ANDERSON REGIONAL
JOINT WATER SYSTEM

998 Hunters Trail Anderson, SC 29625 Phone: 864-332-6534 Fax: 864-224-6116

BOARD AGENDA

Board of Commissioners
March 2021

I. Minutes February 18, 2021

II. Informational Reports

1. Finance and Administration Report
2. Operations Report
3. Staff Member Focus

Future planned Board meeting dates are:

- Thursday, April 22, 2020
- Thursday, June 10, 2020

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www.arjwater.com

MINUTES OF THE ANDERSON REGIONAL JOINT WATER SYSTEM
February 18, 2021

LET THE MINUTES SHOW THAT THE MEDIA WERE NOTIFIED OF THIS MEETING IN ACCORDANCE WITH THE SOUTH CAROLINA FREEDOM OF INFORMATION ACT.

A QUORUM OF THE BOARD IS PRESENT.

COMMISSIONERS PRESENT: Jeff Caldwell, City of Anderson; Benjie McGill, City of Clemson; Douglas Locke, Broadway; Patrick Jackson, Starr-Iva; Mitch Ellenburg, Belton-Honea Path; Jeremy Gillespie, Sandy Springs; Tommy Phillips, Broadway; Phillip Mishoe, Town of Central; Dyke Spencer, Powdersville; David Rogers, Town of Williamston; Chuck Cortez, Big Creek-Hammond

ABSENT: Dwight Edwards, West Anderson; Larry Harrell, Homeland Park; Steve Miller, Town of Pendleton

OTHERS PRESENT: Scott Willett, ARJWS; Jodi Logan, ARJWS; Lisa Evatt, ARJWS; Natalie Whitaker, ARJW; David Gailey, ARJWS; Kendall Cleary, AJRWS; Christopher Weber, ARJWS

Chairman Benjie McGill called the Board meeting of Anderson Regional Joint Water System to order at 11:58 a.m. on February 18, 2021.

Chairman McGill asked for any Commissioners comments. Mr. Willett introduced Christopher Weber. Mr. Weber was hired as the Asset Management Engineer for ARJWS.

There were no public comments.

Mr. Caldwell made a motion to approve the October 21, 2020 minutes and Mr. Jackson seconded.
Motion carried.

I. Consent Calendar (Old Business)

None

II. Items requiring immediate action

1. Flow-Based Voting Recalculation for 2021

Mr. Willett recommended the approval of the member agency flow-based vote allocation based on 2020 water deliveries to all member agencies except Clemson University. Mr. Willett reminded the Board that each Commissioner shall have one vote for each unit of flow measured by the immediate prior year's water purchase. The new vote totals will be effective with votes taken after March 1, 2021. Mr. Spencer made a motion to approve the flow-based vote recalculation. Mr. Jackson seconded. The motion was unanimous.

III. Discussion (New Business)

1. FY 2021/22 Budget Process

Mrs. Cleary explained the Budget Impacting Items FY 2021-2022. The items impacted are Purchased Water (Reallocation Study), IT-Accounting/Asset Management Software, Lab Supplies, CPAC/757, Lab Coordinator (Salary + Benefits), Employee PEBA Pickup, and Depreciation Charge.

2. Personnel

Mr. Willett gave an update on personnel changes and a Lab Coordinator position.

3. Executive Director's Report (Oral)

Mr. Willett gave an update on SCDOT and the Whitehall/Dixon Road project. Mr. Willett thanked Mr. Ellenburg with BHP Water for providing ARJWS with bulk CPAC while ARJWS staff was performing chemical trials. Using CPAC/757 during cold weather has proved to be beneficial to improve settled water quality.

IV. Informational Reports

1. Finance and Administration Report
2. Operations Report
3. Staff Member Focus

These reports are for information and for each Member to review as written. A copy of each report is attached to the file copy of these minutes.

V. Adjournment

With no further business, Mr. Caldwell made a motion to adjourn at 1:05 p.m. and Mr. Mishoe seconded. Motion carried.

