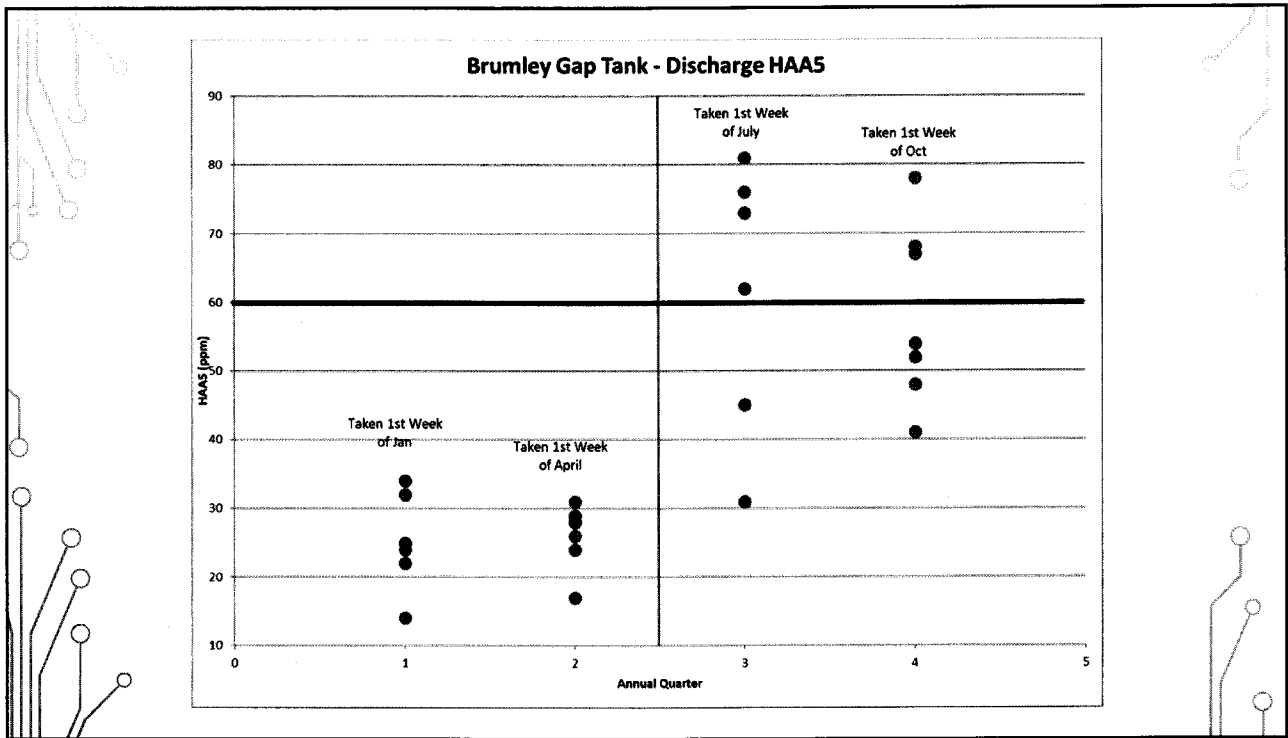
WATER QUALITY 101

DISINFECTION BY-PRODUCTS

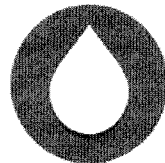
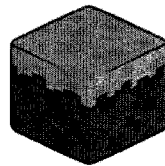
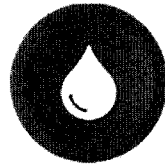
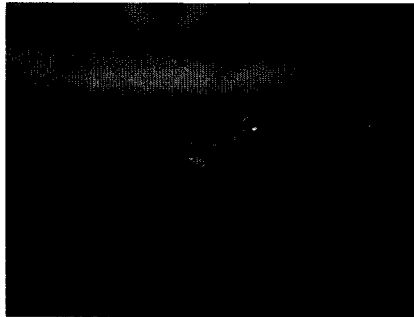


