ANDERSON REGIONAL
JOINT WATER SYSTEM

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

COMMITTEE AGENDA

Executive Committee
January 19, 2021
11:30 am

I. Discussion

1. Dixon Road/SCDOT Relocation
2. Personnel

II. Adjournment

The Anderson Regional Joint Water System Executive Committee meets monthly. The next planned Executive Committee meeting dates (all times 11:30 am) are:

- **Monday, February 8, 2021**
- **Monday, March 8, 2021**
- **Monday, April 12, 2021**
- **Monday, May 17, 2021**

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BOARD MEMORANDUM

January 7, 2020

Subject

Finance and Administration Report

Discussion

Billing

Meters were read on December 30, 2020 with usage down 11.14% from last month (for the same number of days) and up 1.20% from last year (for the same number of days).

AGENCY	PREV.YR SAME MONTH	LAST MONTH	CURRENT
# of Billing Days	**34**	**32**	**30**
Anderson	111,813,424	119,644,724	110,004,162
Big Creek	24,300,000	28,500,000	23,500,000
Broadway	24,707,071	21,926,654	19,004,273
Clemson	61,274,358	74,944,939	45,172,888
Clemson University	18,034,859	27,523,557	15,874,372
Hammond	59,255,714	59,855,332	49,144,008
Homeland Park	21,561,645	21,598,013	18,648,937
Pendleton	14,140,923	10,630,176	8,671,172
Powdersville	3,042,000	6,080,758	4,192,382
Sandy Springs	43,249,000	58,484,650	47,349,925
Starr-Iva	31,561,930	31,676,641	27,236,711
West Anderson	41,428,922	38,795,174	36,587,542
Williamston	15,426,616	3,900,815	14,115,316
TOTAL	**469,796,462**	**503,561,433**	**419,501,688**

Changes in State and Federal Rules

Payroll Tax Deferral Guidance

The U.S. Treasury issued guidance on August 28, 2020 to help employees with the implementation of the deferral of the employee share of payroll taxes issued in a Presidential Memorandum on August 8, 2020. The guidance allows, but does not require, employers to suspend withholding and paying the employees' portion of Social Security payroll taxes. The tax deferral runs from September 1, 2020 through December 31, 2020 and applies to employees earning wages less than $4,000 for a biweekly pay period (or $104,000 per year). This is only a deferral and the employers must subsequently withhold and pay all of the deferred taxes by April 30, 2021.

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.

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

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

SYSTEMS REPAIR & REPLACEMENT ACCOUNT

November 30, 2020

DATE	TRANSACTION MEMO	CREDIT	DEBIT	BALANCE
12/01/2020	Balance Forward LGIP Investment			$575,444.74
12/22/2020	System Transfer for November 2020 Billing	$131,224.60		$706,669.34
12/31/2020	Interest Earned December 2020	$85.61		$706,754.95
12/31/2020	Ending Balance LGIP			**$706,754.95**

PUMPED REPAIR & REPLACEMENT ACCOUNT

November 30, 2020

DATE	TRANSACTION MEMO	CREDIT	DEBIT	BALANCE
12/01/2020	Balance Forward LGIP Investment			$49,486.64
12/22/2020	System Transfer for November 2020 Billing	$6,031.52		$55,518.16
12/31/2020	Interest Earned December 2020	$7.12		$55,525.28
12/31/2020	Ending Balance LGIP			**$55,525.28**

