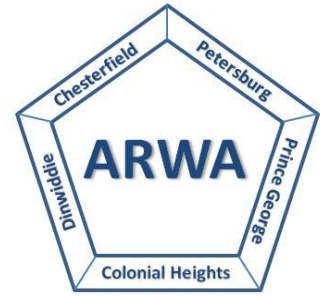


Appomattox River Water Authority



21300 Chesdin Rd. - S. Chesterfield, VA 23803 - Phone (804) 590-1145 - Fax (804) 590-9285

APPOMATTOX RIVER WATER AUTHORITY Board of Directors Meeting

DATE: May 19, 2022

TIME: 2:00 pm

LOCATION: **Appomattox River Water Authority**
Board Room, Administration Building
21300 Chesdin Road
South Chesterfield, VA 23803

AGENDA

1. Call to Order/Roll Call
2. Approval of Minutes: Minutes of the Board Meeting held on March 17, 2022 (Exhibit A, Pages 2 to 4)
3. Public Comment (Exhibit B, Page 5)
4. Executive Director's Report:
 - FY23 Budget Public Hearing (Exhibit C, Pages 6 to 18)
 - Taste and Odor Issues Week of May 2nd. (Exhibit D, Pages 19 to 21)
 - Status Report (Exhibit E, Pages 22 to 25)
 - Financials (Exhibit F, Pages 26 to 29)
5. Items from Counsel
6. Closed Meeting
7. Other items from Board Members/Staff Not on Agenda
8. Adjourn

BOARD OF DIRECTORS MEETING
Appomattox River Water Authority
March 17, 2022, at 2:00 p.m.
Location: Appomattox River Water Authority
21300 Chesdin Road, Petersburg, VA 23803

MEMBERS PRESENT:

Doug Smith, Chairman (Colonial Heights)
Kevin Massengill, Vice-Chairman (Dinwiddie)
Joseph Casey, (Chesterfield)

ALTERNATES PRESENT:

Frank Haltom, Secretary/Treasurer (Alternate, Prince George)
George Hayes, (Alternate, Chesterfield)

ABSENT:

Jeffrey Stoke, (Prince George)
Stuart Turille, (Petersburg)
Scott Morris, (Alternate, Chesterfield)
Tangela Innis, (Alternate, Petersburg)
Todd Flippen, (Alternate, Colonial Heights)

STAFF PRESENT:

Robert B. Wilson, Executive Director, (ARWA & SCWWA)
James C. Gordon, Asst. Executive Director (ARWA & SCWWA)
Arthur Anderson, (McGuire Woods)
Melissa Wilkins, Business Manager/FOIA (ARWA & SCWWA)
Kathy Summerson, Administrative Assistant (SCWWA)

OTHERS PRESENT:

Rita Archer, (Archer Company LLC)	Andrew Barnes, (Petersburg)
Kelly and Pamela Harrell, (ARWA)	Ray Burpoe, (SCWWA) (remote)
Pam Tavel, (SCWWA) (remote)	William Simms, (SCWWA) (remote)
Clinton Popp, (SCWWA) (remote)	Scott Farrar, (SCWWA) (remote)
Walter Richters, (SCWWA) (remote)	Patrick McBride, (SCWWA) (remote)
Chad Creech, (SCWWA) (remote)	Brian Field, (SCWWA) (remote)
Mike Gauldin, (SCWWA) (remote)	Charlie Prier, (SCWWA) (remote)
Drew Williams, (SCWWA) (remote)	Kendric Robinson, (SCWWA) (remote)
Eric Salamon, (ARWA) (remote)	Mike Callen, (ARWA) (remote)
Anyia Hiatt, (ARWA) (remote)	Heather Chancellor, (ARWA) (remote)

The ARWA meeting was called to order by Mr. Smith, Chairman, at 2:05 p.m.

1. Call to Order/Roll Call

The roll was called:	Doug Smith	Present
	Kevin Massengill	Present
	Joseph Casey	Present
	Frank Haltom	Present

2. Approval of Minutes: Minutes of the Regular Meeting of the Board on January 20, 2022

Upon a motion by Mr. Massengill and seconded by Mr. Haltom the following resolution was adopted:

RESOLVED, that the Minutes of the Regular Meeting of the Board on January 20, 2022, are hereby approved:

For: 4 Against: 0 Abstain: 0

3. Public Comment

There were no Public Comments.

4. Executive Director's Report:

• Classification and Compensation Study Presentation

Mr. Wilson stated that the Authority's most important and valued asset is staff. To maintain and sustain our employees, the Authority selected Archer Company to perform our classification and compensation study. This study benchmarked us with our peers and developed a fair market-based system to ensure we are paying a fair wage for the level of responsibility.

Mr. Wilson introduced Ms. Rita Archer of Archer Company LLC who gave a presentation on the Classification and Compensation Study. Ms. Archer stated they met with all the employees and had them complete a formal Comprehensive Position Questionnaire. These questionnaires were used to determine an employee's importance to the organization. To compare against other jurisdictions, job descriptions, not job titles, were sent to ensure the proper level of importance and responsibility were being compared to the other organizations. Ms. Archer provided a list of the other utilities and authorities that responded.

Ms. Archer stated that the U.S. Bureau of Labor Statistics COLA should be 7.5%. The overall implementation costs with the parameters that they recommend is 15% which includes the COLA and salary adjustment. She stated that their study is to attract and retain good employees.

Mr. Wilson stated that the current hierarchy gets the 7.5% COLA. The 7.5% salary adjustment is based on your current salary and then recommended adjustment towards midpoint in the new salary range is added.

Mr. Wilson asked if he got pressed and had key people come to the table, is there any discretion to put something on the table to hold them until July 1, 2022. Mr. Smith stated he thought whatever is in the salary study you should be able to use it for retention.

Mr. Wilson thanked the Board for their support for the study and investing in the Authority's staff.

Upon a motion made by Mr. Haltom and seconded by Mr. Massengill the following resolution was adopted:

RESOLVED, that the Board authorizes a 5% COLA increase effective April 1, 2022, and authorizes the implementation of the Salary Study on July 1, 2022, and that includes the differential of 2.5% for the higher COLA. The Board will also consider earlier implementation at the May 19th meeting after Chesterfield County has reviewed and approved their compensation package so that the Authority's package does not compete, but for now being July 1, 2022:

For: 4 Against: 0 Abstain: 0

Vote:

Doug Smith	Aye
Kevin Massengill	Aye
Joseph Casey	Aye
Frank Haltom	Aye

- **FY23 Budget Presentation**

Mr. Wilson reported on the FY23 budget. He stated we are asking the Board to set the public hearing date for May 19, 2022, which is the next scheduled Board meeting.

Upon a motion made by Mr. Massengill and seconded by Mr. Haltom the following resolution was adopted:

RESOLVED, that the Board approves the Resolution of the Appomattox River Water providing preliminary approval of the Budget for Fiscal Year 2022/2023 and the proposed water rates and set a public hearing date of May 19, 2022, p.m. at the Appomattox River Water Authority:

Vote:

Doug Smith	Aye
Kevin Massengill	Aye
Joseph Casey	Aye
Frank Haltom	Aye

- **Status Report**

Mr. Wilson reported on the status report. He stated the annual flushing is scheduled for March 22, 2022, through March 24, 2022.

There we no specific questions on the status report that required additional discussion.

- **Financials**

Ms. Wilkins reported on the Financials. Mr. Wilson stated where the accounts are broken down in the LGIP for the surplus funds approved at the March 17th meeting. Dr. Casey stated one of the things they are considering with these different pay studies to avoid salary compression is they might be putting monies into a bank account reserved for future step increases. In case of recession or constrains for a year or two we may want to have a bank account to set up for the same reason. The Authority maintains an Operating Reserve account that includes a minimum of six months of reserve.

5. Items from Counsel

There were no items from Counsel.

6. Closed Session

There was no Closed Session.

7. Other Items from Board Members/Staff Not on Agenda

The Executive Director's review to take place during the Board of Director's meeting on May 19, 2022. Mr. Wilson stated being as he is under contract his position was not include in the salary study.

8. Adjourn

Mr. Smith stated, if there is no other business, and asked for motion to adjourn.

Upon a motion by Mr. Massengill and seconded by Dr. Casey the meeting was adjourned at 3:14 p.m.

