ANDERSON REGIONAL
JOINT WATER SYSTEM

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

BOARD AGENDA

Board of Commissioners
October 27, 2021
12 Noon (Lunch @ 11:30am)

Call to Order / Determination of Quorum
Pledge of Allegiance
Commissioners' Comments
Public Comment

I. Approval of Minutes August 25, 2021

II. Consent Calendar (Old Business)

1. None

III. Items requiring immediate action

1. Receive and Accept Comprehensive Annual Financial Report Years Ended June 30, 2021

IV. Discussion (New Business)

1. Executive Director's Report (Oral)

V. Informational Reports

1. Financial & Administration Report
2. Operations Report
3. Personnel Report
4. Engineering Report
5. Executive Committee Meeting Summary

VI. Closed Executive Session

1. None.

VII. Adjournment

Future planned meeting dates of the Anderson Regional Joint Water System Board are:

- Wednesday, December 22, 2021
- Wednesday, February 23, 2022
- Wednesday, April 27, 2022

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www.arjwater.com

MINUTES OF THE ANDERSON REGIONAL JOINT WATER SYSTEM August 25, 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: Benjie McGill, City of Clemson; Patrick Jackson, Starr-Iva; Tommy Phillips, Broadway; Dyke Spencer, Powdersville; David Rogers, Town of Williamston; Chuck Cortez, Big Creek-Hammond; Phillip Mishoe, Town of Central; Douglas Locke, Broadway; Jeremy Gillespie, Sandy Springs

ABSENT: Dwight Edwards, West Anderson; Larry Harrell, Homeland Park; Mitch Ellenburg, Belton-Honea Path; Evan Link; Town of Pendleton

OTHERS PRESENT: Scott Willett, ARJWS; Jeff Caldwell, ARJWS; Lisa Evatt, ARJWS; Natalie Whitaker, ARJWS; Kendall Cleary, AJRWS; Christopher Weber, ARJWS; Jodi Logan, ARJWS; Trey Burns, ARJWS; David Gailey, ARJWS; Billy Bolger, Clemson Univesity

Chairman Dyke Spencer called the Board meeting of Anderson Regional Joint Water System to order at 11:49 a.m. on August 25, 2021.

Chairman Dyke Spencer asked for any Commissioner comments. Mr. Spencer made a recommendation to change the Board Agenda start time to reflect the start time of the meetings. Mr. Jackson thanked Mr. Willett and the ARJWS staff for the time spent working with the Corps of Engineers. Mr. Cortez stated Big Creek-Hammond has had several staff members quarantined with Covid.

There were no public comments.

Mr. Jackson made a motion to approve the June 17, 2021 minutes and Mr. Rogers seconded. Motion carried.

I. Consent Calendar (Old Business)

None

II. Items requiring immediate action

None

III. Discussion (New Business).

1. ARJWS Interagency Communication Plan

Mr. Caldwell presented the Communication Plan to Member Agencies. He discussed Why to Communicate, What to Communicate, and How to Communicate. Mr. Caldwell stated that when an event affects all the Member Agencies, it would be in the best public interest that everyone is communicating the same information. Mr. Caldwell asked for additional member agency contacts with email address and cell phone numbers.

2. Strategic Plan Review for FYE 2021

Mr. Caldwell presented the ARJWS Strategic Plan Update for FYE 2021. He discussed the Critical Objectives which included Brand, Operations and Asset Sustainability, Financial Viability, Staff Retention, and Communication and Partnership. Mr. Spencer made a recommendation to include metrics for the strategic plan goals. Mr. Cortez thanked Mrs. Evatt for including member agencies in the monthly safety training and encouraged member agencies to take advantage of the trainings.

3. Executive Director's Report (Oral)

Mr. Willett gave an update on the Reallocation Study of Lake Hartwell. Mr. Willett should have the allocation contract to present to the Board in less than a year. Mr. Caldwell is working with EPA consultants on the Water Infrastructure Needs Survey. Greene Finney, LLP will be on-site Monday to conduct the Annual Audit for FYE 2021. A full report will be presented at the October Board meeting.

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. McGill made a motion to adjourn at 12:51 p.m. and Mr. Mishoe seconded. Motion carried.