WATER TEMPERATURE





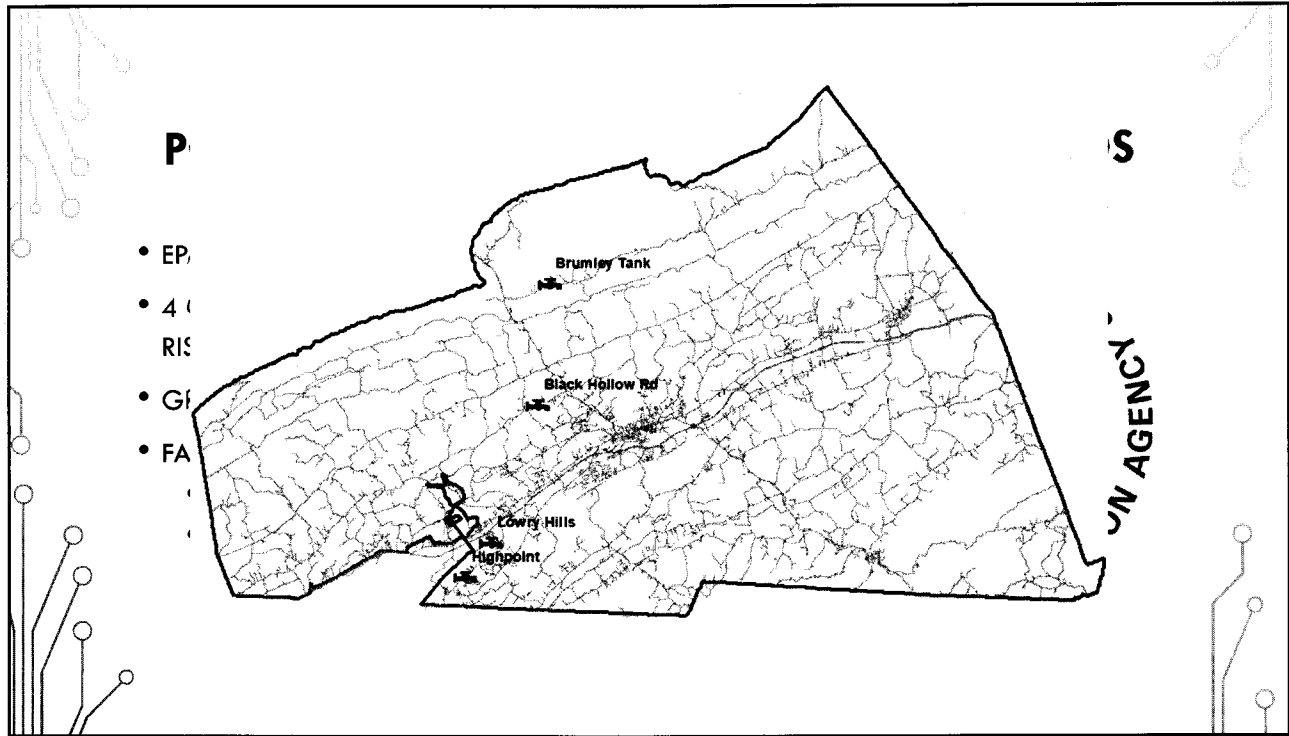
GROUNDWATER GOD'S PURIFICATION PROCESS



PRE-2009 WATER QUALITY TESTING METHODS

- 16 QUARTERLY SAMPLES WERE TAKEN ANNUALLY
- RESULTS FROM ALL LOCATIONS WERE AVERAGED TOGETHER
- THE GROUNDWATER SAMPLES HELD THE AVERAGES OF THE SYSTEM AS A WHOLE IN COMPLIANCE