MINUTES APPROVED BY:

Frank Haltom
Secretary/Treasurer



APPOMATTOX RIVER WATER AUTHORITY
21300 Chesdin Road
Petersburg, VA 23803



SOUTH CENTRAL WASTEWATER AUTHORITY
900 Magazine Road
Petersburg, VA 23803

GUIDELINES FOR PUBLIC COMMENT AT SCWWA/ARWA BOARD OF DIRECTORS MEETINGS

If you wish to address the SCWWA/ARWA Board of Directors during the time allocated for public comment, please raise your hand or stand when the Chairman asks for public comments.

Members of the public requesting to speak will be recognized during the specific time designated on the meeting agenda for "Public Comment Period." Each person will be allowed to speak for up to three minutes.

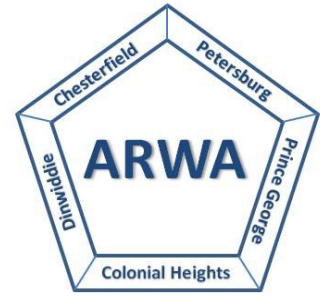
When two or more individuals are present from the same group, it is recommended that the group designate a spokesperson to present its comments to the Board and the designated speaker can ask other members of the group to be recognized by raising their hand or standing. Each spokesperson for a group will be allowed to speak for up to five minutes.

During the Public Comment Period, the Board will attempt to hear all members of the public who wish to speak on a subject, but it must be recognized that on rare occasion presentations may have to be limited because of time constraints. If a previous speaker has articulated your position, it is recommended that you not fully repeat the comments and instead advise the Board of your agreement. The time allocated for speakers at public hearings are the same as for regular Board meeting, although the Board can allow exceptions at its discretion.

Speakers should keep in mind that Board of Directors meetings are formal proceedings and all comments are recorded on tape. For that reason, speakers are requested to speak from the podium and wait to be recognized by the Chairman. In order to give all speakers proper respect and courtesy, the Board requests that speakers follow the following guidelines:

- Wait at your seat until recognized by the Chairman;
- Come forward and state your full name and address. If speaking for a group, state your organizational affiliation;
- Address your comments to the Board as a whole;
- State your position clearly and succinctly and give facts and data to support your position;
- Summarize your key points and provide the Board with a written statement or supporting rationale, when possible;
- If you represent a group, you may ask others at the meeting to be recognized by raising their hand or standing;
- Be respectful and civil in all interactions at Board meetings;
- The Board may ask speakers questions or seek clarification, but recognize that Board meetings are not a forum for public debate; Board Members will not recognize comments made from the audience and ask that members of the audience not interrupt the comments of speakers and remain silent while others are speaking so that other members in the audience can hear the speaker;
- The Board will have the opportunity to address public comments after the Public Comment Period has been closed;
- At the request of the Chairman, the Executive Director may address public comments after the session has been closed as well; and
- As appropriate, staff will research questions by the public and respond through a report back to the Board at the next regular meeting of the full Board. It is suggested that citizens who have questions for the Board or staff submit those questions in advance of the meeting to permit the opportunity for some research before the meeting.

Appomattox River Water Authority



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Exhibit C

TO: Appomattox River Water Authority Board of Directors

FROM: Robert B. Wilson, Executive Director
James C. Gordon, Assistant Executive Director

DATE: May 19, 2022

SUBJECT: FY23 Proposed Budget

At the March 17th meeting, staff presented the proposed FY23 budget. Staff also requested the Board set a public hearing date of May 19th. The public hearing for May 19th was advertised in the Progress Index on April 27th and May 4th. A copy of the March 17th presentation is included for reference as Attachment #1.

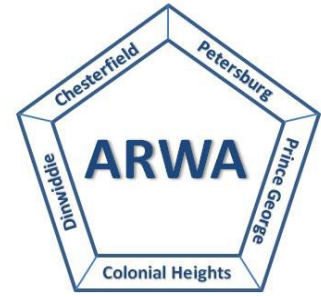
The executive director sent out the same budget advertised for the public hearing on April 26th to members to see if there were any additional questions. No additional comments or questions were received.

Staff recommends approval of the FY23 budget included in Attachment #1 that is the same that was presented at the March 17th meeting.

Board Action Requested:

Staff requests the Board approve the FY23 budget.

Appomattox River Water Authority



21300 Chesdin Rd. - S. Chesterfield, VA 23803 - Phone (804) 590-1145 - Fax (804) 590-9285

EXHIBIT D

TO: Appomattox River Water Authority Board Utility Directors

FROM: Robert B. Wilson, Executive Director
James C. Gordon, Assistant Executive Director

DATE: March 17, 2022

SUBJECT: Proposed FY22/23 Budget

The budget is divided into operating and maintenance costs, operating capital outlay, and debt service. Each participating jurisdiction is responsible for a pro rata share of the operating and maintenance costs and operating capital outlay costs. The pro rata share for O&M costs and operating capital outlay costs is calculated from the previous five year running average for each participating jurisdiction.

The pro rata shares used to develop the O&M costs and operating capital outlay costs for FY22/23 are:

	<u>FY22/23</u>	<u>FY21/22</u>
○ Chesterfield County	72.790%	71.394%
○ City of Colonial Heights	5.493%	5.721%
○ Dinwiddie County	3.873%	3.987%
○ City of Petersburg	15.400%	16.397%
○ Prince George County	2.444%	2.502%

The debt service for each participating jurisdiction is calculated as follows:

- 2012 Issuance – Each participating jurisdiction’s pro rata share is calculated by the previous five year running average for water purchased from the plant. The last payment for the 2012 Issuance will be made 10/01/2027.
- 2017 Issuance – Each participating jurisdiction’s pro rata share is calculated by the previous five year running average for water purchased from the plant. The last payment for the 2017 Issuance will be made 10/01/2032.
- 2019 Issuance – This issuance refinanced the 2010 Issuance. The 2019 Issuance debt service was broken down the same as the 2010 Issuance it replaced, 45.62% for expansion and 54.38% for operating. The expansion part of the annual debt service, 45.62%, is distributed between the participating jurisdictions as follows:

- Chesterfield County – 7.87%. The reason that Chesterfield pays such a small percentage towards the expansion portion of this issuance is that they paid most of their portion in cash.
- City of Colonial Heights – 5.76%.
- Dinwiddie County – 57.58%. The reason for Dinwiddie's high percentage is that they borrowed 100% of their portion of the expansion piece of the bond.
- City of Petersburg – 0%. The city did not participate in the expansion piece of the bond.
- Prince George County – 28.79%. Similarly, to Dinwiddie, Prince George financed their entire portion of the expansion piece.

The remaining portion of the 2019 issuance, 54.38%, is divided between the participating jurisdictions on a pro rata share based on their previous five year running average. The last payment for the 2019 Issuance is 10/01/2031.

Both the 2012 Bond and the 2017 Bond financed solely capital maintenance projects to enhance the plant's reliability—not to expand the plant's capacity. In the authorizing resolutions for both the 2012 Bond and the 2017 Bond, the Board determined that the financed projects were for "improvement costs" within the meaning of the existing Water Service Agreements between the Authority and each of the participating jurisdictions (the "Existing Agreements"). Hence, under the Existing Agreements the debt service on both the 2012 Bond and the 2017 Bond is to be covered by the Authority's annual budgeted "Base Rate." The Base Rate is a uniform rate applied equally to all water purchases by each participating jurisdiction, which rate is based annually upon the five year running average water usage for all participating jurisdictions for a given fiscal year such that funds generated from charging the Base Rate will be sufficient to pay for all of the costs associated with (a) the operation and maintenance of the Authority's water system, and (b) all improvement costs incurred by the Authority (including, for example, the debt service on the 2012 Bond and the 2017 Bond and any other bonds issued to finance improvement costs).

For the 2019 issuance, there is a line of refinancing. The 2019 issuance refinanced the 2010 issuance which refinanced 2002 (plant operations and maintenance). The 2002 issuance refinanced the 1982 issuance (plant operations and maintenance) and the 1983 issuance (expansion - \$20 million). The breakdown of 45.62% for expansion and 54.38% for operations and maintenance was established with the 2002 issuance. This was verified in the Appomattox River Water Authority Billing Special Report dated April 23, 2019, by Chesterfield County Internal Audit. At that time the 2010 issuance breakdown was audited.

The main factor that has a direct influence on the five-year running average is rain. The higher the amount of rain, the lower the irrigation demand and the lower the consumption, water purchased. Conversely, the lower the amount of rain, the higher the irrigation demand and the higher the consumption. The next leading factor would be growth and economic development. We did have

instances last fiscal year where one of our members had one of their sources out of service and that increased their running average.

