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 26, 2022
12 Noon

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

I. Approval of Minutes August 24, 2022

II. Consent Calendar (Old Business)

1. None

III. Items requiring immediate action

1. Receive and Accept Annual Comprehensive Financial Report for years ending June 30, 2022 & 2021

IV. Discussion (New Business)

1. Executive Director's Report (Oral)

V. Informational Reports

1. Financial & Administration Report
2. Operations and Maintenance Report
3. Sustainability 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:

- December 14, 2022
- February 22, 2023
- April 26, 2023
- June 28, 2023

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www.arjwater.com

MINUTES OF THE ANDERSON REGIONAL JOINT WATER SYSTEM August 24, 2022

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: Andy Blondeau, City of Clemson; Patrick Jackson, Starr-Iva; Dyke Spencer, Powdersville; David Rogers, Town of Williamston; Chuck Cortez, Big Creek-Hammond; Douglas Locke, Broadway; Tracy Durham, Sandy Springs; Scott Banks, City of Anderson; John Lollis, West Anderson; Dennis Chastain, Homeland Park; Evan Link, Town of Pendleton; Phillip Mishoe, Town of Central

OTHERS PRESENT: Scott Willett, ARJWS; Jeff Caldwell, ARJWS; Kendall Cleary, AJRWS; Christopher Weber, ARJWS; Jodi Logan, ARJWS; Billy Bolger, Clemson University; David Gailey, ARJWS; Trey Burns, ARJWS; Lisa Evatt, ARJWS; Carl Edwards, Vickie Edwards

Chairman Dyke Spencer called the Board meeting of Anderson Regional Joint Water System to order at 11:58 a.m. on August 24, 2022.

Chairman Dyke Spencer asked for any Commissioner comments. Mr. Spencer welcomed Andy Blondeau with the City of Clemson to the Board.

Mr. Willett thanked the Town of Williamston and Mr. Cortez for hosting the Upstate Rural Water Meeting through SCRWA.

Mr. Cortez made a motion to approve the June 22, 2022 minutes and Mr. Jackson seconded. Motion carried.

I. Consent Calendar (Old Business)

None

II. Items requiring immediate action

1. Recognition and Appreciation of Service Award

Mr. Caldwell read the Recognition and Appreciation of Service for Mr. Dwight Edwards Board Memorandum aloud. Chairman Spencer presented the family of Mr. Edwards with a plaque. Board members spoke on Mr. Edwards professionalism, character, leadership, and friendship.

III. Discussion (New Business).

1. Strategic Plan Annual Report FYE 2022

Mr. Caldwell presented the ARJWS Strategic Plan Update for FYE 2022. He discussed the Critical Objectives which included Brand, Operations and Asset Sustainability, Financial Viability, Staff Retention, and Communication and Partnership.

2. Executive Director's Report (Oral)

Mr. Willett discussed Lake Hartwell Partnership for Clean Water. The formal organization is now a legal entity that has started applying for grants. Mr. Willett updated the Board on the Reallocation Study of Lake Hartwell. The allocation contract has been pushed back 6 to 8 months. New anticipated contract date is April 2024. Mr. Willett gave an update on S.C. Surface Water Withdrawal, Permitting, Use and Reporting Act.

IV. Informational Reports

1. Executive Committee Meeting Summary
2. Finance and Administration Report

Greene Finney, LLP has been on-site to conduct the Annual Audit for FYE 2022. A full report will be presented at the October Board meeting. Each Board member was given the board letter.

3. Operations and Maintenance Report
4. Sustainability Report

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.

VI. Adjournment

With no further business, Mr. Locke made a motion to adjourn at 12:46 p.m. and Mr. Mishoe seconded. Motion carried.