Respectfully submitted,

Phillip Mishoe
Town of Central

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BOARD MEMORANDUM

October 20, 2021

Subject

FYE 2021 Financial Audit report

Recommendation

Accept the FYE 2021 Financial Audit report and file copies to required reporting agencies.

Alternatives:

1. Request additional analysis and or editorial changes to the Audit.

Discussion

Article XI, Section 3 of the Joint Water System By-Laws states "Annual Audit. The Commission shall appoint annually an independent public accountant or accountants to prepare audited financial statements of the financial condition and operations of the Water System for each year. The Commission may authorize or direct the preparation of additional audited or unaudited financial statements of the Water System as the Commission determines is appropriate from time to time."

Greene Finney and Horton, Certified Public Auditors and Consultants has completed the audit for the fiscal year that ended June 30, 2021 and reviewed fiscal year ending June 30, 2020. In summary, the auditors have opined that the financial statements present fairly, in all material respects, the financial position of the Joint Water System as of June 30, 2021 and the results of its operations and its cash flows for the year then ended in conformity with accounting principles generally accepted in the United States. The report includes the debt service coverage ratio calculation per Bond Covenants; the annual coverage ratio was 1.37x. The audit did not identify any deficiencies in internal control.

The Financial Report continues to receive the Government Finance Officers Association Certificate of Achievement for Excellence in Financial Reporting.

Approved by: Scott Willett, Executive Director

Attachment:

1. Independent Audit's Report: Anderson Regional Joint Water System Report on Financial Statements for the Years Ended June 30, 2021
2. Management Letter: Anderson Regional Joint Water System Report on Financial Statements for the Years Ended June 30, 2021

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JOINT WATER SYSTEM

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BOARD MEMORANDUM

October 8, 2021

Subject

Finance and Administration Report

Discussion

Billing

Meters were read on September 30th, 2021, with usage down 4.47% from last month (for the same number of days) and up 4.00% from last year (for the same number of days).

AGENCY	PREV.YR SAME MONTH	LAST MONTH	CURRENT
# of Billing Days	**33**	**33**	**30**
Anderson	137,568,048	135,379,148	134,731,884
Big Creek	29,200,000	31,000,000	23,400,000
Broadway	23,361,748	26,176,587	24,166,001
Clemson	74,658,495	75,778,296	67,711,895
Clemson University	33,126,290	39,705,354	40,222,198
Hammond	76,145,003	89,118,272	66,290,649
Homeland Park	23,093,884	22,486,079	19,251,152
Pendleton	11,599,173	13,016,040	11,293,429
Powdersville	7,011,834	10,100,131	7,316,299
Sandy Springs	59,775,291	75,759,222	60,865,000
Starr-Iva	35,217,012	37,717,932	32,411,968
West Anderson	46,997,276	51,429,713	38,756,429
Williamston	15,730,853	16,606,991	15,762,481
TOTAL	**573,484,907**	**624,273,765**	**542,179,385**

Finance/Budget Summary

For the month ending September 30, 2021, ARJWS is slightly over budget in revenue collections primarily due to the unbudgeted collection of $40,000 from Pioneer Water for water rights. This is an annual collection that should end with the adoption of the new allocation from the Corps. For expenses, the ideal percentage column has been added to the report to reflect that not all expenses are linear over 12 months. Expenses such as chemicals and power are seasonal based on water produced; therefore, the ideal percentage has been updated based on historical averages. ARJWS is trending appropriately for all expense categories except for chemicals. Chemicals are over budget due to using bulk sodium hypochlorite for disinfection rather than onsite generation.

Safety Training

August and September
Subject: Safe Handling of Sodium Hypochlorite
Presenter: Jack Holmes, Trinity Manufacturing
Mr. Holmes was onsite for 3 presentations to teach employees about the following:

- Company and Employee Responsibilities
- Basic Chemical and Physical Properties
- Proper Terminology
- Testing Procedures
- Safe Storage and Processing
- General Safety Practices for Handling Sodium Hypochlorite
- Delivery Procedures
- Periodic Inspections

October
Subject: CCC-CPR & AED Training
Training Dates: October 21st & 28th
ARJWS and member agency employees will learn the following:

- Recognize Sudden Cardiac Arrest
- Heart Attack Vs Sudden Cardiac Arrest
- Continuous Chest Compression (CCC)
- How to correctly apply and use an AED (Automated External Defibrillator)