For the proposed FY22/23 Budget the operating and maintenance costs and operating capital outlay costs are developed by meeting with staff, setting priorities, and using real estimates. The proposed budget includes a 7.5% salary adjustment, COLA, and a salary and scale adjustment. The results of the Compensation and Classification Study were presented earlier in a separate agenda item.

On the operating capital outlay portion of the budget, we are continuing to replace filter actuators and valves, replace outdated venturis on the outlet side of the filters – in house at four per year, and replace end of life programmable logic controllers (PLC's). We also have replacement of flow meters for chemical feeds, ammonia and caustic trim, in the operating portion of the budget. We continue to replace the single pane windows in the filter gallery and Prechem Building and add boat lifts to the newly constructed dock (currently under construction) behind Raw Water Pump Station 2. Stop logs are being purchased to dewater the wet well for Raw Water Pump Station #1 (pumps on the dam). This allows us to access the drains in the dam, the lake side of the cone valve, the climbing screen and the two reservoir six foot slide gates for draining the lake.

Under the "Construction Fund" Section we identify the proposed debt service payments and proposed large capital projects that will require debt service borrowings. The large capital projects are highlighted in red. There are two placeholder projects in the Construction Fund Section:

1. Rebuild Filters 1-8 – This project rebuilds the plant filters including replacing the underdrains for filters 1-8. There are indications that the beds have been disturbed over the years due to age and media change outs. The estimated cost is \$5.5 million. The estimated annual debt service for this project would be \$404,633.
2. Lagoon Liners – This will be a regulatory driven project. We currently have a VPDES permit for the lagoon discharge to the Appomattox River below the dam. The permit required two year groundwater monitoring has been completed and submitted to DEQ. Our consultant, Golder and Associates, completed the analysis and developed the statistically calculated background concentrations. From the information generated to date we anticipate we will be required to construct a third lagoon and line the two existing lagoons. The estimated cost for this project at this point is \$8.0 million. The timing for this project is based on the VPDES permit renewal date for the lagoons, April 2023. As part of the permit renewal, we anticipate being required to complete the improvements by the end of that five year permit cycle, April 2028.

The remaining four projects showing appropriations, without detail in the CIP, are to build a fourth clear well and then replace and/or parallel four sections of the transmission system. From a planning perspective, these projects fall outside the five and ten year planning window.

To assist participating jurisdictions with determining the Authority's impact on budgets and looking at their future rates we included a section on estimated rates for the next five years. For these future estimates, we increased the operating expenses annually by 3%, did not inflate the operating capital outlay

costs, and used debt service values from the respective payment schedules. For the five year projections, the most significant increase is slated for FY25/26. The two main influences for the FY25/26 budget increase are new projects that include rebuilding original filters and lining the sludge lagoons.

Specific highlights from the operating budget:

- With salary adjustments per the Compensation and Classification Study, overall salaries increased by 6.5%.
- 46005 Purification Chemicals saw a 30% increase overall.
- 46007 – Repair & Maintenance Supplies increased by \$95,000 and 46014 Repair & Maintenance Supplies – IT decreased by \$95,000. This is where we transferred the materials for IT staff to maintenance. The two IT technicians were moved to the maintenance section and so there accompanying maintenance budget for materials was moved to maintenance.
- 58000 – Operating Capital Outlay was reduced by approximately \$416,000 or 36%.
- The total operating budget increased by \$1,003,672 or 13.4%. The additional cost for treatment chemicals (46005) and carbon change out increase (43180) make up 69% of the total increase.
- The Reserve Policy is fully funded, and no additional appropriation was requested. By policy, the minimum amount in the Reserve Policy is 6 months of operating only expenses. The current Reserve Policy has approximately \$5.9 million or 8.2 months of operating expenses.
- The overall budget, O&M + Capital Operating Capital Outlay + Debt Service + Reserve Policy increased by approximately \$537,091 or 5%.
- The largest member increase was 0.41%. The overall rate increase for the five members averaged together was 0.05%.

We met with the utility directors on February 8th and presented the proposed FY23 Budget Narrative and budget. At that meeting, the directors provided input and comments on the budget. This input was incorporated into proposed budget and forwarded to the member financial representatives and utility directors on February 22nd. No additional comments were received.

On February 22nd we forwarded the attached budget narratives and budgets, including the directors' comments, to the financial representatives with copies to the directors to make sure we had stated the directors' input correctly and addressed their questions. We asked that any additional comments be submitted by February 25th. We did not receive any additional comments from either the financial representatives or directors. On March 3rd we forwarded the budget to Board members for review. The week of March 7th we met individually with each member to present the proposed budget.

The proposed FY23 budget included as Attachment #1 is the culmination of the budget process that includes all of the input and review from the members. We thank the members for their assistance during the budget preparation process.

The next part of the budget process is to set a public hearing for the proposed FY23 budget. Staff recommends setting the next scheduled Board meeting on May 19th as the public hearing date. Attachment #2 is the proposed resolution to set the public hearing date for May 19th.

Board Action Requested:

Staff requests that the Board set a public hearing for May 19th at the Appomattox River Water Authority, 21300 Chesdin Road, South Chesterfield, VA 23803 at 2:00 pm to allow for public comment on the proposed FY23 budget.

APPOMATTOX RIVER WATER AUTHORITY

Proposed: March 17, 2022

Approved:

Revised:

Revision Approved:

PROPOSED OPERATION & MAINTENANCE BUDGET 2022/2023

	<u>FY2021/2022</u>	<u>FY2022/2023</u>	Increase/ (Decrease)
	Budget	Budget	FY20/21 to FY21/22
<u>O&M EXPENSES</u>			
41000 · Salary	\$1,836,000	\$1,931,678	\$95,678
42000 · Employee Benefits	\$754,100	\$801,994	\$47,894
42100 · Employer FICA	\$137,000	\$147,773	\$10,773
42200 · Virginia Retirement System	\$90,000	\$68,961	-\$21,039
42210 · Deferred Comp 457	\$0	\$0	\$0
42300 · Hospitalization Insurance	\$490,000	\$544,275	\$54,275
42400 · VRS Group Life Insurance	\$22,000	\$25,884	\$3,884
42500 · Group Term Life	\$2,100	\$2,100	\$0
42600 · Unemployment Insurance	\$1,000	\$1,000	\$0
42800 · Employee Promotions	\$10,000	\$10,000	\$0
42900 · Other Fringe Benefits - EAP	\$2,000	\$2,000	\$0
42950 · OPEB Health Insurance Adj	\$0	\$0	\$0
42952 · Net Pension Adjustment			
43000 · Contractual Services	\$1,049,500	\$1,152,600	\$103,100
43121 · Auditing Services	\$8,000	\$13,000	\$5,000
43122 · Accounting Services	\$16,000	\$16,000	\$0
43124 · Part-Time Summer Interns		\$5,000	\$5,000
43130 · Legal/Engineering and Reservoir Studies	\$50,000	\$50,000	\$0
43140 · Consulting Engineers	\$85,000	\$85,000	\$0
43150 · Legal Services	\$75,000	\$75,000	\$0
43152 · Medical - Testing	\$2,500	\$5,000	\$2,500
43155 · Other Consulting Services	\$0	\$0	\$0

43156 · Admin and Maintenance Svc-SCWWA	\$0	\$8,000	\$8,000
43160 · Trustee Services	\$12,000	\$12,000	\$0
43162 · Bank Service Charges	\$1,500	\$2,000	\$500
43170 · Research	\$17,500	\$17,500	\$0
43180 · Potable Water Contract	\$450,000	\$520,000	\$70,000
43190 · Samples and Tests	\$40,000	\$40,000	\$0
43200 · Lake Patrol	\$4,000	\$4,000	\$0
43201 · Reservoir Management - Invasive Control Program	\$50,000	\$25,000	-\$25,000
43210 · Software Support	\$40,000	\$50,000	\$10,000
43220 · VPDES Permit Fee	\$15,000	\$15,000	\$0
43310 · Repair Services	\$25,000	\$25,000	\$0
43320 · Service Contracts	\$125,000	\$125,000	\$0
43500 · Printing and Binding	\$3,000	\$3,000	\$0
43600 · Grounds Maintenance	\$30,000	\$57,100	\$27,100
45000 · Other Charges	\$1,067,000	\$1,098,000	\$31,000
45110 · Electricity - Pumping	\$500,000	\$510,000	\$10,000
45111 · Electricity - Purification	\$275,000	\$275,000	\$0
45120 · Heating Fuel	\$50,000	\$60,000	\$10,000
45130 · Trash Pickup	\$5,500	\$5,500	\$0
45210 · Postal Services	\$1,500	\$2,500	\$1,000
45220 · Freight	\$20,000	\$20,000	\$0
45230 · Telecommunications	\$35,000	\$35,000	\$0
45308 · General Liability Insurance	\$100,000	\$110,000	\$10,000
45410 · Lease/Rent of Equipment	\$25,000	\$25,000	\$0
45510 · Mileage Allowance			\$0
45530 · Meals and Lodging	\$5,000	\$5,000	\$0
45540 · Education and Training	\$25,000	\$25,000	\$0
45550 · Safety Supplies	\$25,000	\$25,000	\$0
46000 · Materials and Supplies	\$2,794,000	\$3,520,000	\$726,000
46001 · Office Supplies	\$12,000	\$12,000	\$0
46004 · Laboratory Supplies	\$77,000	\$83,000	\$6,000
46005 · Purification Chemicals	\$2,300,000	\$2,990,000	\$690,000
46006 · Purification Process and Janitorial Supplies	\$15,000	\$15,000	\$0
46007 · Repair & Maint Supplies-Shop	\$115,000	\$210,000	\$95,000
46008 · Vehicle and Equipment Fuels	\$25,000	\$25,000	\$0
46009 · Vehicle and Equipment Supplies	\$20,000	\$20,000	\$0
46010 · Equipment Parts and Small Equipment Purchases	\$55,000	\$55,000	\$0
46011 · Uniforms	\$15,000	\$15,000	\$0
46012 · Dues and Subscriptions	\$25,000	\$40,000	\$15,000