Respectfully submitted,

Jeff Caldwell
City of Anderson

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BOARD MEMORANDUM

March 9, 2021

Subject

Finance and Administration Report

Discussion

Billing

Meters were read on February 26, 2021 with usage up 1.05% from last month (for the same number of days) and down 1.39% from last year (for the same number of days).

AGENCY	PREV.YR SAME MONTH	LAST MONTH	CURRENT
# of Billing Days	**28**	**29**	**29**
Anderson	111,068,685	110,216,211	110,777,117
Big Creek	20,700,000	23,600,000	22,200,000
Broadway	18,556,842	19,859,640	19,640,872
Clemson	59,169,332	48,000,090	53,960,706
Clemson University	24,126,162	20,824,721	22,170,127
Hammond	44,896,632	49,117,518	46,960,551
Homeland Park	18,152,358	18,955,786	19,460,448
Pendleton	11,741,745	9,202,229	8,863,319
Powdersville	2,457,800	3,941,116	2,394,808
Sandy Springs	39,390,000	47,509,000	47,568,532
Starr-Iva	26,599,178	28,526,906	26,986,260
West Anderson	32,899,700	34,058,398	36,546,848
Williamston	12,590,133	13,050,968	13,822,908
TOTAL	**422,348,567**	**426,862,583**	**431,352,496**

Changes in State and Federal Rules

GASB Statement No. 87, "Leases"

GASB Statement number 87, Leases, eliminates operating leases. All contracts that meet the definition of lease should be accounted for as an asset and a liability by the lessee, similar to capital leases. For governments that are a lessee or a lessor will have to report these leases from when the lease began throughout the lease term. The requirement for this statement will take effect for financial statements for the fiscal year ending December 31, 2020. See the GFOA website for guidance and examples.

Safety

OSHA Summary of Work-Related Injuries and Illnesses Form 300A was posted and submitted electronically on February 1, 2021. CPR/AED training planned for the week of January 11th - 14th was canceled due to the American Heart Association stopped all in-person training due to rising Covid-19 cases. Once AHA resumes training, ARJWS will reschedule.
Staff completed Competent Person Confined Space Entry training hosted by Transportation Technology Transfer Service Glenn Department of Civil Engineering Clemson University February 23, 24, 25, 2021. April Safety Training-Ladder Safety.

Prepared by: Kendall Cleary, Accountant
Approved by: Scott Willett, Executive Director