Respectfully submitted,

Phillip Mishoe
Secretary/Treasurer

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BOARD MEMORANDUM

October 19, 2022

Subject

Annual Comprehensive Financial Report

Recommendation

Accept the FYE 2022 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 Cauley, Certified Public Auditors and Consultants has completed the audit for the fiscal year that ended June 30, 2022 and reviewed fiscal year ending June 30, 2021. 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, 2022, 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 1.38x. 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

Attachments: (Website only – Hard copies available at the board meeting)

1. Independent Audit's Report: Anderson Regional Joint Water System Report on Financial Statements for the Years Ended June 30, 2022
2. Management Letter: Anderson Regional Joint Water System Report on Financial Statements for the Years Ended June 30, 2022

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BOARD MEMORANDUM

October 5, 2022

Subject

Finance and Administration Report

Discussion

Billing

Meters were read on October 3, 2022, with usage down 5.40% from last month (for the same number of days) and up 3.53% from last year (for the same number of days).

AGENCY	PREV.YR SAME MONTH	LAST MONTH	CURRENT
# of Billing Days	**30**	**34**	**33**
Anderson	134,731,884	155,459,734	142,856,463
Big Creek	23,400,000	33,800,000	40,900,000
Broadway	24,166,001	23,404,161	24,350,126
Clemson	67,711,895	80,757,904	79,723,573
Clemson University	40,222,198	36,482,384	41,880,587
Hammond	66,290,649	90,446,143	85,514,527
Homeland Park	19,251,152	21,007,016	19,105,916
Pendleton	11,293,429	14,531,176	12,467,031
Powdersville	7,316,299	11,266,373	9,699,034
Sandy Springs	60,865,000	86,256,143	74,374,181
Starr-Iva	32,411,968	40,275,146	38,653,029
West Anderson	38,756,429	57,119,519	34,718,240
Williamston	15,762,481	21,671,668	13,210,769
TOTAL	**542,179,385**	**672,477,367**	**617,453,476**

Finance/Budget Summary

For the month ending September 30, 2022, ARJWS is trending appropriately for revenues and expenses for the first quarter of the fiscal year.

See the Profit & Loss report for additional information.

Safety Training

August
Subject: CPR/First Aid/AED Certification Class
Training Date: September 22, 2022
Onsite Attendance (Full Class)
ARJ Staff – 4
Member Agency –4

Prepared by: Jodi Logan, Billing/Purchasing Coordinator
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, 2022

3+9

	Annual Budget	YTD Budget (3 months)	YTD Actual	Year End Projection	Ideal Percentage	% of Budget	YTD Variance	
Operating Revenue								
Operations and Maintenance	5,729,325	1,432,331	1,474,811	5,771,804	25%	26%	42,479	
Capital Charges	5,331,369	1,332,842	1,332,842	5,331,369	25%	25%	-	
Renewal and Replacement								
Water System	1,499,760	374,940	375,114	1,499,934	25%	25%	174	
Pump Station	67,738	16,935	16,957	67,761	25%	25%	23	
Miscellaneous	51,616	12,904	69,663	108,375	25%	135%	56,759	A
Total Operating Revenue	12,679,808	3,169,952	3,269,387	12,779,243				
Operating Expenses								
Salaries and Wages	1,727,500	431,875	437,682	1,733,307	25%	25%	5,807	
Payroll Taxes and Employee Benefits	726,400	181,600	171,490	716,290	25%	24%	(10,110)	
Operations and Maintenance								
Administrative Expenses	310,790	77,698	54,229	287,322	25%	17%	(23,468)	
Operations Expenses								
Lab Supplies/Uniforms/Safety Equipment	118,900	29,725	24,813	113,988	25%	21%	(4,912)	
Chemicals	801,600	200,400	216,690	817,890	28%	27%	16,290	
Sludge and Chemical Disposal	175,000	43,750	-	175,000	0%	0%	(43,750)	
Utilities and Security	1,113,300	278,325	316,551	1,151,526	32%	28%	38,226	
Maintenance Expenses	372,135	93,034	62,937	342,038	25%	17%	(30,097)	
Professional Fees	98,000	24,500	16,500	90,000	25%	17%	(8,000)	
Insurance	111,800	27,950	22,108	111,800	25%	20%	(5,842)	
Debt Expenses	5,331,370	1,306,281	1,103,418	5,331,370	25%	21%	(202,863)	
Source Water Protection	50,000	12,500	32,753	70,253	25%	66%	20,253	B
Miscellaneous Expenses	123,900	30,975	7,382	100,307	25%	6%	(23,593)	
Total operating expenses before depreciatic	11,060,695	2,738,612	2,466,552	11,041,090				
Net operating income	1,619,113	431,340	802,835	1,738,153				
Raw Water								
Raw Water Income	58,811	14,703	90,051	134,160				
Raw Water O&M Expenses	-	-	76,739	76,739				
Raw Water Operating Income	58,811	14,703	13,313	57,421	25%	23%	(1,390)	
Non-Budget Impacting Items								
Junior Lien Bond Payments	246,090	61,523	57,000	57,000	25%	23%	(4,523)	
	246,090	61,523	57,000	57,000				