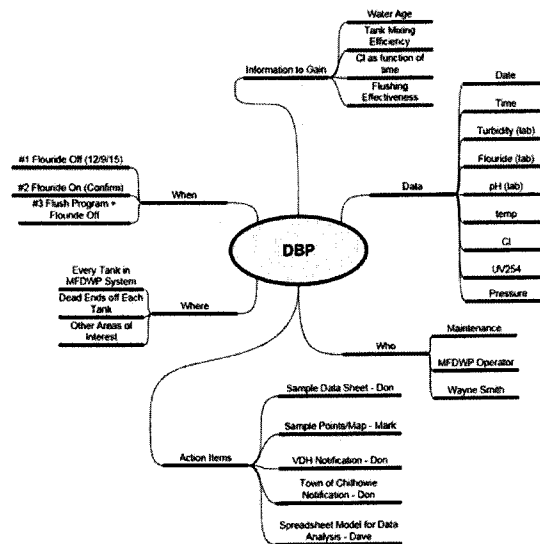


**SO WHAT DID WE DO
ABOUT IT?**

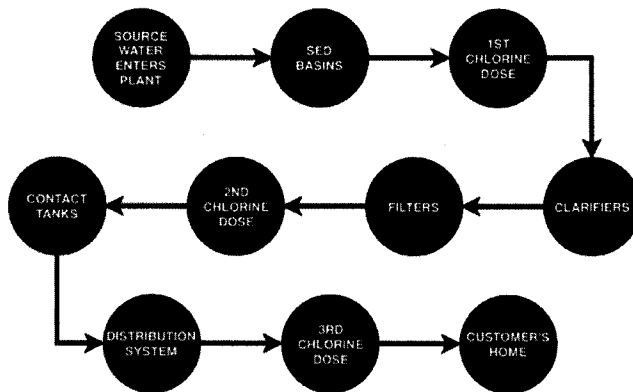
IMPROVEMENT TEAM

- JOE BALDWIN
- DON COLE
- DAVE CHEEK
- BOBBY GOBBLE
- JOHNNY LESTER
- LARRY THOMAS
- GARY VANHUSS

BRAINSTORMING

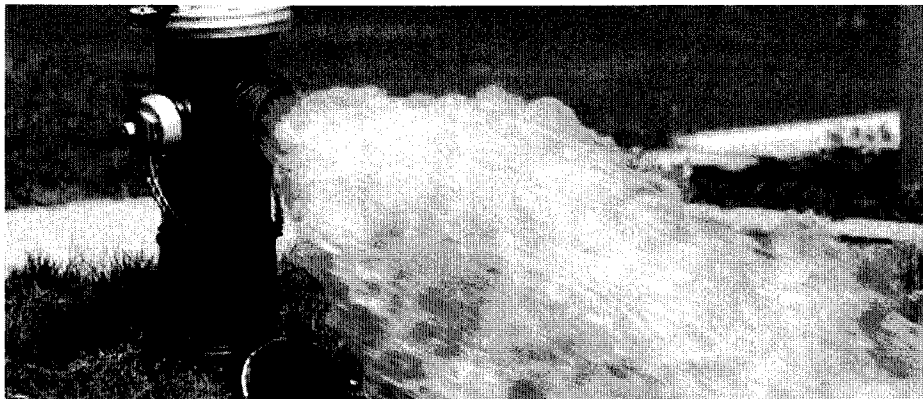


IMPROVED DISINFECTION PROCESS



- INDUSTRY STANDARDS HAD BEEN TO DISINFECT WATER ENTERING PLANT
- BY REMOVING THE FIRST STEP, MUCH ~~OF~~ THE TOC'S ARE REMOVED PRIOR TO THE INTRODUCTION OF CHLORINE
- THIS GREATLY REDUCES DISINFECTANT BY-PRODUCTS