Attachments: Profit & Loss Summary – Budget, Actual and Forecast

ANDERSON REGIONAL
JOINT WATER SYSTEM

Profit & Loss
For the Month ending February 28, 2021

					Ideal Percentage:	67%	
				7+5			
	Annual Budget	YTD Budget (7 months)	YTD Actual	Year End Projection	% of Budget Used	YTD Variance	
Operating Revenue							
Operations and Maintenance	4,626,200	3,084,133	2,890,528	4,432,594	62%	(193,606)	
Capital Charges	5,392,245	3,594,830	3,594,830	5,392,245	67%	-	
Renewal and Replacement							
Water System	1,574,695	1,049,797	1,049,645	1,574,543	67%	(152)	
Pump Station	72,378	48,252	48,241	72,367	67%	(11)	
Miscellaneous	148,599	99,066	142,404	191,937	96%	43,338	
Total Operating Revenue	11,814,117	7,876,078	7,725,647	11,663,686			
Operating Expenses							
Salaries and Wages	1,403,800	935,867	880,239	1,348,173	63%	(55,627)	
Payroll Taxes and Employee Benefits	566,700	377,800	382,903	571,803	68%	5,103	
Operations and Maintenance							
Administrative Expenses	191,400	127,600	190,018	253,818	99%	62,418	A
Operations Expenses							
Lab Supplies/Uniforms/Safety Equipment	88,800	59,200	79,795	109,395	90%	20,595	B
Chemicals	446,900	297,933	382,718	531,684	86%	84,784	
Sludge and Chemical Disposal	185,000	123,333	225,234	225,234	122%	101,901	C
Utilities and Security	1,112,500	741,667	684,617	1,055,451	62%	(57,049)	
Maintenance Expenses	281,700	187,800	196,720	290,620	70%	8,920	
Professional Fees	90,000	60,000	22,499	52,499	25%	(37,501)	
Insurance	93,100	62,067	(947)	93,100	-1%	(63,014)	
Debt Expenses	5,490,245	3,660,163	3,338,775	5,168,857	61%	(321,388)	
Junior Lien Bond Payments	-	-	590,113	753,219	100%	590,113	D
Source Water Protection	51,000	34,000	22,105	39,105	43%	(11,896)	
Miscellaneous Expenses	115,300	76,867	53,643	92,076	47%	(23,224)	
Total operating expenses before depreciation	10,116,445	6,744,297	7,048,431	10,585,032			
Net operating income	1,697,672	1,131,781	677,216	1,078,654			
Raw Water							
Raw Water Income	57,646	38,431	175,237	194,453	304%	136,807	
Raw Water O&M Expenses	-	-	127,563	127,563	100%	127,563	
Raw Water Operating Income	57,646	38,431	47,674	66,889			

	Cash Balances	Days Cash on Hand
Operating Cash	1,645,705	59
Capital Project Fund	2,004,191	
R&R Funds (Restricted)	1,280,277	
	4,930,172	

A: Administrative expenses are over budget primarily due to the payment to the Corp for purchased water of $72,000 and the purchase of a vehicle for $22,000. The vehicle will be reclassed to assets during the year-end procedures.

B: Lab Supplies is over budget due to the purchase of turbidimeters for $14k.

C: Sludge Disposal is over budget due to ARJWS allowing the project to exceed the budget by approximately $35,000 to make a more substantial impact in the effort to rid the lagoon from excess sludge caused by using PAC in prior years. This is a single event and the percentage of budget used should self correct as the fiscal year moves forward.

D: Junior Lien bond payments are non budget impacting and are paid for from reserves.

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BOARD MEMORANDUM

March 3, 2021

Subject
Operations Report

Discussion

Operations

As of March 3, 2021, Lake Hartwell's surface elevation was 659.19 ft., 0.81 ft. below full pool. Raw water is being drawn from the first gate of the intake structure. Water temperature at the first gate is 53.4°F. The Joint Water System reached 100% of settled water turbidity goals for the month of February. Raw water pH levels are relatively constant. Settled and Finished water pH levels are normal. The maximum day for January water production was 43.30% of Finished water capacity.

In addition to water quality sampling for the Lake Hartwell Water Treatment Plant, Joint Water System staff processed 206 Total Coliform distribution samples for local entities during the month of February.