	Cash Balances	Days Cash on Hand	
Operating Cash	2,205,839	73	C
Capital Project Fund	2,646,342		
System R&R Fund (Restricted)	484,435		
Pumped R&R Fund (Restricted)	511,529		
Raw Water O&M	179,620		
Raw Water R&R	233,446		
	6,261,212		

A: Over projected revenue due to the annual Pioneer payment of $40,000

B: Over budget due to one-time payments to the Watershed-Based Plan for Twelvemile River & Contribution to Watershed Research Council

C: Increase in response to September transfer for the Series 2017B bond payment

SYSTEMS REPAIR & REPLACEMENT ACCOUNT

September 30, 2022

DATE	TRANSACTION MEMO	CREDIT	DEBIT	BALANCE
09/01/2022	Balance Forward LGIP Investment			$358,649.79
09/28/2022	System Transfer for August 2022 Billing	$124,979.97		$483,629.76
09/30/2022	Interest Earned September 2022	$805.01		$484,434.77
09/30/2022	Ending Balance LGIP			**$484,434.77**

PUMPED REPAIR & REPLACEMENT ACCOUNT

September 30, 2022

DATE	TRANSACTION MEMO	CREDIT	DEBIT	BALANCE
09/01/2022	Balance Forward LGIP Investment			$504,791.28
09/28/2022	System Transfer for August 2022 Billing	$5,648.06		$510,439.34
09/30/2022	Interest Earned September 2022	$1,089.83		$511,529.17
09/30/2022	Ending Balance LGIP			**$511,529.17**

ANDERSON REGIONAL
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BOARD MEMORANDUM

October 5, 2022

Subject
Operations and Maintenance Report

Discussion

Operations

As of October 5, 2022, Lake Hartwell's surface elevation was 656.28 ft, 3.72 ft. below full pool. Raw water is being drawn from the top gate of the intake structure. Water temperature at the top gate is 75.7°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 52.9% of Finished water capacity.

