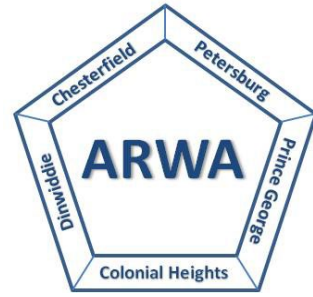


# Appomattox River Water Authority



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

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## APPOMATTOX RIVER WATER AUTHORITY

### Board of Directors Meeting

DATE: January 18, 2024

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 November 16, 2023 (Exhibit A, pages 2 to 4)
3. Public Comment (Exhibit B, page5)
4. Executive Director's Report:
  - FY24/25 Budget presentation (Exhibit C, pages 6 to 25)
  - Award Alternative Analysis Contract (Exhibit D, pages 26 to 30)
  - Status Report (Exhibit E, pages 31 to 34)
  - Financials (Exhibit F, pages 35 to 39)
5. Items from Counsel
6. Closed Meeting
7. Other items from Board Members/Staff Not on Agenda
8. Adjourn

## EXHIBIT A

**BOARD OF DIRECTORS MEETING**  
**Appomattox River Water Authority**  
**November 16th, 2023, at 2:00 p.m.**  
**Location: South Central Wastewater Authority**  
**900 Magazine Rd. Petersburg VA 23803**

**MEMBERS PRESENT:**

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

**ALTERNATES PRESENT:**

Frank Haltom, Secretary/Treasurer (Alternate, Prince George)  
Eddie Pearson, (Alternate, Dinwiddie)  
Matt Rembold, (Alternate, Chesterfield)  
Jerry Byerly, (Alternate, Petersburg)

**ABSENT:**

March Altman, (Petersburg)  
George Hayes, (Alternate, Chesterfield)  
Todd Flippin, (Alternate, Colonial Heights)

**STAFF PRESENT:**

Robert B. Wilson, Executive Director, (ARWA & SCWWA)  
James C. Gordon, Asst. Executive Director (ARWA & SCWWA)  
Arthur Anderson, (McGuireWoods)  
Melissa Wilkins, Business Manager/FOIA (ARWA & SCWWA)  
Tiffanee Rondini, Administrative Assistant (ARWA & SCWWA)

**OTHERS PRESENT:**

James Gill, (Robinson, Farmer, Cox Associates)  
Keith Boswell (VA Gateway)

The ARWA meeting was called to order by Mr. Smith, Chairman, at 2:02 p.m.

Mr. Smith welcomed Ms. Wilkins back and stated it is great having her back with us.

**1. Call to Order/Roll Call**

The roll was called:

Participating members at the table were:

Doug Smith	Present
Kevin Massengill	Present
Joseph Casey	Present
Frank Haltom	Present
Jerry Byerly	Present

Mr. Smith stated that there was an updated copy of the minutes submitted to the board and asked the Executive Director to add to that matter. The Executive Director acknowledged that we received feedback from Mr. Hayes (Chesterfield) regarding a revision request for the September 21<sup>st</sup> minutes. The Executive Director stated that we listened to the recording of those minutes, and the request was consistent with what was on the tape, and we made those changes accordingly. The Executive Director requested that the original minutes from the board package be replaced with the updated revised version that we provided. Mr. Smith stated that the revised minutes would be considered for adoption and asked if there were any questions or comments. There were no questions or comments.

**2. Approval of Revised Minutes: Revised Minutes of the Regular Meeting of the Board on September 21, 2023**

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

**RESOLVED, that the Revised Minutes of the Regular Meeting of the Board on September 21, 2023, are hereby approved:**

**For: 5      Against: 0      Abstain: 0**

**3. Public Comment**

There were no public comments.

**4. Executive Director's Report:**

- Annual Audit Presentation**

Mr. Wilson Introduced Mr. Gill of Robinson, Farmer, Cox Associates who provided a presentation on

ARWA's Annual Financial Accounting Audit. Mr. Gill reviewed the financial statements with the Board and reported there were no findings during the FY23 Annual Audit. Staff recommended the Board accept the FY23 Audited Financial Statements as presented. Mr. Smith thanked Staff for assisting and working with the auditors to get everything together and appreciates all the effort and said great job for both authorities. Mr. Smith asked if there were any questions.

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

**RESOLVED, that the Board accepts the findings of the FY23 Audit as presented by Robinson, Farmer, Cox Associates:**

**For: 5                      Against: 0                      Abstain: 0**

**Roll Call Vote:**

**Participating members at the table were:**

<b>Doug Smith</b>	<b>Aye</b>
<b>Kevin Massengill</b>	<b>Aye</b>
<b>Joseph Casey</b>	<b>Aye</b>
<b>Frank Haltom</b>	<b>Aye</b>
<b>Jerry Byerly</b>	<b>Aye</b>

**Absent During Vote:                      None**

Mr. Wilson presented a true-up proposal for FY23 surplus funds collected. Mr. Wilson requested a portion of the surplus funds be applied to specified projects and the remaining surplus be refunded to the members. The total surplus was \$1,102,090.54. The specific projects included \$255,000 for 54" repair materials for inventory, \$220,000 for facility improvements-office and training spaces, and \$127,000 for right angle actuators for flocculators #7 through #9. The remaining \$500,069.64 would be refunded to members. The percentage paid back to each member would be based on what each member bought in FY23. If the Board finds this proposal acceptable, we will issue a credit in the second quarter of FY24. The Board accepted the proposal as submitted.