46014 · Repair & Maint Supplies-IT	\$125,000	\$30,000	-\$95,000
46015 · Small Equipment Purchases	\$0	\$0	\$0
46016 · Operations Supplies and Maintenance	\$10,000	\$25,000	\$15,000
Total Operating Expenses	\$7,500,600	\$8,504,272	\$1,003,672
58000 · Operating Capital Outlay	\$1,140,000	\$674,000	-\$466,000
Debt - 2010 Issue (Refunded as 2019 series)	\$0	\$0	\$0
Debt - 2012 Issue	\$302,103	\$302,322	\$219
Debt - 2017 Issue	\$1,080,414	\$1,080,795	\$381
Debt - 2019 Issue (2010 Refunded)	\$705,940	\$704,760	-\$1,180
Total Debt	\$2,088,457	\$2,087,876	-\$581
Reserve Policy	\$0	\$0	\$0
Total Expenses	\$10,729,057	\$11,266,148	\$537,091

FY Budget Year		Revenues					
		Appomattox River Water Authority					
2022/2023		Proposed	Mar. 17, 2022	Adopted	Revised		
		Revision Adopted					
		Chesterfield	Colonial Heights	Dinwiddie	Petersburg	Prince George	Total
1) Operations and Maintenance Base Rate							
O&M Rate							
	\$/1000 gallons	\$ 0.9874	\$ 0.9874	\$ 0.9874	\$ 0.9874	\$ 0.9874	\$ 0.9874
Estimated (\$/quarter)		\$ 1,986,203	\$ 149,878.41	\$ 105,689	\$ 420,201	\$ 66,687	\$ 2,728,659.08
Total annual allocation		\$ 7,944,813	\$ 599,514	\$ 422,755	\$ 1,680,806	\$ 266,749	\$ 10,914,636
% of flows		72.790%	5.493%	3.873%	15.400%	2.444%	100.000%
Estimated (mgd)		22.045	1.663	1.173	4.664	0.740	30.285
Calc. annual usage (bg)		8.046	0.607	0.428	1.702	0.270	11.054
O&M =	\$ 8,504,272	Op. Cap. Outlay	\$ 674,000	54.38% 2019 Debt (maintenance)	\$ 383,248		
Int./Misc. Income	\$ 30,000	100% 2012 Debt	\$ 302,322	100% 2017 Debt	\$ 1,080,795	Reserve Policy	\$0
BASE RATE	\$/1000gals	\$ 0.9874	\$ 0.9874	\$ 0.9874	\$ 0.9874	\$ 0.9874	
2) Expansion Rate							
Bonds	% Financed						
Rate (cents/1000 gals)		\$ 0.0031	\$ 0.0305	\$ 0.4324	\$ -	\$ 0.3426	
2019 expansion (\$/year)	45.62%	\$ 25,303	\$ 18,519	\$ 185,126	\$ -	\$ 92,563	\$ 321,511
% allocation		7.87%	5.76%	57.58%	0.00%	28.79%	100.00%
FY22/23 Bond Payments	2019 refunding =	\$ 704,760					
TOTAL DEBT SERVICE RATE	\$/1000 gals	\$ 0.0031	\$ 0.0305	\$ 0.4324	\$ -	\$ 0.3426	
	\$/year	\$ 25,303	\$ 18,519	\$ 185,126	\$ -	\$ 92,563	\$ 321,511
3) Total Rate							
TOTAL RATE (BASE + EXPANSION)	\$/1000gals	\$ 0.9905	1.0179	1.4198	0.9874	1.3300	\$ 1.1491
Estimated annual charges	\$/year	\$ 7,970,116	\$ 618,033	\$ 607,881	\$ 1,680,806	\$ 359,312	\$ 11,236,148
4) Budget Comparison (see note 1)							
FY22/23 Total Rate	\$/1000 gals	\$ 0.9905	\$ 1.0179	\$ 1.4198	\$ 0.9874	\$ 1.3300	\$ 1.1491
FY21/22 Total Rate	\$/1000 gals	\$ 0.9867	\$ 1.0140	\$ 1.4240	\$ 0.9833	\$ 1.3345	\$ 1.1485
Total Rate Difference	\$/1000 gals	\$ 0.0038	\$ 0.0038	\$ (0.0043)	\$ 0.0041	\$ (0.0045)	\$ 0.0006
Total Rate Difference	%	0.39%	0.38%	-0.30%	0.41%	-0.34%	0.05%
FY22/23 Revenues	\$/year	\$ 7,970,116	\$ 618,033	\$ 607,881	\$ 1,680,806	\$ 359,312	\$ 11,236,148
FY21/22 Revenues	\$/year	\$ 7,433,876	\$ 612,178	\$ 599,188	\$ 1,701,510	\$ 352,305	\$ 10,699,057
Annual Cash Difference	\$/year	\$ 536,240	\$ 5,855	\$ 8,693	\$ (20,704)	\$ 7,007	\$ 537,091
FY22/23 Expenses	\$ 11,266,148	FY 22/23 Income Revenue		\$ 11,266,148			

NOTES:

Reserve Policy: Appomattox River Water Authority FY22/23
Reserve Policy Calculation

ARWA O&M Budget	Reserves as of 6/30/2021	Revenue for FY2021/2022	Total expected reserves on 6/30/2022	Recommended 50% O&M Reserves	Annual Charge to achieve 50% Reserves
\$8,504,272	\$5,903,336	\$0	\$5,903,336	\$4,252,136	\$0

APPOMATTOX RIVER WATER AUTHORITY
Operating Capital Outlay - 58000
FY22/23

Acct#	Current Budget 21/22	Proposed Budget 22/23	INFORMATIONAL & PLANNING									
			23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	
58010 - Machinery and Motors-Process	\$ 179,000	\$ 124,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000	\$ 75,000
58020 - Instrumentation	\$ 281,000	\$ 100,000	\$ 110,000	\$ 100,000	\$ 50,000	\$ 60,000	\$ 35,000	\$ 35,000	\$ 25,000	\$ -	\$ -	
58030 - SCADA	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ -	\$ -	\$ -	\$ -	\$ 10,000	\$ -	
58040 - Computer Equipmment	\$ -	\$ -	\$ -	\$ 12,000	\$ 13,500	\$ -	\$ -	\$ -	\$ 12,000	\$ 13,500	\$ -	
58050 - Furniture and Fixtures	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
58060 - Motor Vehicles	\$ -	\$ -	\$ 80,000	\$ 50,000	\$ 40,000	\$ 35,000	\$ -	\$ -	\$ -	\$ 110,000	\$ 110,000	
58065 - Maintenance Equipment	\$ 40,000	\$ -	\$ -	\$ -	\$ 45,000	\$ 35,000	\$ -	\$ 15,000	\$ -	\$ -	\$ -	
58090 - Construction	\$ 640,000	\$ 450,000	\$ 475,000	\$ 475,000	\$ 225,000	\$ 100,000	\$ -	\$ -	\$ -	\$ 75,000	\$ -	
TOTALS:	\$ 1,140,000	\$ 674,000	\$ 740,000	\$ 712,000	\$ 458,500	\$ 305,000	\$ 110,000	\$ 125,000	\$ 112,000	\$ 283,500	\$ 185,000	