Operations and Maintenance Highlights

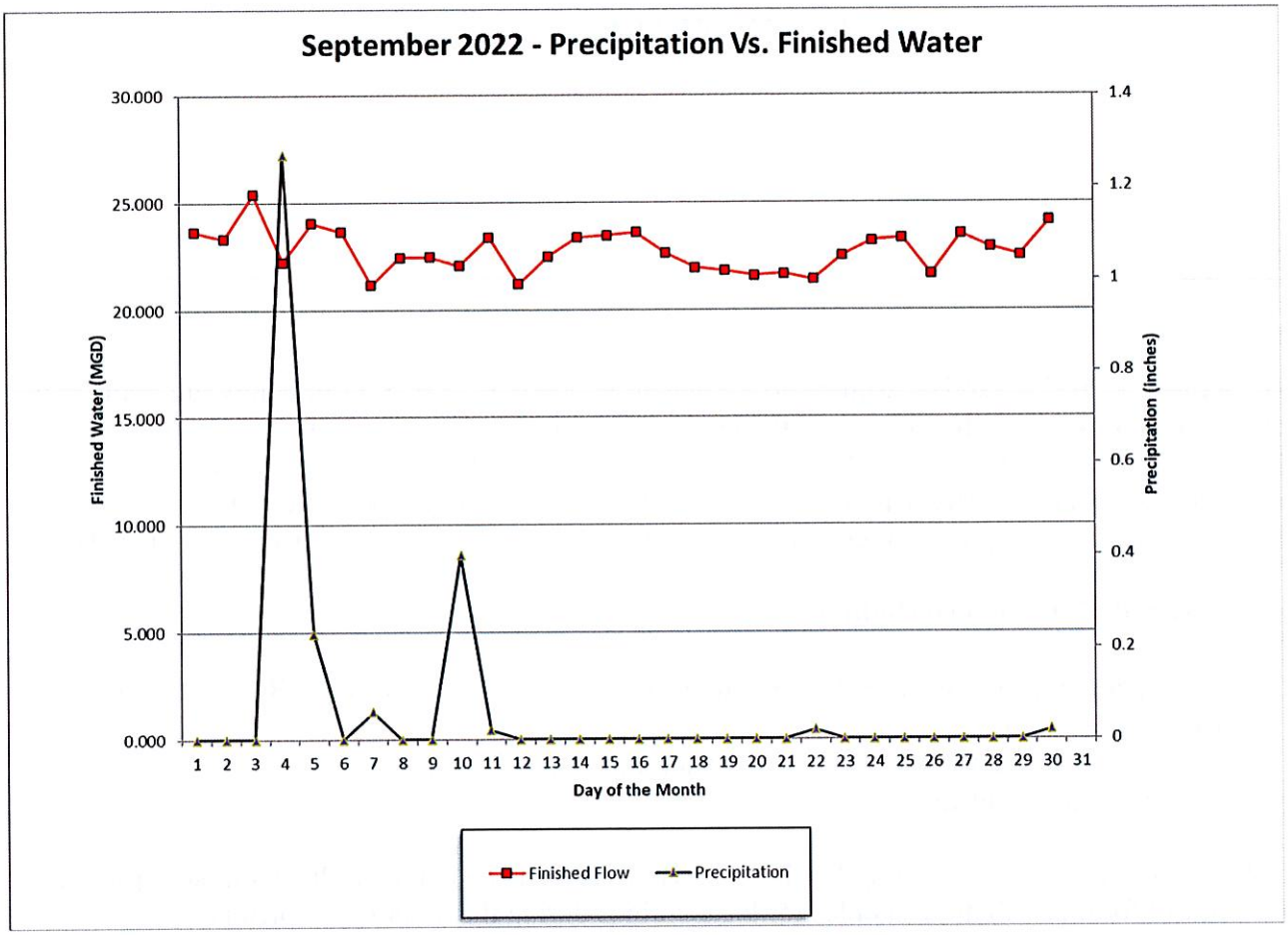
- New operator, James Clouse started with us in September. He joins the ARJWS team with a B level Treatment license.
- Prepared for sodium hypochlorite outage and lime tank cleanout
- Performed lagoon cleanout

In addition to water quality sampling for the Lake Hartwell Water Treatment Plant, our staff processed 158 Total Coliform distribution samples for local entities during the month of September.

Water Quality Data

	Raw	Settled	Finished
pH	6.79	6.42	7.11
Turbidity (NTU) Range	1.40-2.10	0.28-0.64	0.03-0.04
Turbidity (NTU) Average	1.62	0.40	0.03
Turbidity (NTU) Exceedance	-	0%	0%
Total Organic Carbon	1.71	-	0.99
Fluoride Average (ppm)	-	-	0.69
Phosphate Average (ppm)	-	-	1.31 (wet)
Residual Disinfectant (ppm)	-	-	1.72
TTHM (DBP)	-	-	8.3 ppb
Methylisoborneol (MIB)	12.5 NG/L	-	<1.0 NG/L
Geosmin	5.9 NG/L	-	<1.0 NG/L