Prepared by: Kendall Cleary, Accountant
Approved by: Jeff Caldwell, Deputy Director

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

ANDERSON REGIONAL
JOINT WATER SYSTEM

Profit & Loss
For the Month ending September 30, 2021

	Annual Budget	YTD Budget (3 months)	YTD Actual	3+10 Year End Projection	Ideal Percentage	% of Budget Used	YTD Variance	
Operating Revenue								
Operations and Maintenance	5,363,635	1,340,909	1,352,083	5,374,809	25%	25%	11,174	
Capital Charges	5,221,245	1,305,311	1,305,311	5,221,245	25%	25%	-	
Renewal and Replacement								
Water System	1,498,635	374,659	393,617	1,517,593	25%	26%	18,958	
Pump Station	67,738	16,935	18,090	68,894	25%	27%	1,156	
Miscellaneous	51,105	12,776	59,717	98,046	25%	117%	46,941	A
Total Operating Revenue	12,202,358	3,050,590	3,128,818	12,280,586				
Operating Expenses								
Salaries and Wages	1,650,100	412,525	322,505	1,560,080	25%	20%	(90,020)	
Payroll Taxes and Employee Benefits	645,700	161,425	159,168	643,443	25%	25%	(2,257)	
Operations and Maintenance								
Administrative Expenses	417,435	104,359	48,795	361,871	25%	12%	(55,564)	
Operations Expenses								
Lab Supplies/Uniforms/Safety Equipment	136,700	34,175	13,642	116,167	25%	10%	(20,533)	
Chemicals	572,000	143,000	236,694	665,694	27%	41%	93,694	B
Sludge and Chemical Disposal	150,000	37,500	5,283	5,283	0%	4%	(32,217)	
Utilities and Security	1,105,600	276,400	312,751	1,141,951	32%	28%	36,351	
Maintenance Expenses	299,200	74,800	94,594	318,994	25%	32%	19,794	
Professional Fees	110,000	27,500	38,392	120,892	25%	35%	10,892	
Insurance	94,900	23,725	5,181	76,356	0%	5%	(18,544)	
Debt Expenses	5,221,245	1,305,311	1,305,948	5,221,882	25%	25%	637	
Junior Lien Bond Payments	-	-	54,000	54,000	100%	100%	54,000	
Source Water Protection	51,000	12,750	880	39,130	25%	2%	(11,870)	
Miscellaneous Expenses	131,000	32,750	30,584	128,834	25%	23%	(2,166)	
Total operating expenses before depreciati	10,584,880	2,646,220	2,628,417	10,454,577				
Net operating income	1,617,478	404,370	500,401	1,826,009				
Raw Water								
Raw Water Income	58,223	14,556	56,077	99,744				
Raw Water O&M Expenses	-	-	44,896	44,896				
Raw Water Operating Income	58,223	14,556	11,181	54,849	25%	19%	(3,374)	

	Cash Balances	Days Cash on Hand
Operating Cash	1,950,090	67
Capital Project Fund	3,132,000	
R&R Funds (Restricted)	827,892	
	5,909,982	

A: Over budget due to the annual Pioneer payment of $40,000 and a termination balance returned from the refunding of Series 2011A.

B: Over budget due to using bulk sodium hypochlorite for disinfection.

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BOARD MEMORANDUM

October 6, 2021

Subject
Operations Report

Discussion

Operations

As of October 6th, 2021, Lake Hartwell's surface elevation was 658.65 ft, 1.35 ft. below full pool. Raw water is being drawn from the top gate of the intake structure. Water temperature at the top gate is 77.90°F. The Joint Water System reached 100% of settled water turbidity goals for the month of September. Raw water pH levels are relatively constant. Settled and Finished water pH levels are normal. The maximum day for September water production was 49.8% of Finished water capacity.

In addition to water quality sampling for the Lake Hartwell Water Treatment Plant, Joint Water System staff processed 177 Total Coliform distribution samples for local entities during the month of September.