NOTE: FY 21/22 OPERATING CAPITAL OUTLAY BUDGET TO BE APPROVED WITH BUDGET

Construction Fund (Capital Projects)
FY22/23

Project Cost Estimate	Budget 21/22	Proposed Budget 22/23	INFORMATIONAL & PLANNING									
			23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	
ITEM												
2012 Bond	\$ 302,103	\$ 302,322	\$ 302,293	\$ 302,016	\$ 302,475	\$ 301,671	\$ 301,604	\$ -	\$ -	\$ -	.	
2017 Bond	\$ 1,080,414	\$ 1,080,795	\$ 1,080,648	\$ 1,079,973	\$ 1,080,744	\$ 1,080,936	\$ 1,080,550	\$ 1,080,572	\$ 1,079,991	\$ 1,080,781	\$ 1,079,929	
2019 Bond (2010 Rebonding)	\$ 705,940	\$ 704,760	\$ 703,011	\$ 705,495	\$ 706,888	\$ 712,224	\$ 701,702	\$ 705,204	\$ 702,762	\$ 699,439	\$ 700,021	
Rebuild Filters 1-8 \$ 5,500,000					\$ 404,633	\$ 404,633	\$ 404,633	\$ 404,633	\$ 404,633	\$ 404,633	\$ 404,633	
Lagoon Liners \$ 8,000,000					\$ 588,558	\$ 588,558	\$ 588,558	\$ 588,558	\$ 588,558	\$ 588,558	\$ 588,558	
Clearwell #4												
Transmission Main - Chesdin Rd. to Pickett Rd												
Transmission Main - Pickett Ave. to Matoaca Tank												
Transmission Main - Matoaca Tank to Branders Bridge												
Transmission Main - Branders Bridge to Lakeview												
Totals	\$ 2,088,456	\$ 2,087,876	\$ 2,085,952	\$ 2,087,483	\$ 3,083,297	\$ 3,088,022	\$ 3,077,046	\$ 2,778,968	\$ 2,775,944	\$ 2,773,411	\$ 2,773,141	

NOTE:

1) The above items for information only. Approval required from BOD at time of project award.

2) Bond Funding will be required for these Proposed Capital Projects. Debt Service was estimated at 3% for 20 years

Total Operating Capital Outlay and Construction Budget											
21/22	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	
\$ 3,228,456	\$ 2,761,876	\$ 2,825,952	\$ 2,799,483	\$ 3,541,797	\$ 3,393,022	\$ 3,187,046	\$ 2,903,968	\$ 2,887,944	\$ 3,056,911	\$ 2,958,141	

ARWA Budget comparisons

Year	O&M Expenses	Operating Capital		Debt Service 2010 issue	Debt Service 2012 issue	Debt Service 2017 issue	See Note (1)	See Note (2)	Reserve Policy	Total	Difference	% change	Comments
		Outlay					Debt Service 2019 issue	Debt Service 2026 issue					
21/22	\$ 7,500,600	\$ 1,140,000			\$ 302,103	\$ 1,080,414	\$ 705,940		\$ -	\$ 10,729,056			
22/23	\$ 8,504,272	\$ 674,000			\$ 302,322	\$ 1,080,795	\$ 704,760		\$ -	\$ 11,266,148	\$ 537,092	5%	
23/24	\$ 8,759,400	\$ 740,000			\$ 302,293	\$ 1,080,648	\$ 703,011		\$ -	\$ 11,585,351	\$ 319,204	3%	Reserve Fund is 50% of O&M
24/25	\$ 9,022,182	\$ 712,000			\$ 302,016	\$ 1,079,973	\$ 705,495		\$ -	\$ 11,821,665	\$ 236,314	2%	
25/26	\$ 9,292,847	\$ 458,500			\$ 302,475	\$ 1,080,744	\$ 706,888	\$ 993,191	\$ -	\$ 12,834,645	\$ 1,012,980	9%	
26/27	\$ 9,571,633	\$ 305,000			\$ 301,671	\$ 1,080,936	\$ 712,224	\$ 993,191	\$ -	\$ 12,964,655	\$ 130,010	1%	See notes (3) and (4)

Notes:

(1) The 2010 issue was refinanced with the 2019 issue.

(2) The debt service service shown in 2026 represents:

Rebuild filters \$ 404,633.00 replace filters 1-8, end of life - \$5.5M

Lagoon Liner \$ 588,558.00 regulatory driven by DEQ based on groundwater monitoring program - \$8.0M

(3) The Branders Bridge Tank and PS was originally projected for the 2026 debt service estimate. The board has elected to remove this project from the bond issue at this time.

The estimated project cost was \$5,000,000 with an estimated debt service of \$367,849. The estimated project cost was \$5,000,000 with an estimated debt service of \$367,849.

(4) The PAC (Powder Activated Carbon) feed system was removed from the 2026 debt service estimate. Based on historic UCMR sampling results by our members, it does not appear this project is needed. The estimated project cost was \$2,500,000 with an estimated debt service of \$183,924.

ARWA Projected Annual Cost

5 year projections - O&M, Operating Capital Outlay, Reserve Policy, 54.38% 2019 Series, 2012 Series, and 2017

Series						
	Chesterfield	Colonial Heights	Dinwiddie	Petersburg	Prince George	total
	71.394%	5.721%	3.987%	16.397%	2.502%	100.000%
FY 22/23	\$ 7,813,782	\$ 626,099	\$ 436,385	\$ 1,794,584	\$ 273,786	\$ 10,944,636
FY 23/24	\$ 8,042,243	\$ 644,405	\$ 449,144	\$ 1,847,054	\$ 281,791	\$ 11,264,638
FY 24/25	\$ 8,210,147	\$ 657,859	\$ 458,521	\$ 1,885,617	\$ 287,674	\$ 11,499,818
FY 25/26	\$ 8,932,897	\$ 715,771	\$ 498,885	\$ 2,051,610	\$ 312,999	\$ 12,512,162
FY 26/27	\$ 9,023,978	\$ 723,070	\$ 503,972	\$ 2,072,528	\$ 316,190	\$ 12,639,738

Note: Budget % based on five year average flow consumption (FY15/16 to FY19/20)

5 year projections -2019 Series Debt Service (45.62%)

	Chesterfield	Colonial Heights	Dinwiddie	Petersburg	Prince George	total
Allocation	7.870%	5.760%	57.580%	0.000%	28.790%	100.000%
FY 22/23	\$ 25,303	\$ 18,519	\$ 185,126	\$ -	\$ 92,563	\$ 321,511
FY 23/24	\$ 25,240	\$ 18,473	\$ 184,667	\$ -	\$ 92,333	\$ 320,714
FY 24/25	\$ 25,329	\$ 18,538	\$ 185,319	\$ -	\$ 92,660	\$ 321,847
FY 25/26	\$ 25,379	\$ 18,575	\$ 185,685	\$ -	\$ 92,843	\$ 322,482
FY 26/27	\$ 25,571	\$ 18,715	\$ 187,087	\$ -	\$ 93,543	\$ 324,917

5 year projections - \$/year

	Chesterfield	Colonial Heights	Dinwiddie	Petersburg	Prince George	TOTAL
FY 22/23	\$ 7,839,085	\$ 644,619	\$ 621,511	\$ 1,794,584	\$ 366,349	\$ 11,266,148
FY 23/24	\$ 8,067,483	\$ 662,879	\$ 633,811	\$ 1,847,054	\$ 374,125	\$ 11,585,351
FY 24/25	\$ 8,235,476	\$ 676,398	\$ 643,840	\$ 1,885,617	\$ 380,334	\$ 11,821,665
FY 25/26	\$ 8,958,277	\$ 734,346	\$ 684,570	\$ 2,051,610	\$ 405,841	\$ 12,834,645
FY 26/27	\$ 9,049,549	\$ 741,785	\$ 691,059	\$ 2,072,528	\$ 409,734	\$ 12,964,655

5 year projections - \$/1000 gallons

	Chesterfield	Colonial Heights	Dinwiddie	Petersburg	Prince George	Average
Annual consumptions (1000 gallons)				11,054,157		
Five year average flows (FY16/17 to FY20/21)	72.790%	5.493%	3.873%	15.400%	2.444%	
FY 22/23	\$ 0.9742	\$ 1.0617	\$ 1.4516	\$ 1.0542	\$ 1.3561	\$ 1.1796
FY 23/24	\$ 1.0026	\$ 1.0917	\$ 1.4803	\$ 1.0850	\$ 1.3848	\$ 1.2089
FY 24/25	\$ 1.0235	\$ 1.1140	\$ 1.5037	\$ 1.1077	\$ 1.4078	\$ 1.2314
FY 25/26	\$ 1.1133	\$ 1.2094	\$ 1.5989	\$ 1.2052	\$ 1.5022	\$ 1.3258
FY 26/27	\$ 1.1247	\$ 1.2217	\$ 1.6140	\$ 1.2175	\$ 1.5166	\$ 1.3389

See Note (1) below

Notes:

(1) The FY25/26 figures include the proposed debt service for a 2026 Issuance. The projects for the issuance are still under consideration and the funding distribution has not been approved. These figures are subject to change.