Weather Data



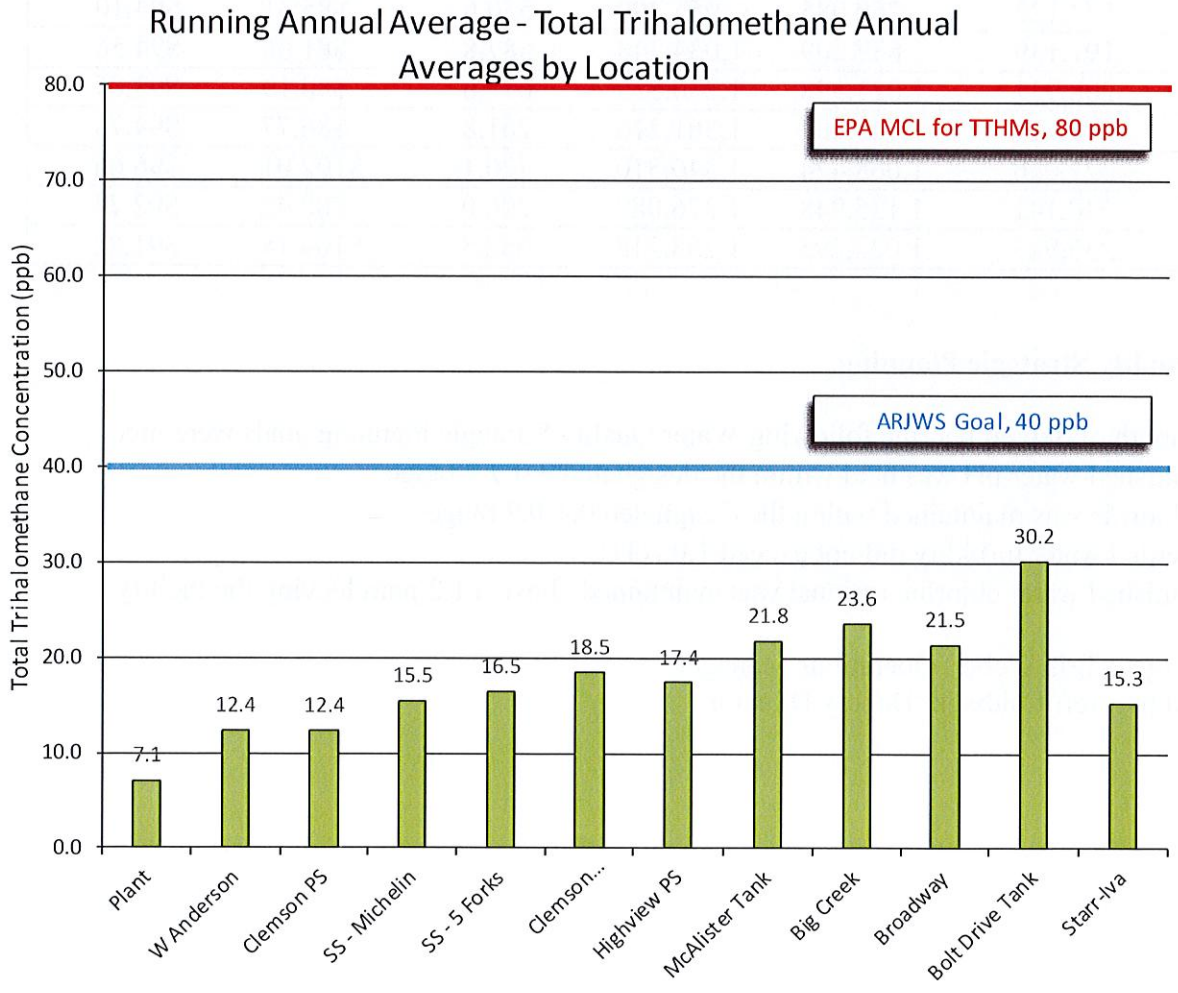
	Minimum	Maximum	Total
Rainfall	0.00 in.	1.27 in.	2.02 in.
Temperature	52.5° F	90.3° F	N/A
Humidity	20.4%	89.4%	N/A