LINE FLUSHING



LINE FLUSHING

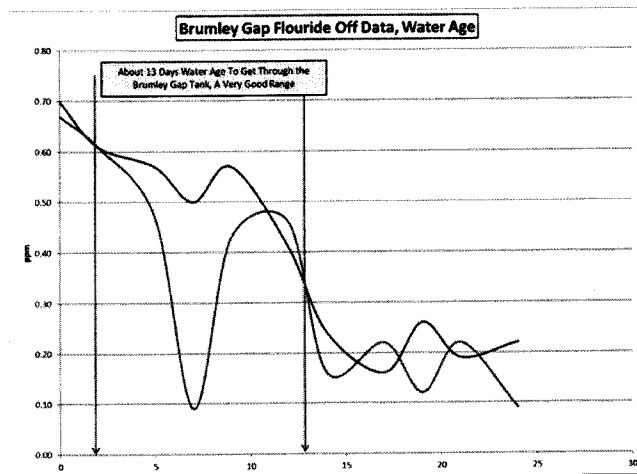
DATA ANALYSIS OF DISTRIBUTION SYSTEM INCLUDED:

- TANK TURNOVER RATES
- FLOURIDE RESIDUAL TEST
- LINE SIZING COMPARED TO NUMBER OF TAPS
- CHLORINE RESIDUAL SAMPLES
- PLUMBING OF TANKS/PUMPS
- WATER TEMPERATURE

WCSA Flushing Worksheet			
Flush Location: RATTLE CREEK			
Starting Date: 10.22.19			
Installed and Confirmed By: Johnny Lister/Larry Thomas			
Line Dia: 8 inch	Pipe Cross Sectional Area: 0.35 Sq. Ft.		
Line Length: 6,000 feet	Pipe Volume: 15665 gallons		
Pressure at Flush Point: 100 psi	Flush Flow Rate: 110 gpm		
Flush Size: 3 inch	Flush Velocity: 0.71 fps		
# of Residential Taps: 16 #	Flush Type: Turbidity		
# of Industrial Taps: 0 #	Mins to Turnover: 140 mins		
Suggested Flushing Program			
Flush Length: 280 mins	Tap Usage Rate: 1.9 gpm		
Flush Frequency: 4 #/month	Industrial Usage Rate: 0.0 gpm		
Trickle Flush: 2.9 gpm	Days for 1 Turnover: 5.9 days		
Pipe Type: PVC	Turnovers		
Time of Year: Fall	Turnovers per Flush: 2 #		
Monthly Total Turnovers: 8 #			

LINE FLUSHING DATA ANALYSIS

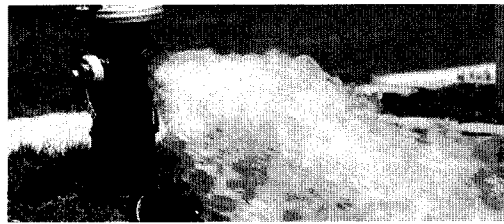
Tank Name: Brumley Mountain			
Tank Data	Base Elevation (ft): 2,056	Overflow Height (ft): 2,084	Total Gallons: 150,000
			Gallons/ft: 5,263
Capacity Reserves	Normal (gpm): 24	Capacity (hours): 24	Gallons: 34,560
Usage	Rate (GPM): 250	Hours: 2	Gallons: 30,000
Sub Total	64,560 Gallons		
Safety Factor	25%		
Total Gallons	80,700		
Minimum Water Level	15 feet	15% Exchanged	
Upper Working Level	18 feet	14,034 Volume	
Expected Cycle Time	10 hours		
Calculations Completed By:	D. Cheek		
Date:	3/16/2017		