RESOLUTION

OF THE APPOMATTOX RIVER WATER AUTHORITY

PROVIDING PRELIMINARY APPROVAL OF THE

BUDGET FOR FISCAL YEAR 2023 AND

THE RELATED WATER RATES

WHEREAS, in the fall and winter of 2021 and 2022 the staff of the Appomattox River Water Authority (the "Authority") developed the Authority's proposed budget and water rates for Fiscal Year 2023 and has presented the proposed budget and water rates to the Authority Board at this meeting held on March 17, 2022; and

WHEREAS, Virginia Code Section 15.2-5136(G) requires the preliminary approval of the proposed budget and water rates for notification of a public hearing prior to the final adoption of the budget and water rates for any fiscal year.

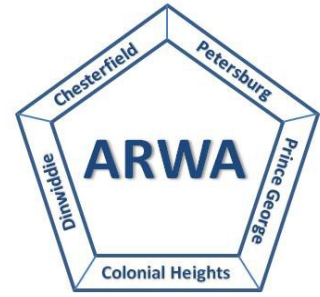
NOW, THEREFORE, BE IT RESOLVED that the Board of the Appomattox River Water Authority hereby (a) provides preliminary approval of (i) the proposed Fiscal Year 2023 budget submitted as an attachment to this resolution and (ii) the proposed water rates for Fiscal Year 2023 as set forth below, (b) schedules a public hearing on the proposed Fiscal Year 2023 budget and water rates at the Authority's next scheduled Board meeting on May 19, 2022, and (c) directs Authority staff to provide for the publication of the notices of such public hearing in accordance with Virginia Code Section 15.2-5136(G):

RATES (cents/1,000 gallons)

	FY2022
Chesterfield County	0.9905
City of Colonial Heights	1.0179
Dinwiddie County	1.4198
City of Petersburg	0.9874
Prince George County	1.3300

BE IT FURTHER RESOLVED that the Authority Board acknowledges that the above-stated water rates will be subject to change in accordance with the Authority's water service agreement in effect between the Authority and each of its five member jurisdictions, based on, among other things, the amount of water actually purchased by each member jurisdiction and the amounts of revenues received and expenses incurred by the Authority during Fiscal Year 2023.

Appomattox River Water Authority



21300 Chesdin Rd. - S. Chesterfield, VA 23803 - Phone (804) 590-1145 - Fax (804) 590-9285

Exhibit D

TO: Appomattox River Water Authority Board of Directors

FROM: Robert B. Wilson, Executive Director
James C. Gordon, Assistant Executive Director

DATE: May 19, 2022

SUBJECT: Taste and Odor Event beginning May 2nd Update

The week of May 2nd we began to receive taste and odor (T&O) complaints. The following is the sequence of events:

Monday, May 2nd The lab received a call from the City of Colonial Heights Utilities stating they had received a taste and odor complaint for an “earthy” taste. City utility staff flushed the area and that seemed to resolve the issue.

Wednesday, May 4th The operations manager mentioned operations from Chesterfield County had called and stated they were getting T&O complaints. I contacted the plant manager at the Addison-Evans water plant and asked if they were getting any T&O complaints. Dr. Sirois stated they had received ten complaints, one on Monday, five on Tuesday and four on Wednesday.

Thursday, May 5th Lab staff took algae samples on the lake. The result was 3,773 cells/ml. The action level in the Lake Chesdin and Plant Management Plan for Taste and Odors is 15,000 cells/ml.

Even though we were well below the action level in the plan, operations initiated the following changes:

- Put additional filters online.
- Increased the empty bed contact time.
- Reduced the velocity across the filters.
- Increased the carbon contact time.

- Turned on potassium permanganate feed.
- Operators running T&O tests more often.
- Reduced chlorine dioxide feed across the basin.

Chesterfield County emailed and advised that they were receiving additional T&O complaints. I received an email providing the addresses for twelve additional T&O complaints.

Friday, May 6th

We took additional algae samples from the lake – where river enters lake, at the second power line crossing the lake, the entrance to Whippernock Creek, and at the dam. The highest algae count was 2,911 cells/ml which was at the dam. This result was lower than the result from Thursday.

We sent out a notification to members of the T&O issues we were experiencing at the plant.

Monday, May 9th

Lab staff took additional MIB/Geosmin samples from the lake and sent to a third-party lab to evaluate. This sampling is not usually initiated in our “Alert Level Framework” until our Anabaena counts reach 30,000 cells/mL, but was done proactively due to T&O complaints.

Wednesday, May 11th Received results for RAW Water Sample:

MIB was at 19 ng/L

Geosmin was at 9.3 ng/L

Alert Level Framework indicates both values should be below a 10 ng/L.

In the Lake Chesdin and Plant Management Plan for Taste and Odors laboratory staff look for two specific algae species, anabaena and aphanizomenon. Both algae are in the blue/green family and known to create T&O issues and have historically been identified as our target species to monitor. The results of the tests we performed the week before and week of the event were well below the threshold or action level for the lake. Further research through AWWA papers and the internet, found that there are two other naturally occurring compounds, geosmin and methyl-isoborneol (MIB) which are known to contribute to an “earthy” taste. That is the reason we sent out additional lake samples for evaluation. Our conventional treatment process neutralizes the bacteria that create these compounds but does not totally remove them. Neither geosmin nor MIB are toxic or harmful.

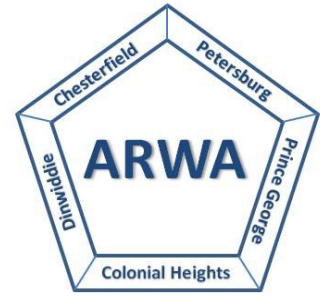
We continue to monitor for taste and odor daily. As of Wednesday, May 11th, we are not picking up the “earthy” taste at the plant. Chesterfield County has continued to sample at their point of entry, the Chesdin East Pump Station. Their results from Tuesday, May 10th state “very faint musty in background, if not looking for T&O might not notice, no plastic finish”.

We have contacted Dr. Rosenfeldt who developed the Lake Chesdin and Plant Management Plan for Taste and Odors to determine if we need to consider looking at additional compounds for taste and odor and/or need to revise the plan.

Board Action Requested:

No Board Action requested.

Appomattox River Water Authority



21300 Chesdin Rd. - S. Chesterfield, VA 23803 - Phone (804) 590-1145 - Fax (804) 590-9285

Exhibit E

TO: Appomattox River Authority Board of Directors

FROM: Robert B. Wilson, P.E., Executive Director
James C. Gordon, Assistant Executive Director

DATE: May 19, 2022

SUBJECT: Ongoing Projects\Operations

Operating Status Report

This report hits the highlights and does not cover the day to day operations, maintenance or preventive maintenance summaries.

➤ General

- The next scheduled Board of Directors Meeting is Thursday, July 28, 2022 at the South Central Wastewater Authority at 2:00 pm.
- My 2022 vacation is scheduled for May 31st through June 10th. I will have phone and laptop with me.
- The Authority was interviewed by Jeremy Cox of the Chesapeake Bay Journal on April 25th. Mr. Cox had some information that showed the Appomattox River was showing higher levels for total suspended solids (TSS) and phosphorous (P). There was a discussion that there was missing information for Farmville to compare against to see if the lake was capturing TSS and P. We also discussed sedimentation for the lake. We provided Mr. Cox with a copy of our sedimentation plan. We provided a copy of our Virginia Water Protection (VWP) Permit and explained that we are a run of the river water plant and the required flow by releases. We completed the interview with a boat trip on the lake. We will provide a copy of the article to members when it is available.

➤ Operations

- Found an issue during carbon change out with filter #1. The porcelain balls in the bottom of the filter had migrated into the carbon layer of the filter. We brought in representatives from Robert's Filter (manufacturer) and K. L. Shane (contractor for manufacturer) and it was determined that the number of cones in the filter required a total filter rebuild. The cost for that repair is \$216,696.93. The funding for this emergency repair can either be funded out of

the Revenue Fund that we will surpass our revenue projections or the Operating Reserve Fund. Staff's recommendation would be to fund this project out of the excess revenue collected for the current fiscal year.