ANDERSON REGIONAL
JOINT WATER SYSTEM

Profit & Loss
For the Month ending December 31, 2021

Ideal Percentage: 50%

	Annual Budget	YTD Budget (4 months)	YTD Actual	6+6 Year End Projection	% of Budget Used	YTD Variance	
Operating Revenue							
Operations and Maintenance	4,626,200	2,313,100	2,189,739	4,502,839	47%	(123,361)	
Capital Charges	5,392,245	2,696,123	2,696,123	5,392,245	50%	-	
Renewal and Replacement							
Water System	1,574,695	787,348	787,234	1,574,581	50%	(114)	
Pump Station	72,378	36,189	36,181	72,370	50%	(8)	
Miscellaneous	148,599	74,300	114,121	188,420	77%	39,821	
Total Operating Revenue	11,814,117	5,907,059	5,823,397	11,730,455			
Operating Expenses							
Salaries and Wages	1,403,800	701,900	659,969	1,361,869	47%	(41,931)	
Payroll Taxes and Employee Benefits	566,700	283,350	300,303	583,653	53%	16,953	
Operations and Maintenance							
Administrative Expenses	191,400	95,700	103,378	199,078	54%	7,678	
Operations Expenses							
Lab Supplies/Uniforms/Safety Equipment	88,800	44,400	63,405	107,805	71%	19,005	A
Chemicals	446,900	223,450	256,546	479,996	57%	33,096	
Sludge Disposal	185,000	92,500	220,192	220,192	119%	127,692	B
Utilities and Security	1,112,500	556,250	542,311	1,098,561	49%	(13,939)	
Maintenance Expenses	281,700	140,850	149,981	290,831	53%	9,131	
Professional Fees	90,000	45,000	19,526	64,526	22%	(25,474)	
Insurance	93,100	46,550	-	93,100	0%	(46,550)	
Debt Expenses	5,490,245	2,745,123	2,526,207	5,271,330	46%	(218,915)	
Junior Lien Bond Payments	-	-	490,133	753,219	100%	490,133	C
Source Water Protection	51,000	25,500	20,536	46,036	40%	(4,964)	
Miscellaneous Expenses	115,300	57,650	43,655	101,305	38%	(13,995)	
Total operating expenses before depreciation	10,116,445	5,058,223	5,396,142	10,671,500			
Net operating income	1,697,672	848,836	427,255	1,058,955			
Raw Water							
Raw Water Income	57,646	28,823	135,519	164,342	235%	106,696	
Raw Water O&M Expenses	-	-	99,465	99,465	100%	99,465	
Raw Water Operating Income	57,646	28,823	36,054	64,877			

	Cash Balances	Days Cash on Hand
Operating Cash	1,542,576	56
Capital Project Fund	2,016,251	
R&R Funds (Restricted)	998,529	
	4,557,357	

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

B: 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.

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

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BOARD MEMORANDUM

January, 2021

Subject
Planning, Projects, and External Affairs Update

Project Updates

1. Alum Tanks
    a. Started internal preliminary discussions on what is needed for two new alum tanks.
2. Sludge Application
    a. Waiting on quote to locally land apply ARJWS sludge.
3. Three and Twenty Creek Watershed Based Plan
    a. Kick off meeting this month to start implementing/investing money on projects.

Asset Management

December 2020

Workflows (PMs) Completed	300
Work Orders Completed	6
Emergency Locates Completed	140
Hours of Work Logged	157

External Communications

December 2020

Social Media Reach	40,003
Social Media Engagement	16.75%
Website Sessions	1,242

Tours	2	Virtual tour for Clemson Environmental Engineering class
Events	0	

Source Water

December Adopt-a-Stream Data

	E. Coli Count (cfu/100 mL)
Hembree Creek	
Hurricane Creek	
Town Creek	
Six and Twenty Creek	

Inter-Agency Partnerships

1. Innovate Anderson
    a. Nonprofit looking to made Anderson better via "Community Development".
    b. Attended their board meeting to look for opportunity to partner as they recraft their vision and rebuild their board.

Anderson Area Chamber Water Resources Committee

1. Ozone Presentation
    a. Showed the benefits of Ozone treatment at ARJWS over the past three years.

Lake Hartwell Partners for Clean Water

1. Created the Mission Statement:
    a. A Healthier Lake for Today and Tomorrow.
2. Created the Vision Statement:
    a. Lake Hartwell is central to our community and quality of life. We seek to activate our community to create positive changes to protect this source of drinking water and its surrounding environment.