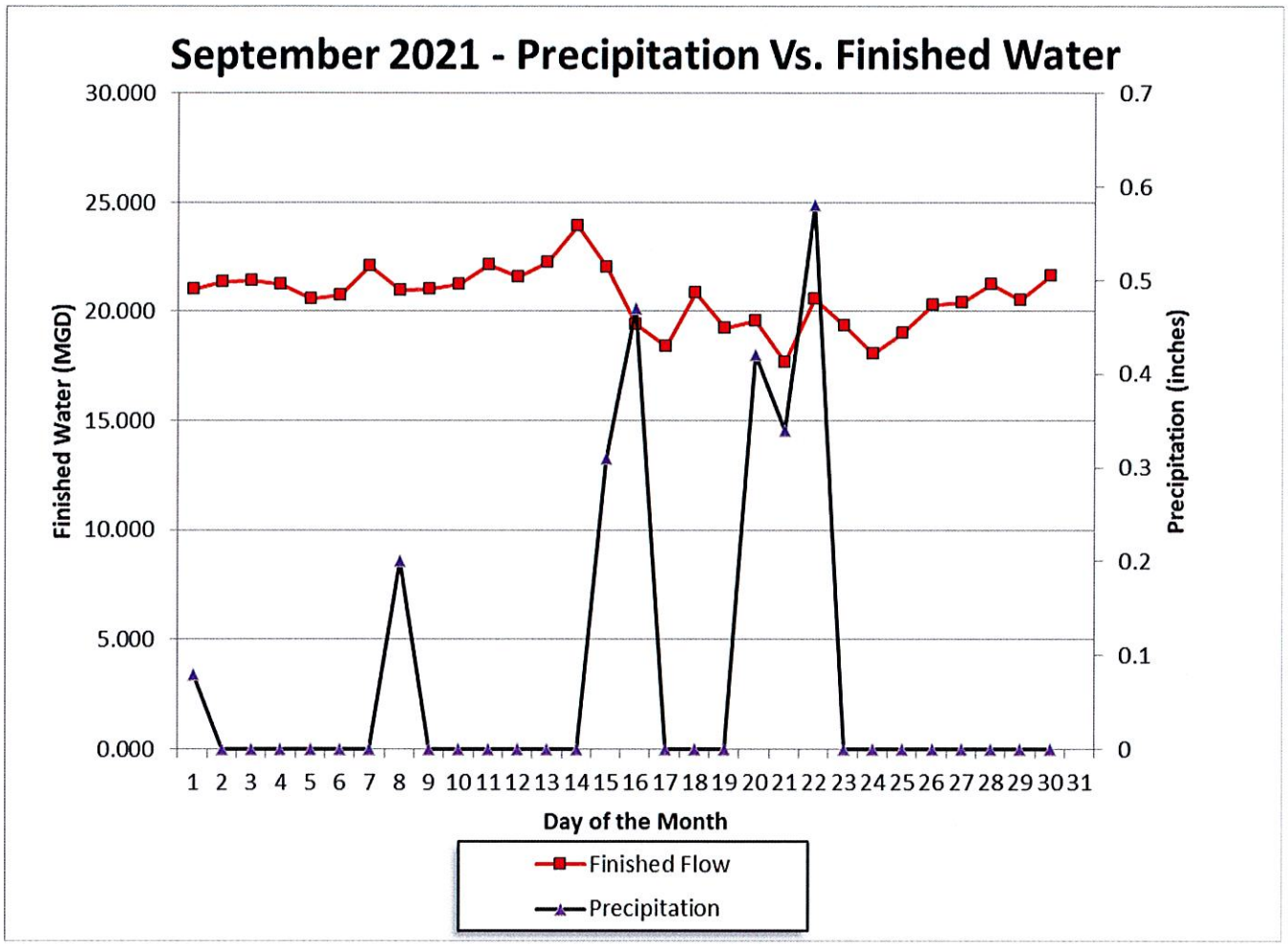
Weather Data

	Minimum	Maximum	Total
Rainfall	0.00 in.	0.58 in.	2.40 in.
Temperature	51.7° F	87.7° F	N/A
Humidity	41%	100%	N/A

Water Production Data

	Average	Minimum	Maximum	Total
Raw Water (MG)	20,791,000	15,039,000	24,645,000	623,719,000
Finished Water (MG)	20,672,000	17,665,000	23,919,000	620,149,000
Finished Max Capacity	43.1%	36.8%	49.8%	43.06%

NOTE: Percentages are finished water capacities.