- BleachTech, the local sodium hypochlorite producer, had some type of production issue and shutdown for two weeks. This created a shortage of hypo in the immediate area. Some water plants were close to running out of this disinfection product. Notification of this problem was sent to the Board on May 4th. To reduce our hypo usage we reduced the plant output from 3.5 ppm to 3.0 ppm.
- Taste and Odor complaints the week of May 4th. See separate agenda item.
- Received the VDH gold award for filtration.
- Performed spring cleanout and inspection of all settling basins and flocculators.
- Calibrated all dry lime feeders.
- Flushed out caustic tanks to access 50% caustic for the summer. We use 32% caustic in the winter – gelling issue.
- Continue to look for a Class 1 operator.
- Finished water met all permit requirements for March and April.
- The average daily finished water consumption for March was 26.23 mgd and the total withdrawn from the lake was 941 BG. The average daily finished water consumption for April was 29.2 mgd and the total withdrawn was 1043 BG.

The maximum VWP permit criteria is:

- Daily maximum withdrawal is 86.24 mgd.
 - Monthly maximum withdrawal is 2.289 billion gallons.
 - Maximum annual withdrawal is 17.934 billion gallons (49.1 mgd average)
- The March 1st lake level was 3.0” and the April 30th lake level was 1.5”.
 - Drained and cleaned basins.

➤ Maintenance

- Completed mag meter, butterfly valve and electric actuator installation for filters 11 and 12.
- Assisting electrician with outage plan for transformer change out.
- Relocated entrance gate and associated camera and call box.
- Set warning buoys on lake for stump field and for DWR at Dinwiddie ramp.
- Replaced hatches on lagoon splitter boxes.
- Cut purchase order for cipher lock installation – plant security.
- Completed fire alarm rehabilitation – now functional.
- Located tie-ins to 24” water line on Temple Avenue.
- Inspected flocculators
- Installed new level monitoring equipment in underground alum tank.
- Cleaning up laydown yard and hauling off scrap material.

➤ Instrumentation

- Server improvements and cybersecurity upgrades.
- Working on power issues.
- Continuing to work with power contractor on bidirectional feed for both generators. Contractor is having difficulty procuring modules.

➤ Laboratory

- Met all the VPDES requirements for March and April for the outfalls.
- HRSD scheduled to sample outfalls on May 24th and 25th.
- Working on sampling for VPDES permit renewal for the lagoons.
- Additional lake algae sampling
- Completed laboratory services selection.
- Completed annual proficiency testing for lab staff.
- Met monthly requirements for VDH report submittals.
- Working with operators on recent treatment challenges.
- Received and installed new data management system for lab – Operator10

➤ Phase II In-plant Project

- Contractor working on instrumentation to automate 42” and 54” butterfly valves and tie into SCADA.

➤ 30” Transmission Fortification

- New purchase order cut with Southern Construction to perform this work.
- Contractor is scheduling work.

➤ Replace PMT-2

- The changeout is being scheduled to week of May 16th. A generator is being brought in to make sure service to members is not interrupted.
- We hope to be complete by Friday, May 20th.

➤ Liquid Lime System

- Surveying complete.
- Project under design.

➤ Hydrilla

- Contacted our consultant and requested a formal update. Do not have an update for the agenda package.

➤ Docks

Date	Address	Locality	Construction
3/21/2022	15606 Chesdin Manor Drive	Chesterfield	New
3/25/2022	847 Even Keel Lane	Dinwiddie	Rehab
3/25/2022	3518 Chesdin Boulevard	Dinwiddie	New
3/31/2022	19410 Oxford Lane	Dinwiddie	New
3/31/2022	18908 Waterford Circle	Dinwiddie	New

➤ Miscellaneous

We received an email from a concerned resident on the lake about where the Appomattox River empties into the lake. There is a somewhat narrow curve where bass boats run through at high speeds. He was concerned there may be an accident. We have ordered signage to install on both sides of the curve.

Appomattox River Water Authority-Balance Sheet
For Month Ending April 30, 2022

Assets		
Current Assets		
Petty Cash	\$	400
SunTrust Operating Fund	\$	1,293,246
SunTrust Replacement Fund	\$	-
Total Unrestricted Cash	\$	1,293,646
Water Revenue	\$	6,759,318
LGIP-O&M Reserve	\$	4,099,298
LGIP-Revenue Surplus	\$	4,456,576
ERRF (Equipment Repair/Replacement)	\$	2,500,000
Debt Service Reserve	\$	1,793,975
Bond Principal/Interest	\$	776,574
Bond Construction	\$	285,853
Total Restricted Cash	\$	20,671,593
Total Checking/Savings	\$	21,965,239
Accounts Receivable	\$	14,800
Other Current Assets	\$	10,779
Inventory	\$	831,667
Total Current Assets	\$	22,822,485
Fixed Assets		
Land and Land Rights	\$	1,044,167
Water System	\$	85,582,831
Equipment	\$	1,738,287
Hydro	\$	34,873
Construction in Progress	\$	12,773,550
Accumulated Amortization	\$	(34,873)
Accumulated Depreciation	\$	(53,451,019)
Total Fixed Assets	\$	47,687,816
Other Assets		
Def Outflow-OPEB GLI	\$	20,179
Def Out Res-Post ER Pension Costs	\$	35,851
Deferred Outflow-OPEB GLI	\$	7,801
Def Out Res-Net Dif Pension Inv	\$	-
Def Out Res-OPEB Experience	\$	43,133
Def Out Res-OPEB Assumptions	\$	1,873
Def Out Res-OPEB Subsequent	\$	13,173
Total Other Assets	\$	122,010
Total Assets	\$	70,632,311
Liabilities & Equity		
Current Liabilities		
Accounts Payable	\$	115,713
Retainage Payable	\$	12,492
Accrued Interest Payable	\$	126,732
Total Current Liabilities	\$	254,936
Long Term Liabilities		
Def Inf Res-Net Dif Pension Inv	\$	261,124
Def Inf Res-Pen Chg Assumptions	\$	(61,850)
Def Inf Res-Pens Dif Proj/Act E	\$	(184,803)
Net Pension Liability	\$	(335,122)
Def Infl-OPEB Chg of Assumptions	\$	1,092
Deferred Inflow-OPEB GLI	\$	10,214
Deferred Inflow-Expect & Actual	\$	11,985
Bonds Payable-2010	\$	-
Bonds Payable-2012	\$	1,901,000
Bonds Payable-2017	\$	10,383,000
Bonds Payable-2019 Refunding Bond Payment	\$	6,185,000
Bonds Payable-2019 Def Amt on Refunding	\$	(91,617)
Accrued Leave Payable	\$	190,641
Post Employment Benefit	\$	125,096
OPEB Liability-GLI	\$	125,664
Total Long-Term Liabilities	\$	18,521,424
Total Liabilities	\$	18,776,360
Equity		
Retained Earnings	\$	3,623,805
Reserve for Operations	\$	2,880,200
Reserve for Water Revenue	\$	7,145,445
Reserve for Replacements	\$	500,000
Reserve for Bond Interest	\$	126,732
Reserve for Debt Service	\$	2,094,831
Reserve for Bond Principal	\$	1,601,000
Reserve for Reserve	\$	3,750,300
Fixed Assets, Net of Debt	\$	28,744,065
Net Income	\$	1,389,572
Total Equity	\$	51,855,951
Total Liabilities & Equity	\$	70,632,311
	\$	-

Appomattox River Water Authority
YTD Income Statement for the period ending April 30, 2022

Water Rate Center

Revenues and Expenses Summary

Operating Budget vs. Actual

Revenues

	Budget FY 21/22	Budget Year-to-Date	Actual Year-to-Date	YTD Budget vs. Actual	Variance Percentage
Water Sales	\$ 10,699,057	\$ 8,024,293	\$ 8,843,160	\$ 818,867	10.20%
Rent/Misc. Income	\$ 30,000	\$ 25,000	\$ 23,907	\$ (1,093)	-4.37%
Total Operating Revenues	\$ 10,729,057	\$ 8,049,293	\$ 8,867,067	\$ 817,774	10.16%