Water Production Data

	Average	Minimum	Maximum	Total
Raw Water	21,716,000	17,984,000	24,739,000	651,485,000
Finished Water	22,752,000	21,145,000	25,388,000	682,560,000
Finished Max Capacity	47.4%	44.1%	52.9%	47.4%

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. ARJWS Operations Staff collects monthly, one-time samples, as a spot check for TTHM formation in the transmission system. The running annual averages of those results are shown in the figure below.



Monthly Power Consumption Update

For the month of September, ARJWS treated 682,560,000 gallons of water at a power cost of $104.18 per million gallons produced. The 12 month Running Annual Average is currently at $91.82.

Monthly Power Consumption Data

Month	On Peak kW	Off Peak kW	Total kW	Finished Water MG	$/ MG	12 month Average
Sep – 21	236,672	1,031,508	1,268,180	620.1	$104.64	$94.15
Oct – 21	228,046	894,233	1,122,279	593.7	$96.90	$92.95
Nov – 21	199,551	874,347	1,073,898	544.6	$91.66	$93.16
Dec – 21	186,656	794,378	981,035	534.3	$87.42	$93.38
Jan – 22	198,616	786,624	985,240	558.2	$88.94	$93.97
Feb – 22	184,554	859,075	1,043,630	502.6	$95.57	$94.65
Mar – 22	173,122	760,085	955,200	550.6	$85.31	$94.10
Apr – 22	197,139	837,209	1,034,348	587.8	$81.66	$94.56
May - 22	208,937	1,021,598	1,230,535	677.6	$80.19	$93.85
June - 22	217,719	1,143,497	1,361,216	761.8	$86.77	$94.76
Jul – 22	272,036	1,068,474	1,340,510	720.1	$102.01	$96.66
Aug – 22	240,141	1,135,948	1,376,089	706.0	$88.42	$92.74
Sep – 22	235,923	1,022,295	1,258,218	682.5	$104.18	$91.82

Water Quality Strategic Planning

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

- Finished water pH was held within the designated 7.0-7.2 range
- Fluoride was maintained within the designated 0.4-0.7 range
- Settled water turbidity did not exceed 1.0 NTU
- Finished water chlorine residual was maintained above a 1.2 ppm leaving the facility.

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

ANDERSON REGIONAL
JOINT WATER SYSTEM

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BOARD MEMORANDUM

October 19, 2022

Subject
Sustainability Report

Asset Management

ARJWS is tracking maintenance tasks of all assets. Preventative Maintenance tasks (PMs) are performed on every asset on a weekly, monthly, quarterly, bi-annually, or annual basis. Work Orders consist of installations or repairs required on an asset that are separate from the PM schedule. The current target is 400 completed tasks for the month.

PMs Completed	307
PMs Deferred	224
Work Orders Open	36
Work Orders Completed	19

*Working through issues with software not allowing staff to close out assigned PM tasks. Meeting with Next Service weekly to document issues and expand options available to the maintenance staff.

The effectiveness of the asset management program on ARJWS's ability to deliver the highest quality drinking water can be measured by treatment reliability. A decrease of reliability is defined by a capacity reduction for 72 hours or more. The table below shows overall reliability for the month of August.

Plant Rated Capacity	42.00 MGD		
Reliable Capacity	30.24 MGD	**% of rated capacity**	72%
3-year Max Day (same month) + 10%	27.93 MGD	**Reliability**	108%
3-year Max Day (Next 90 days) + 10%	28.34 MGD	**Reliability**	107%

Limiting treatment component is the transfer pump station, Pump #2 is currently down due to a failed retainer bearing.

Brand

ARJWS uses many different platforms in order to engage with the public to bring awareness to the system as well as educate and inform about relevant topics of interest to water supply, water treatment, regulatory issues, etc.