LINE FLUSHING

DATA ANALYSIS SHOWED THAT CHLORINE RESIDUALS
COULD BE USED TO DETERMINE LINE FLUSHING

LOW/NO RESIDUALS =



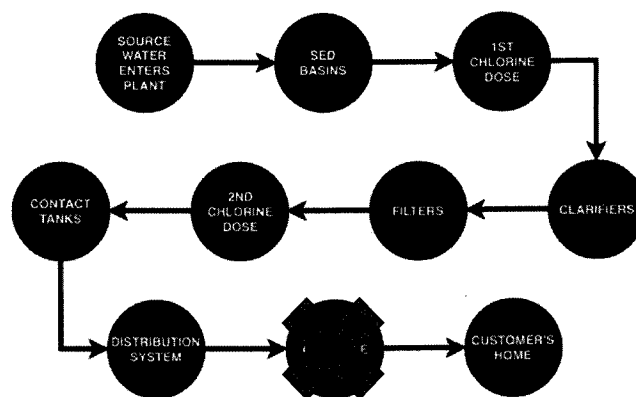
LINE FLUSHING

SAMPLE SITE	DATE	LOCATION	Flush Time	TYPE FLUSH	CL START	CL FINISH
16174 Black Hollow Rd.				Fire Hyd.		
15676 Black Hollow Rd.				Fire Hyd.		
15221 Black Hollow Rd.				Fire Hyd.		
Mtn. Springs Rd. Blow off				Blow off		
Black Hollow Rd./Countryside Rd.				Fire Hyd.		
Pine Hill Blow Off				Trickle Flush		
13453 Dector Rd.				Meter		
15179 Mandata Rd.				Fire Hyd.		
16194 Mandata Rd.				Fire Hyd.		
18006 Brumley Gap Rd.				Fire Hyd.		
Brumley Tank				Test Port		
18478 Brumley Gap Rd.				Fire Hyd.		
Brumley Gap Rd./Trout Rd. #H				Fire Hyd.		
Trout Rd. (END OF LINE)				Trickle Flush		
10070 Brumley Gap Rd.				Fire Hyd.		
20384 Brumley Gap Rd.				Fire Hyd.		
20570 Brumley Gap Rd.				Fire Hyd.		
21224 Brumley Gap Rd.				Fire Hyd.		
22340 Brumley Gap Rd.				Fire Hyd.		
23077 Brumley Gap Rd.				Fire Hyd.		
24087 Brumley Gap Rd.				Fire Hyd.		
7220 Hayters Gap Rd.				Fire Hyd.		
7228 Clinch Mon. Rd.				Trickle Flush		
7038 Hayters Gap Rd.				Fire Hyd.		
Int. Hayter Gap/Poore Val. F.H.				Fire Hyd.		
6085 Hayters Gap Rd. (end Line)				Trickle Flush		
27122 Poore Valley Rd.				Meter		
27434 Poore Valley Rd.				Meter		
28315 Poore Valley Rd. (end Line)				Blow Off		
Hidden Valley Rd. @ Church				Trickle Flush		
Hidden Valley Rd. @ Cemetery				Trickle Flush		
9516 Porterfield Hwy				Blow off		
Cedar Tree Ln.				Trickle Flush		
Lee Hwy at Boulder Stone				Trickle Flush		
Russ Rd. & Gong Drive				Trickle Flush		
Greensway Creek @ End of Line				Trickle Flush		
Seneca Drive				Off		
Blue Hills Drive				Off		
Prices Bridge Rd.		New Line filled in the Gap		Off		
Camden Ave.				Off		

LINE FLUSHING STATS

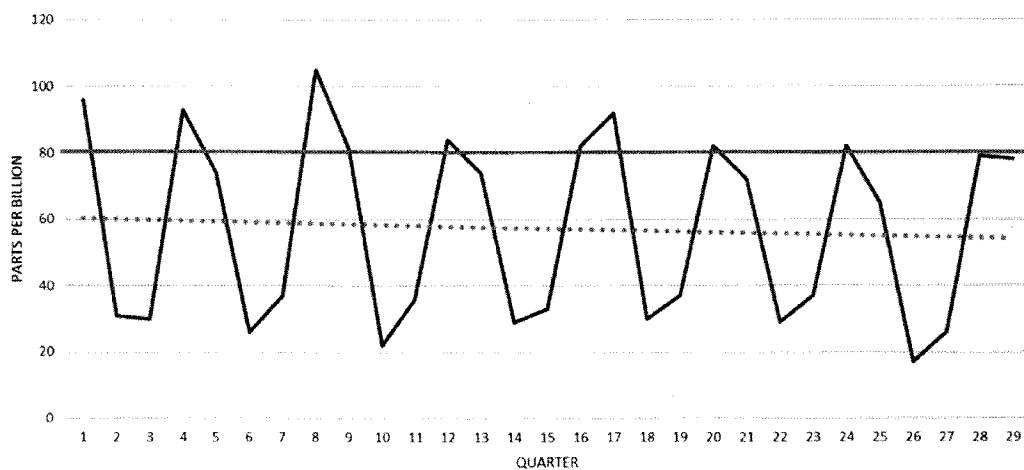
- CURRENTLY FLUSHING 41 SITES
- FLUSHING PEAKS AT 6.5 MILLION GALLONS PER MONTH IN JULY-SEPTEMBER
- ESTIMATED ROUGHLY 50 MILLION GALLONS FLUSHED ANNUALLY
- COST OF FLUSHING IS ROUGHLY \$24,000 IN VARIABLE PRODUCTION COST