Expenses

Personnel Cost	\$ 2,590,100	\$ 2,158,417	\$ 1,864,857	\$ (293,560)	-13.60%
Contractual/Professional Services	\$ 1,049,500	\$ 874,583	\$ 828,373	\$ (46,210)	-5.28%
Utilities	\$ 830,500	\$ 692,083	\$ 760,268	\$ 68,185	9.85%
Communication/Postal/Freight	\$ 56,500	\$ 47,083	\$ 32,765	\$ (14,318)	-30.41%
Office/Lab/Janitorial Supplies	\$ 104,000	\$ 86,667	\$ 84,875	\$ (1,791)	-2.07%
Insurance	\$ 100,000	\$ 100,000	\$ 98,837	\$ (1,163)	-1.16%
Lease/Rental Equipment	\$ 25,000	\$ 20,833	\$ 17,360	\$ (3,473)	-16.67%
Travel/Training/Dues	\$ 55,000	\$ 45,833	\$ 35,233	\$ (10,600)	-23.13%
Safety/Uniforms	\$ 40,000	\$ 33,333	\$ 24,206	\$ (9,128)	-27.38%
Chemicals	\$ 2,300,000	\$ 1,916,667	\$ 1,645,400	\$ (271,267)	-14.15%
Repair/Maintenance Parts & Supplies	\$ 350,000	\$ 291,667	\$ 287,323	\$ (4,344)	-1.49%
Total Operating Expenses	\$ 7,500,600	\$ 6,267,167	\$ 5,679,497	\$ (587,669)	-9.38%
Operating Results Suplus/(Deficit)	\$ 3,228,457	\$ 1,782,126	\$ 3,187,570	\$ 1,405,444	78.86%

Replacement Outlay Budget vs. Actual

Machinery & Motors-Process	\$ 179,000	\$ 149,167	\$ 85,009	\$ (64,157)	-43.01%
Instrumentation	\$ 281,000	\$ 234,167	\$ 152,632	\$ (81,535)	-34.82%
SCADA	\$ -	\$ -	\$ 50,974	\$ 50,974	#DIV/0!
Furniture/Fixtures	\$ -	\$ -	\$ 29,432	\$ 29,432	#DIV/0!
Motor Vehicles	\$ -	\$ -	\$ 26,348	\$ 26,348	#DIV/0!
Maintenance Equipment	\$ 40,000	\$ 33,333	\$ 32,116	\$ (1,217)	-3.65%
Valve Replacement	\$ 100,000	\$ 83,333	\$ -	\$ (83,333)	-100.00%
Roof Repairs	\$ 100,000	\$ 83,333	\$ -	\$ (83,333)	-100.00%
Dock Improvements	\$ 80,000	\$ 66,667	\$ 18,595	\$ (48,071)	-72.11%
Lagoon Splitter Box Access	\$ 25,000	\$ 20,833	\$ -	\$ (20,833)	-100.00%
Sedimentation Basin Improvements	\$ 235,000	\$ 195,833	\$ -	\$ (195,833)	-100.00%
Single Pane Windows	\$ 100,000	\$ 83,333	\$ -	\$ (83,333)	-100.00%
Prince George Meter Vault	\$ -	\$ -	\$ 81,714	\$ 81,714	#DIV/0!
Security Infrastructure Upgrade	\$ -	\$ -	\$ 67,864	\$ 67,864	#DIV/0!
Warehouse Restroom	\$ -	\$ -	\$ 25,158	\$ 25,158	#DIV/0!
Total Capital Outlay	\$ 1,140,000	\$ 950,000	\$ 569,843	\$ (554,893)	-58.41%

Construction Outlay Budget vs. Actual

In-Plant Capital Upgrade	\$ -	\$ -	\$ 502,091	\$ 502,091	#DIV/0!
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Debt Service Budget vs. Actual

Interest Income	\$ -	\$ -	\$ 8,393	\$ 8,393	#DIV/0!
Other (Income)	\$ -	\$ -	\$ -	\$ -	#DIV/0!
Sell of Asset	\$ -	\$ -	\$ -	\$ -	#DIV/0!
Interest Expense	\$ 487,457	\$ 487,457	\$ 487,456	\$ (1)	0.00%
Bond Issuance Cost	\$ -	\$ -	\$ -	\$ -	#DIV/0!
Principal Payments	\$ 1,601,000	\$ 1,601,000	\$ 247,000	\$ (1,354,000)	-84.57%

Other Income/Other Expense

Alum Litigation Proceeds-Received YTD	\$ -	\$ -	\$ 10,076	\$ 10,076	#DIV/0!
Alum Litigation Proceeds-Credited to Members YTD	\$ -	\$ -	\$ 10,076	\$ 10,076	#DIV/0!

**Appomattox River Water Authority
Executive Review
Cash And Debt Highlights
As of April 30, 2022**

Highlights: ARWA Cash Positions		30-Jun-21	30-Apr-22	Change	Explanation
Unrestricted Cash & Investments:					
Petty Cash	\$	400.00	\$ 400.00	\$ -	see explanation (a) below
SunTrust Operating Account	\$	2,926,658.47	\$ 1,293,245.94	\$ (1,633,412.53)	see explanation (b) below
SunTrust Replacement Fund	\$	200.00	\$ -	\$ (200.00)	see explanation (c) below
Restricted Cash and Investments:					
Water Revenue	\$	6,843,188.10	\$ 6,759,317.56	\$ (83,870.54)	see explanation (d) below
LGIP-O&M Reserve	\$	-	\$ 4,099,297.68	\$ 4,099,297.68	see explanation (e) below
LGIP-Revenue Surplus			\$ 4,456,575.99	\$ 4,456,575.99	see explanation (f) below
Reserve Account	\$	4,003,336.28	\$ -	\$ (4,003,336.28)	
ERRF (Equipment Repair/Replacement)	\$	474,195.15	\$ 2,500,000.00	\$ 2,025,804.85	see explanation (g) below
Debt Service Reserve	\$	2,090,700.24	\$ 1,793,974.51	\$ (296,725.73)	see explanation (h) below
2012 Bond Principal/Interest	\$	220,519.40	\$ 153,154.11	\$ (67,365.29)	
2017 Bond Principal/Interest	\$	757,674.23	\$ 545,673.98	\$ (212,000.25)	
2019 Bond Principal/Interest	\$	450,368.77	\$ 77,745.60	\$ (372,623.17)	
2017 Construction	\$	800,124.01	\$ 285,853.33	\$ (514,270.68)	
Total Cash and Investments	\$	18,567,364.65	\$ 21,965,238.70	\$ 3,397,874.05	

Highlights: ARWA Outstanding Bonds		30-Jun-21	30-Apr-22	Change
2012 Bond	\$	1,901,000.00	\$ 1,901,000.00	\$ -
2017 Bond	\$	11,192,000.00	\$ 10,383,000.00	\$ (809,000.00)
2019 Bond	\$	6,730,000.00	\$ 6,185,000.00	\$ (545,000.00)
2019 Bond-Def Amt on Refund	\$	(91,617.07)	\$ (91,617.07)	\$ -
Total Bonds Outstanding	\$	19,731,382.93	\$ 18,377,382.93	\$ (1,354,000.00)

Explanation of Unrestricted and Restricted Cash positions:

- a. On-Hand Petty Cash for incidental expenses
- b. Financial Policy: Based on next four months of O&M expense
- c. Pass-through account: From US Bank to SunTrust Bank for Replacement Fund Requisitions
- d. Financial Policy: Held by Trustee for all operating water revenues
- e. Financial Policy: 50% of current FY O&M Budget
- f. Board Approval: Surplus Revenue approved for specific projects.
- g. Financial Policy: Must maintain a minimum of \$2.5M
- h. Financial Policy: Held by Trustee, funded at such amount as may be necessary.

2022	\$	1,601,000.00	\$	487,456.03	\$	2,088,456.03
2023	\$	1,640,000.00	\$	447,876.21	\$	2,087,876.21
2024	\$	1,679,000.00	\$	406,951.58	\$	2,085,951.58
2025	\$	1,723,000.00	\$	364,483.12	\$	2,087,483.12
2026	\$	1,770,000.00	\$	320,106.38	\$	2,090,106.38
2027	\$	1,821,000.00	\$	273,831.09	\$	2,094,831.09
2028	\$	1,858,000.00	\$	225,855.20	\$	2,083,855.20
2029	\$	1,605,000.00	\$	180,776.72	\$	1,785,776.72
2030	\$	1,644,000.00	\$	138,753.27	\$	1,782,753.27
2031	\$	1,685,000.00	\$	95,219.57	\$	1,780,219.57
2032	\$	1,730,000.00	\$	49,950.17	\$	1,779,950.17
2033	\$	1,067,000.00	\$	13,422.86	\$	1,080,422.86