Platform	Twitter	Facebook	Instagram	Websites	Events	Tours	Total
Reach	807	6,698	1,680	1,005	0	19	18,943
Engagement	13.94%	7.36%	40.01%				

Reach is the total amount of people impacted on each platform.
Engagement is the percentage of people reached who interacted with the content published (likes, shares, comments, website visits, etc.)

Communication and Partnership

ARJWS's goal is to strengthen regional presence, cooperation, and communication among ARJWS and communities.

1. City of Belton & Helping Hands Community Group
    a. Restoring a public pond at JC Ball Park.
    b. 2-year project by a grant from the Anderson County Watershed Council.
2. Anderson Soil & Water Conservation District
    a. $50,000 grant application submitted for education curriculum and materials in the Broadway Lake area.
    b. ARJWS is a partner in the grant submittal.

Source Water Protection

The ARJWS has adopted the four creeks upstream of our intake and sample each once per month. These creeks account for approximately 80% of our source water supply.

	E. Coli (cfu/100 mL)	Dissolved Oxygen (ppm)
Hembree Creek	133	9.5
Hurricane Creek	133	6.9
Town Creek	100	6.3
Six and Twenty Creek	33	7.8

Prepared by: Trey Burns, Sustainability Manager
Approved by: Jeff Caldwell, Deputy Director

ANDERSON REGIONAL
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BOARD MEMORANDUM

October 18, 2022

Subject

Engineering Report

Discussion

Transfer Pump Station Upgrade and Improvements Project

Staff worked with GMC to install a pressure recorder on the existing manifold and provided historical SCADA data in order to model existing conditions. This hydraulic model will be used to estimate the current capacity of the existing infrastructure under varying operating conditions including backwash. Then the project will be designed to ultimately meet the desired rated capacity of the pump station.

SCDOT Improvement Projects Update

SCDOT is currently planning four (4) improvement projects in areas where ARJWS owns and operates major transmission infrastructure.

1. Dixon Road – ARJWS has provided a no conflict letter as part of the redesign of this intersection
2. Welcome Road and Hwy 29N – ARJWS must relocate approximately 550LF of 20" transmission main to avoid a proposed roundabout. In the process of providing preferred relocation route, cost estimate and preferred list of contractors.
3. Destination Blvd and Clemson Blvd – SCDOT has redesigned the storm drainage plan and ARJWS has provided a no conflict letter as part of the design of this project.
4. Welpine Rd and Clemson Blvd – ARJWS has provided a no conflict letter as part of this project.

2022 Filter PLC Upgrades

MR Systems is designing upgrades to filter panels 1, 4, and 8. Panels 1 & 4 are similar to the panels that were upgraded last year. Panel 8 will include controls for the blowers for all backwash cycles. PLC programmer is scheduled to create the programs the last week of October and we expect drawings for review the first week of November. Installation is tentatively scheduled to start November 14th.

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

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COMMITTEE SUMMARY

Executive Committee

October 17, 2022

11:30 am

I. Discussion Summary

1. **Annual Comprehensive Financial Report**
   Scott Willett provided an overview of the audit findings including an unmodified opinion where Greene Finney notes that all financial statements where materially correct. Auditor's presentation will be available at the October board meeting.

2. **PFAs Update**
   Following the recent sampling results, ARJWS provided anonymous results at the request of the Water Quality Association. Of the 32 water utility's responding, ARJWS is believed to be in the bottom 10%. Some discussion around the EPA's Health Advisory and the World Health Organization's proposed guidance values. More discussion related to potential treatment alternatives including Activated Carbon, Ion Exchange, and High-pressure Membranes.

3. **Continuous Improvement**
   Discussion items included quarterly staff reviews, Duke Energy bill adjustment, Lime Tank Cleanout plan, and Lagoon Sludge Removal. Additional discussion regarding inflation and equipment and material price increases.

Prepared by: Jeff Caldwell, Deputy Director