RESULTS



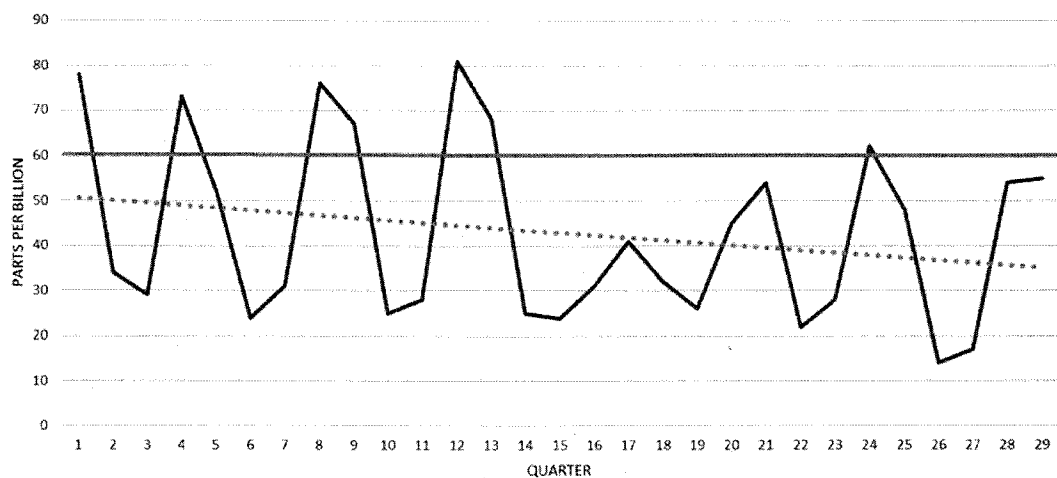
RESULTS

TTHM (PARTS PER BILLION)



RESULTS

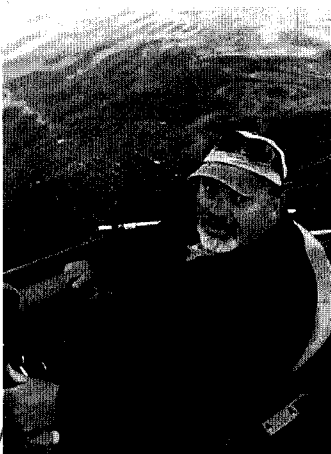
HAAS (PARTS PER BILLION)



IMPROVEMENT TEAM

- JOE BALDWIN
- DON COLE
- DAVE CHEEK
- BOBBY GOBBLE
- JOHNNY LESTER
- LARRY THOMAS
- GARY VANHUSS

JOHNNY LESTER



- DECEMBER 31ST IS JOHNNY'S LAST DAY OF FULLTIME EMPLOYMENT
- 42 YEARS OF SERVICE
- 87,360 NON-OVERTIME HOURS
- 10 YEARS OF 24/7 SERVICE
- 1/6 OF HIS ENTIRE LIFE
- DEDICATED, FAITHFUL, SERVANT, LEADER BY EXAMPLE