Weather Data

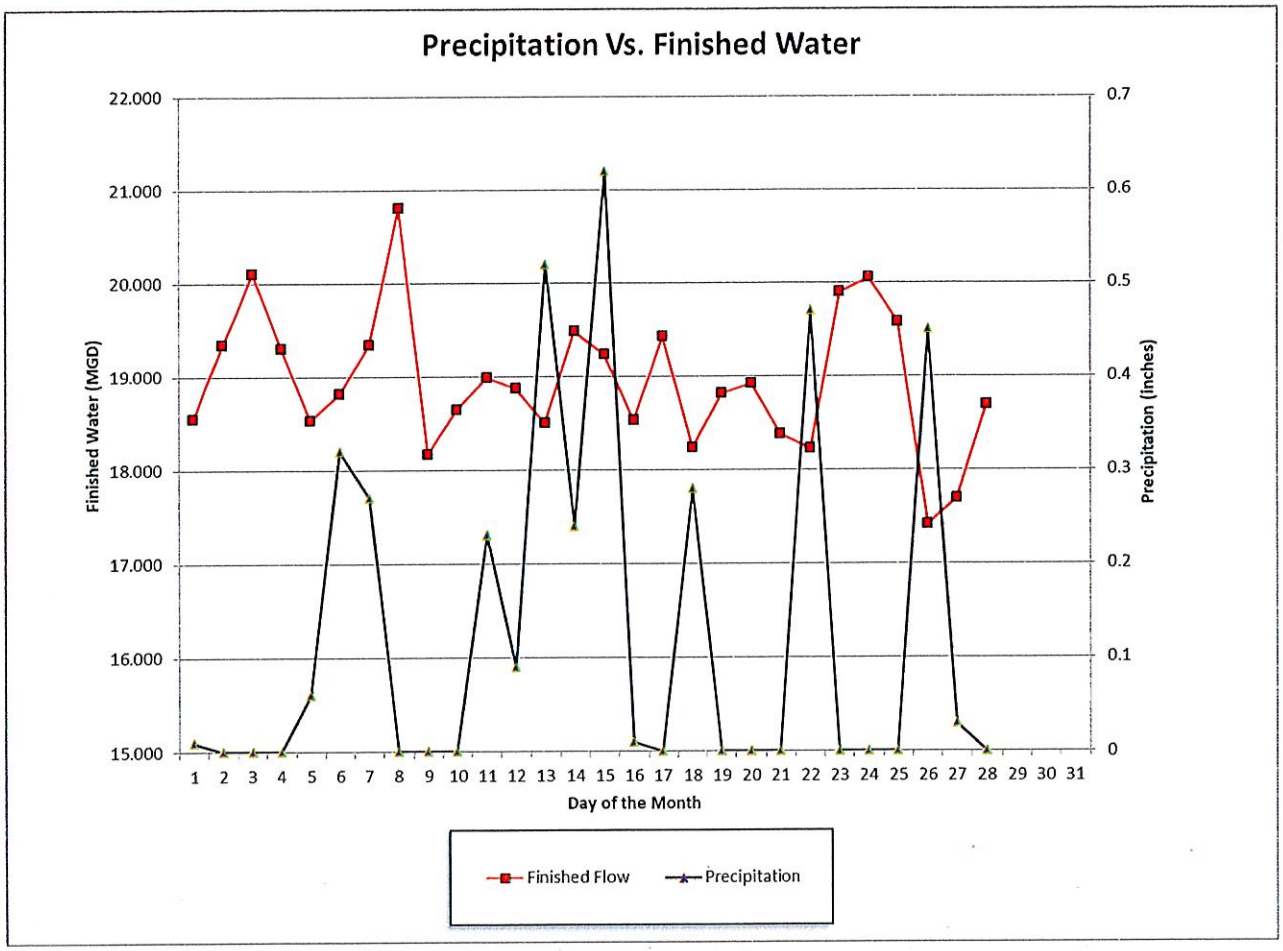
	Minimum	Maximum	Total
Rainfall	0.00 in.	0.62 in.	3.60 in.
Temperature	25.8° F	74.5° F	N/A
Humidity	21%	100%	N/A

Water Production Data

	Average	Minimum	Maximum	Total
Raw Water (MG)	17,991,000	14,482,000	20,653,000	503,734,000[‡]
Finished Water (MG)	18,948,000	17,419,000	20,804,000	530,552,000[‡]
Finished Max Capacity	39.50%	36.29%	43.34%	39.50%

NOTE: Percentages are finished water capacities.

[‡] - Typically, the raw water total exceeds the finished water total by ~10 million gallons. During January, we ran a chemical trial where we processed more water through one side of the plant that uses a different style flow meter (ultrasonic vs venturi). We suspect this accounts for the apparent flow discrepancy in January where the Finished Water total exceeded the Raw Water Total by ~27 million gallons.