Water Quality Data

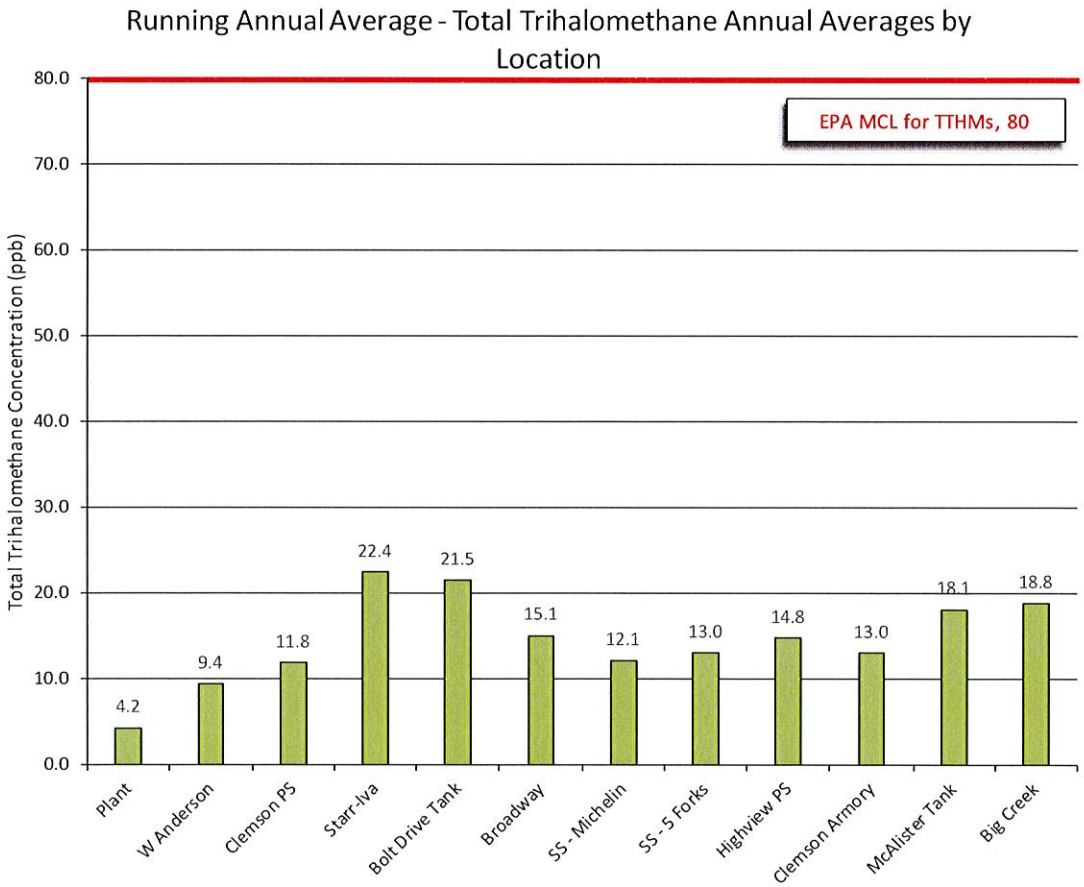
	Raw	Settled	Finished
pH	6.79	6.82	7.14
Turbidity (NTU) Range	1.10 to 1.70	0.20 to 0.74	0.04-0.04
Turbidity (NTU) Average	1.37	0.44	0.04
Turbidity (NTU) Exceedance	-	0.00%	0.00%
Total Organic Carbon	1.80	-	0.95
Fluoride Average (ppm)	-	-	0.63
Residual Disinfectant (ppm)	-	-	1.72
TTHM (DBP)	-	-	11.7 ppb
Methylisoborneol (MIB)*	29.2 NG/L	-	<1.0 NG/L
Geosmin*	3.4 NG/L	-	<1.0 NG/L

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

Total Trihalomethane Discussion

Trihalomethanes (THMs) are one type of disinfection byproduct that can form during the treatment process and within the distribution system. THM concentrations vary primarily as a function of total organic carbon (TOC), temperature, disinfectant type, and residence time. THMs can have adverse health effects at high concentrations, and the EPA has established compliance criteria for these compounds in aggregate, termed Total Trihalomethanes (TTHMs). These criteria are established in Stage 2 of the Disinfection Byproduct Rule, which has a numerical MCL of 80 micrograms per liter (or parts per billion, ppb) based on a Locational Running Annual Average. The Operations Staff at ARJWS collect monthly, one-time samples, as a spot check for TTHM formation in the distribution system. The table below displays this month's readings, along with annual maximum, minimum, and overall averages at the designated sample locations.