Prepared by: Trey Burns, Sustainability Manager
Approved by: Scott Willett, Executive Director

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BOARD MEMORANDUM

January 5, 2021

Subject
Operations Report

Discussion

Operations

As of January 5, 2021, Lake Hartwell's surface elevation was 659.29 ft. below mean sea level, 0.71 ft. below full pool. Raw water is being drawn from the first gate of the intake structure. Water temperature at the first gate is 54.5°F. The Joint Water System reached 84% of settled water turbidity goals for the month of December. Raw water pH levels are constant. Settled and Finished water pH levels are normal. The maximum day for December water production was 42.64% of Finished water capacity.

In addition to water quality sampling for the Lake Hartwell Water Treatment Plant, Joint Water System staff processed 192 Total Coliform distribution samples for local entities during the month of December.

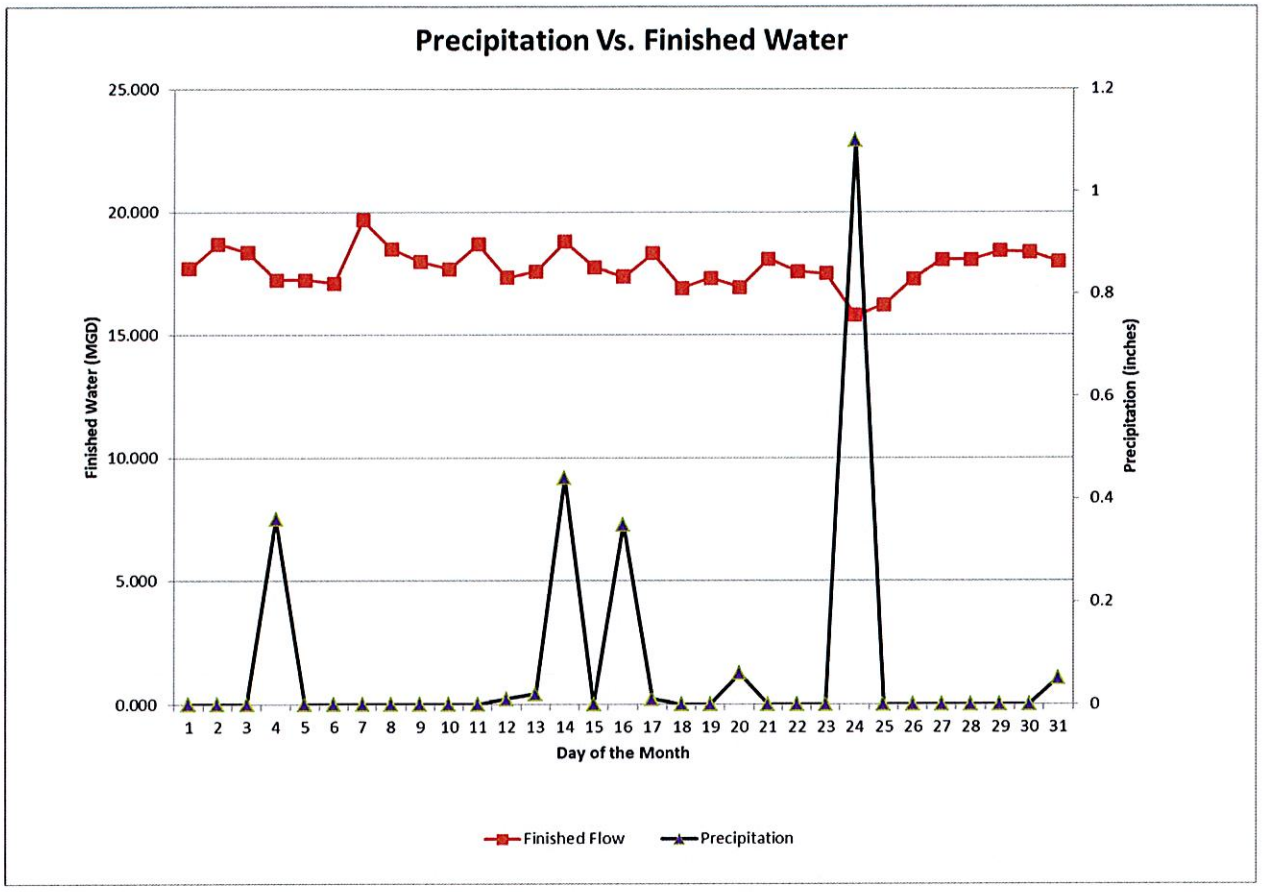
Weather Data

	Minimum	Maximum	Total
Rainfall	0.00 in.	1.10in.	2.40 in.
Temperature	20.8° F	68.5° F	N/A
Humidity	22%	100%	N/A