Water Quality Data

	Raw	Settled	Finished
pH	6.91	7.10	7.14
Turbidity (NTU) Range	1.40 to 4.80	0.46 to 0.91	0.02 to 0.07
Turbidity (NTU) Average	2.23	0.68	0.02
Turbidity (NTU) Exceedance	-	0.00%	0.00%
Total Organic Carbon	1.50	-	0.90
Fluoride Average (ppm)	-	-	0.70**
Residual Disinfectant (ppm)	-	-	1.69
TTHM (DBP)	-	-	1.1 ppb
Methylisoborneol (MIB)*	<1.0 NG/L	-	<1.0 NG/L
Geosmin*	1.2 NG/L	-	<1.0 NG/L

*Note: For the general population, detection of MIB & Geosmin occurs at 10 NG/L.

**Note: DHEC has encouraged all water treatment plants to maintain Fluoride levels between 0.60-1.00 ppm. ARJWS will comply with this request, which will be reflected on future water quality data summaries.

TTHM Discussion

TTHMs

TTHMs, or Total Trihalomethanes, are formed when a disinfectant, like chlorine, comes into contact with organic material within a distribution system. As the water increases in temperature within a distribution system, so too does the organic content. At high concentrations, these disinfection by-products can have adverse health effects. Therefore, the Environmental Protection Agency, EPA, has set a Maximum Contaminant Level, or MCL, for TTHMs at 80 parts per billion. The Operations Staff at ARJWS collects monthly, one-time samples, which are analyzed for TTHMs. The following report displays this month's readings, along with annual maximum, minimum, and overall averages at the designated sample locations.

Disinfection Byproduct Analysis Report

Sample Location	Current TTHM Reading	12 Month Maximum	12 month Minimum	12 Month Average
Broadway	4.0	24.3	4.0	11.8
Big Creek	2.3	24.1	2.3	12.9
Clemson Armory	4.2	18.5	3.4	9.4
Sandy Springs-Michelin	3.7	17.9	2.3	9.0
Sandy Springs-5 Forks	4.9	16.8	3.9	9.8
West Anderson	2.6	12.1	2.1	6.1
Bolt Drive Tank	4.5	28.6	4.50	14.3
McAlister Tank	4.7	25.4	3.8	13.7
Highview Pump Station	2.8	19.6	2.8	10.3
Starr-Iva Hydrant	6.0	18.9	1.3	8.0
Clemson Pump Station	1.5	17.9	1.5	8.6

Note: All TTHM results are in ppb, or parts per billion. Also, the Water Quality Data Table displays the plant TTHMs.

Water Quality Strategic Planning Discussion

For the month of February, the following Water Quality Strategic Planning goals were met:

- Finished water pH was held within the designated 7.0-7.2 range.
- Fluoride dosing average was kept within the approved 0.60 – 0.75 ppm range.
- Finished water Chlorine residual was maintained above a 1.2 ppm leaving the facility.
- Non-detect for taste and odor was achieved, despite detectable concentrations at the source.
- All 11 routine distribution sample locations were less than half of the maximum contaminant level for TTHMs.
- Achieved settled water turbidity goal < 1 NTU for the entire month.

Discussion

Corrosion

Metal pipe naturally corrodes based on the chemical properties surrounding it. Corrosivity of water is directly related to pH. Lower pH concentrations, less than 7.0, are considered acidic, and therefore increase corrosion to metal piping. For this reason, The Lake Hartwell Water Treatment Plant adds lime to increase the pH levels to non-corrosive levels. In addition, orthophosphate is added to create a protective barrier on the inner linings of all distribution and premise piping. The added orthophosphate barrier keeps water from contact with bare metal.

pH adjustment technique-

The recommended pH range for orthophosphate to minimize lead, iron, and copper solubility is 7.4-7.8. For the month of February, the Lake Hartwell Water Treatment Plant Finished water pH was stable at 7.1.