Disinfection Byproduct Analysis Report



Water Quality Strategic Planning Discussion

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

- Finished water pH was held within the designated 7.1-7.2 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.
- Achieved settled water turbidity goal < 1 NTU for the entire month.

Corrosion Discussion

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.

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 September, 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 1.08 ppm.

Monthly Power Consumption Data

Month	On Peak kW	Off Peak kW	Total kW	Finished Water MG	$/ MG	12 month Average
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
Mar – 21	168,000	787,200	955,200	559.9	$75.67*	$94.39
Apr – 21	194,337	880,130	1,074,467	571.7	$89.46	$94.23
May – 21	215,996	909,415	1,125,411	662.4	$74.97*	$92.58
Jun – 21	218,574	1,098,505	1,317,079	667.4	$94.20	$94.16
Jul – 21	271,224	947,223	1,218,447	649.6	$122.47	$94.06
Aug - 21	281,251	974,455	1,255,706	666.0	$116.14	$94.99
Sep - 21	236,672	1,031,508	1,268,180	620.1	$104.64	$94.15

*Noting that the March and May bills from Duke Energy were lower than historical normal.

Monthly Power Consumption Update

For the month of September, ARJWS treated 620,149,000 gallons of water at a power cost of $104.64 per million gallons produced. This includes the power needed to produce Ozone continuously for effective taste and odor removal for the system. The 12 month Running Annual Average is currently at $94.15.

Discussion

September Operations Highlights

- Justin Clemones received his "A" operator's license
- Started dewatering operation to remove accumulated solids from the settling lagoons.
- Bulk hypochlorite successfully delivered to site, diluted, and used in process. As demand drops, we will switch back to MIOX to help offset chemical costs.

Prepared by: Chris Weber, Operations Manager
Approved by: Jeff Caldwell, Deputy Director

ANDERSON REGIONAL
JOINT WATER SYSTEM

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BOARD MEMORANDUM

October 05, 2021

Subject

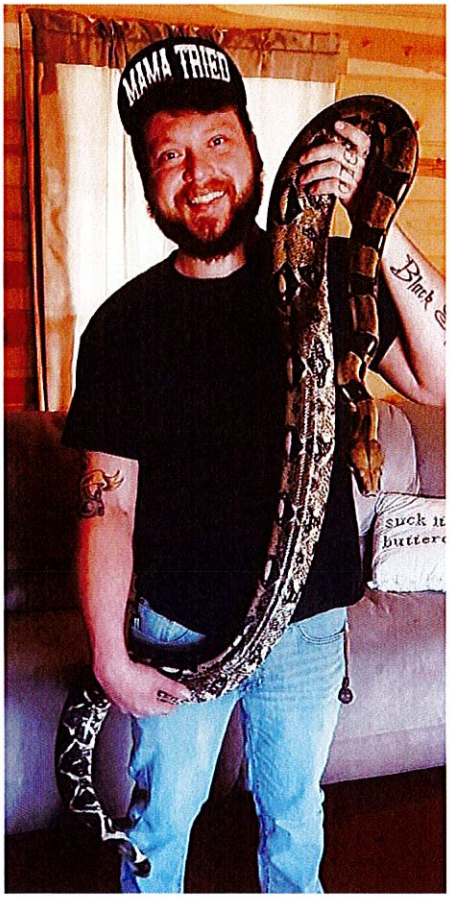
Personnel Report: Staff Member Focus

Discussion

Anderson Regional Joint Water would like to introduce Kyle Merritt. Kyle was hired in October 2020, as a Water Maintenance Assistant. Kyle currently maintains a "D" license in Water Distribution. Kyle previously worked at Anderson County Fleet Services as an ASE Certified Automotive Technician. He is also certified and trained in multiple automotive specifics by Ford, General Motors, Mopar Dodge, Wix, AC Delco, and others.