Water Production Data

	Average	Minimum	Maximum	Total
Raw Water (MG)	18,077,000	13,523,000	22,108,000	560,392,000
Finished Water (MG)	17,761,000	15,799,000	19,682,000	550,594,000
Finished Max Capacity	37.00%	32.91%	41.00%	37.00%

NOTE: Percentages are finished water capacities.



Water Quality Data

	Raw	Settled	Finished
pH	6.95	5.91	7.09
Turbidity (NTU) Range	1.20 to 2.90	0.56 to 1.40	0.02 to 0.06
Turbidity (NTU) Average	1.70	0.86	0.02
Turbidity (NTU) Exceedance	-	16.00%	0.00%
Total Organic Carbon	1.71	-	0.84
Fluoride Average (ppm)	-	-	0.70**
Residual Disinfectant (ppm)	-	-	1.7
TTHM (DBP)	-	-	1.1 ppb
Methylisoborneol (MIB)*	<2.1 NG/L	-	<1.0 NG/L
Geosmin*	<2.2 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	5.9	24.3	5.8	12.2
Big Creek	5.8	24.1	5.8	13.8
Clemson Armory	7.7	18.5	6.7	10.1
Sandy Springs-Michelin	4.1	17.9	3.3	9.3
Sandy Springs-5 Forks	8.0	16.8	4.0	10.0
West Anderson	2.6	12.1	2.5	6.2
Bolt Drive Tank	5.3	28.6	5.3	14.5
McAlister Tank	8.5	25.4	6.2	14.0
Highview Pump Station	5.7	19.6	5.4	10.8
Starr-Iva Hydrant	3.3	18.9	3.3	8.1
Clemson Pump Station	4.0	17.9	2.9	9.0

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 December, the following Water Quality Strategic Planning goals were met:

- Finished water pH was held within the designated 7.1-7.4 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.

In summary, the ARJWS staff has done an outstanding job in the month of December, achieving the strategic planning goals for Effective Utility Management adopted by the ARJWS board.

Discussion

Corrosion

Metal pipe naturally corrodes based on the chemical properties surrounding it. Corrosivity of water is directly related to pH. Lower pH concentrations, under 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 December, the Lake Hartwell Water Treatment Plant Finished water pH was stable at 7.1. ARJWS has made this change, as we have noticed pH levels within the distribution system increase over time, due to water age.

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 December, 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 1.2 ppm. ARJWS lab has reassessed optimization of this metric, so the desired range has been changed to 1.0 ppm to 1.6 ppm.

Monthly Power Consumption Data

Month	On Peak kW	Off Peak kW	Total kW	Finished Water MG	$/ MG	12 month Average
Dec – 19	194,400	787,200	981,600	522.1	$97.40	$101.04
Jan – 20	187,200	811,200	998,400	537.1	$94.08	$100.38
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

Monthly Power Consumption Update

For the month of December, ARJWS was able to treat 550,594,000 gallons of water at a cost of $81.30 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 $97.43.

Discussion

December Operations Highlights

Strategic Planning Goal of staff development:
-Had operators trained on optimization of jar testing procedures.
-Had operations staff experience filter assessment procedures for evaluation of useful life.

Other Highlights:
-Worked with Asset Management Engineer for polymer dosing optimization.