Orthophosphate corrosion inhibitor technique-

The Lake Hartwell Water Treatment Plant has determined to adjust the baseline numbers for Orthophosphate to a running annual average to establish a consistent dose rate. During the month of February, the Lake Hartwell Water Treatment Plant Finished water running annual average dose rate is within the desired 1.0 ppm to 1.6 ppm protective barrier range at 1.4 ppm.

Monthly Power Consumption Data

Month	On Peak kW	Off Peak kW	Total kW	Finished Water MG	$/ MG	12 month Average
Feb – 20	206,400	832,800	1,039,200	508.1	$102.90	$100.97
Mar – 20	184,800	763,200	948,000	536.1	$91.49	$99.70
Apr – 20	180,000	861,600	1,041,600	533.1	$96.46	$100.17
May – 20	199,200	873,600	1,072,800	571.8	$92.87	$100.04
Jun – 20	228,000	969,600	1,197,600	621.3	$104.51	$101.57
Jul – 20	235,200	1,111,200	1,346,400	730.7	$104.09	$100.98
Aug – 20	259,200	1,137,600	1,396,800	675.3	$115.59	$101.75
Sep – 20	230,400	1,060,800	1,291,200	643.4	$112.53	$101.83
Oct – 20	208,800	945,600	1,154,400	619.7	$88.86	$100.45
Nov – 20	201,600	914,400	1,116,000	561.8	$84.53	$99.14
Dec – 20	172,800	864,000	1,036,800	550.6	$81.30	$97.43
Jan – 21	208,800	856,800	1,065,600	595.9	$86.81	$96.62
Feb – 21	194,400	871,200	1,065,600	530.6	$92.36	$96.48

Monthly Power Consumption Update

For the month of February, ARJWS was able to treat 530,552,000 gallons of water at a cost of $92.36 per million gallons produced. These costs include the power needed to produce Ozone continuously for effective taste and odor removal for the system. ARJWS also incurred a power rate increase, which went into effect on May 15, 2019. The 12 month Running Annual Average is currently at $96.48.

Discussion

February Operations Highlights

Staff development:
-Several staff passed water treatment operator and distribution exams.
-Bradley Smith has taken on the role of Laboratory Coordinator, where he will assume a lead position in laboratory testing, calibrations, lab related orders, sampling, and maintaining the laboratory certification.

Other Highlights:
- Successfully cleaned out tank to accept bulk loads of Cedar Clear 757, an alternative to alum for improved cold water settling performance.
- Successfully re-configured chemical plumbing to feed Cedar Clear 757 into main process

Discussion

EPA resigned Unregulated Contaminant Monitoring Rule 5 (UCMR5) in February. Every five years, EPA uses the UCMR to monitor for the highest priority unregulated drinking water contaminants at PWSs across the United States.

Prepared by: Chris Weber, Operations Manager
Approved by: Scott Willett, Executive Director

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BOARD MEMORANDUM

March 11, 2021

Subject

Staff Member Focus

Discussion

Anderson Regional Joint Water would like to introduce the newest member to the team, Christopher Weber. Chris joined ARJWS in December 2020, as an Asset Management Engineer. Chris's early career focused on technical, process, and operational functions that supported industrial and hazardous waste treatment facilities. His academic background includes a BS in Civil Engineering from Purdue University and an MS in Environmental Engineering from Clemson University. Chris is the co-inventor on a patent titled "TREATMENT OF SLUDGES AND FLOCCULANTS USING INSOLUBLE MINERAL COLLOIDAL SUSPENSIONS."

Chris relocated from his hometown of Indianapolis to Anderson when he accepted the position here at ARJWS with his wife, Carina, and their cats, Jack and Amelia. Carina is a Charleston native and they are both thrilled to be back in South Carolina living closer to her family. They enjoy spending time outdoors, staying active, fostering kittens from the local animal shelters, and baking homemade pizzas together. They are building a home in Pendleton that is scheduled to be completed in May.

Chris is excited to be a part of the water community and serve the greater Anderson area. He encourages the Board members to say hello any time and he looks forward to continue working with everyone at ARJWS.