Kyle resides in Starr with his wife, Cassidy Merritt, and son, Waylon (4). They are expecting their second child in April. Kyle's hobbies include spending time with his family, working on cars, and handling his many reptiles.

"ARJWS is appealing because of the competitive pay and it allows me to provide for my family."



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BOARD MEMORANDUM

October 14, 2021

Subject

Engineering Report

Discussion

Grant Funding

ARJWS submitted a Rural Infrastructure Authority grant application for the Transfer Pump Station Reliability Upgrade project. The transfer pump station discharge header has been identified as a single point of failure in the system's ability to reliably deliver treated water to the ground storage reservoirs. This project would provide a redundant discharge header, add a 7,000-gpm vertical turbine pump, reorient and connect three transfer pumps to the new discharge, and provide greater operational control of the ground storage reservoirs which will lead to higher water quality leaving the plant.

Asset Management

The new asset management software, NextService, rolled out staff training on the mobile app on September 1st. The maintenance team is using the new system to create and complete work order and preventative maintenance activities. As data is generated, subsequent tasks will begin to accurately schedule of PM tasks, compile reports, and generate trends. This will provide the necessary data to development the future CIP.

Disinfection Changes

Dependability issues with the current MIOX generators due to availability of replacement parts and ability to make adequate product during peak summer usage, staff completed the switch over to bulk hypochlorite on August 25th. This project was a team effort between the management, maintenance, and operations staff. The 12.5% bulk product is diluted to approximately 3.5% and injected via the existing feed system. Current plans include returning to MIOX generation when demands decrease in October.

Lagoon Dredging

Bio-nomics mobilized on August 27th to begin the 2021 solids removal operations from Lagoon #1. On September 7th, dewatering operations began via dredge and belt filter press. As of this report, a total of 991.47 wet tons have been removed and hauled to the Anderson Regional Landfill. The system has documented an average of 16.82% dewatered solids to date.

Water Age Study

ARJWS is conducting a tracer study using fluoride to help determine water age throughout the transmission system. ARJWS hosted a kick-off meeting with member systems on October 7th. The meeting was very well attended by 10 agencies, and everyone seemed excited to participate. Phase 1 of the study (turning off fluoride) has provided some very good information on the water transmission patterns to various system connection points. Member agency participation will begin on October 19th and Phase 1 will be complete on October 22nd. Phase 2 will commence on October 25th.

Prepared by: Jeff Caldwell, Deputy Director
Approved by: Scott Willett, Executive Director

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COMMITTEE SUMMARY

Executive Committee

October 18, 2021

11:30 am

I. Discussion Summary

1. American Rescue Plan Act (ARPA) Funding – Scott Willett

ARJWS has reviewed several scenarios regarding the potential of $500 million in funding for water and wastewater systems in the South Carolina. There was discussion based on the Unified Water Advisory Panel recommendation and the funding proposal to our member agencies. This proposal is based on an estimated population considering the number of service taps. This methodology uses 10 taps and a total population of 25 to calculate funding for the ARJWS resulting in approximately $2,300. The ARJWS has discussed with the Panel chair and RIA to better understand and identify other avenues to access funding that would provide better benefit to the system.

2. ARPA Potential Projects – Jeff Caldwell

ARJWS has identified four (4) major projects in response to the potential ARPA funding opportunities.

A. Transfer Pump and Manifold Upgrade - $800,000

B. Disinfection – Onsite Generation Upgrade - $1,500,000

C. Ozone Generator Addition - $1,500,000

D. CBS Ground Storage Tank Addition - $5,000,000

3. Water Age Study Update – Chris Weber

ARJWS is conducting a fluoride tracer study to better inform our understanding of water age in the transmission system. Phase 1 of the study provided some worthwhile data. Member systems are asked to start the initial sampling this week. Graphs of the data were provided showing the rate at which fluoride dissipated at each sample point.

Phase 2 is expected to begin next Monday, October 25th.

4. Lake Hartwell Partnership Activities – Scott Willett

ARJWS is a sponsor of the Lake Hartwell Partnerships grant proposal for funding the 18-mile creek watershed. The sponsorship level is $3,000 for FY22 and $15,000 for FY23. The goal is to grow the membership of the partnership into surrounding counties.