Discussion

State and Federal Issues

None to report

Operations Preventative Maintenance Report

Lab (includes weekly verification of clarifier and filter turbidity meters):
Total hours completed 10.0 hours (verification included for 4 weeks)

Prepared by: Bryan Bates, Operations Manager
Approved by: Scott Willett, Executive Director

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BOARD MEMORANDUM

January 12, 2021

Subject

Board Member Focus

Discussion

This month's ARJWS Spotlight is Dyke Spencer. Dyke is the Executive Director of Powdersville Water. He has over 40 years of experience in the water and wastewater industry with the last 16 years of service dedicated to the Powdersville District. Dyke studied at Clemson University and Coastal Carolina University where he graduated with a Bachelors Degree in Marine Science and Engineering in 1980 as a James F. Byrnes Scholar. Dyke has comprehensive knowledge and experience that he has gained from various employment opportunities in the past. Those opportunites included multiple positions with the National Oceanic & Atmospheric Administration (NOAA) and the SC Water Resources Commission. The opportunity where he gained most of his expertise would be the 22 years he served as the Director of Operations & Maintenance at the Beaufort-Jasper Water and Sewer Authority.

Dyke has been a past member of the Anderson Chamber Board of Directors, past Chairman of the SC Water Utility Council and past Chairman of the Anderson Regional Water System. He is currently the Chairman of the Anderson Chamber Water Resources Committee, an active member of Imagine Anderson Board, Adopt-a-Stream Board and SC Drinking Water Advisory Council. He is an elder in the Presbyterian Church.

Dyke has a beautiful wife, Rhonda. They have 3 sons and four grandchildren and live on the lake in Oconee County. Dyke's hobbies include photography, golf, water sports, traveling, hiking, our environment and Clemson sports. Dyke states that the most interesting experience of his life while traveling was sitting on the Great Pyramid in Giza. Can you imagine sitting on one of the oldest of the Seven Wonders for the Ancient World??

Favorite quote: "Excellence is not a destination – it is a continuous journey that never ends".

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BOARD MEMORANDUM

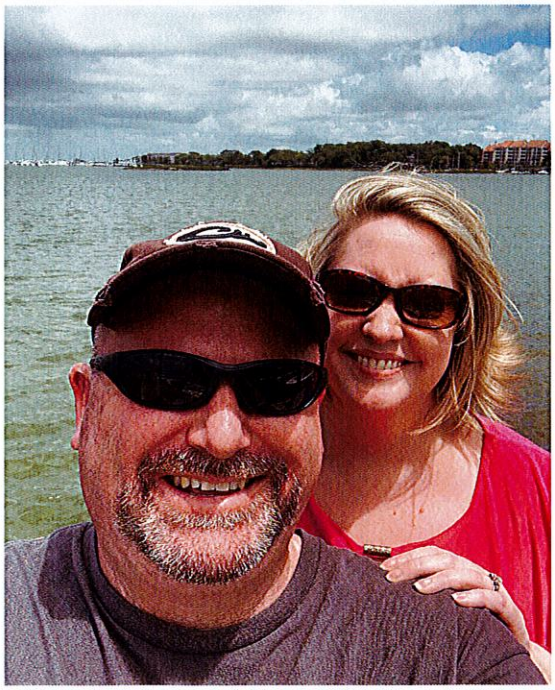
January 12, 2021

Subject

Staff Member Focus

Discussion

Anderson Regional Joint Water would like to introduce William Calvin "Billy" Macomson. Billy was hired in August 2011 as an Electrical Maintenance Technician. Billy was promoted in 2014 as a Systems and Controls Specialist. In this current position, he troubleshoots, repairs, and maintains all equipment related to water treatment and distribution. He is also involved in the preventative maintenance program used by the Utility Cloud Software. Billy maintains both a level "A" Water Treatment and level "A" Water Distribution license. Billy has received a Mechanical Engineering Technology degree from Greenville Technical College in 1995, an Electrical Engineering Technology degree from Greenville Technical College in 2000, and Bachelor's in Business Administration/ Computer Information Systems degree in 2017.

Billy has been married to Jennifer Macomson for 13 years and they have 2 children. They are Colt, 11, and Ethan, 19. When Billy is not at work he enjoys hunting, fishing, riding motorcycles, and other outdoor activities. He also enjoys traveling and exploring new vacation spots with his family.

Billy believes that working at ARJWS is appealing because of the flexibility of his work schedule. "I enjoy the flexibility of my work schedule because it allows me to meet my family needs."