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

**RESOLVED, that the Board approves the implementation of the True Up as proposed by Staff in the terms of use of surplus funds and distribution back to the members:**

**For: 5                      Against: 0                      Abstain: 0**

**Roll Call Vote:**

**Participating members at the table were:**

<b>Doug Smith</b>	<b>Aye</b>
<b>Kevin Massengill</b>	<b>Aye</b>
<b>Joseph Casey</b>	<b>Aye</b>
<b>Frank Haltom</b>	<b>Aye</b>
<b>Jerry Byerly</b>	<b>Aye</b>

**Absent during vote:                      None**

- **Brasfield Dam Update**

Mr. Wilson stated that we want to amend the recommendations that were originally cited in the board package regarding the alternative analysis and state water plan since DEQ is changing the regional planning areas by the end of November. With this change we have additional localities that would require a revision of the current water plan. We are only recommending updating the Alternative Analysis for the raw water supply. Funds for this effort were transferred at the end of FY22 towards the VWP permit reissuance. Dr. Casey asked if there was a coordinating agent so that there is an efficient way to consolidate and figure out proportionally who pays for what with respect to the new participants that will be part of our state water planning region. Mr. Wilson stated that is where the issue lies as to how we get everyone together to determine that specific criteria and we are not far enough along to know what that effort will require. The consensus of the Board was to proceed with updating the Alternative Analysis. Mr. Wilson advised he will have a proposal for Board approval at the January meeting.

- **Calendar Year 2024 Meeting Schedule:**

Mr. Wilson asked if there were any schedule conflicts with the proposed 2024 Board meeting calendar that was distributed to the members. Mr. Smith stated that if there were no schedule conflicts that we could consider a motion to approve the board meeting schedule as proposed.

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

**RESOLVED, that the Board approves the proposed meeting schedule for regular scheduled meetings for calendar year 2024 as presented by Staff:**

**For: 5                      Against: 0                      Abstain: 0**

- **Status Report**

Mr. Wilson reviewed the Status Report included in the agenda package with the Board.

- **Financials**

Ms. Wilkins began her remarks by thanking the Board for their emails, text messages, phone calls and support while she was fighting cancer. Ms. Wilkins stated she is happy to report that she is cancer free. She continues to move in the right direction and wanted to make sure everyone's effort was appreciated.

Ms. Wilkins reported on the year-to-date financials, and everything is trending as budgeted.

**5.        Items from Counsel**

There were no items from Counsel.

**6.        Closed Session**

There were no closed sessions.

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

Dr. Casey stated that he and Mr. Massengill would be amending their ordinances from three hundred feet to five hundred feet at the exclusionary zone and would report a timeline on those amendments at the January meeting.

**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 Mr. Byerly the meeting was adjourned at 2:33 p.m.

MINUTES APPROVED BY:

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**Frank Haltom/Secretary/Treasurer**



APPOMATTOX RIVER WATER AUTHORITY  
21300 Chesdin Road  
Petersburg, VA 23803



SOUTH CENTRAL WASTEWATER AUTHORITY  
900 Magazine Road  
Petersburg, VA 23803

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### **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.

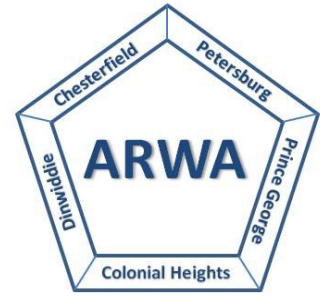
When two or more individuals are present from the same group, it is recommended that the group designate a spokesperson to present its comments to the Board and the designated speaker can ask other members of the group to be recognized by raising their hand or standing. Each spokesperson for a group 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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21300 Chesdin Rd. - S. Chesterfield, VA 23803 - Phone (804) 590-1145 - Fax (804) 590-9285

## EXHIBIT C

TO: Appomattox River Water Authority Board of Directors

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

DATE: January 18, 2024

SUBJECT: Proposed FY24/25 Budget

On December 6, 2023, staff distributed, via email, the proposed FY24/25 budget narrative to the primary members, utility directors and financial representatives. On December 14, 2023, staff presented the proposed budget to the utility directors in a meeting held at ARWA in the conference room.

The original budget narrative (black text) and the revisions from the meeting (blue text) are included as Attachment C-1.

Staff will present the highlights from the compiled Budget Narrative at the meeting. There is one item staff requests further direction:

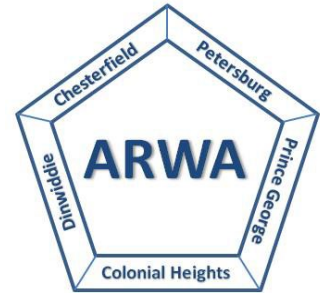
1. The proposed salary adjustment is 4.0%. We calculated the proposed salary adjustment by taking the average of the September 2023 Employee Cost Index (ECI) for local government and state workers, 4.8%, and the October 2023 Consumer Price Index (CPI), 3.2%. The reason we took the average is inflation is forecasted to slow down. The Compensation and Classification Study recommends selecting an index and continuing to use that index. The ECI is a better index for salary adjustments whereas the CPI is a better index for inflation, hence we chose the average. We also took into consideration what we were advised members gave last year and were forecasting for the upcoming fiscal year.

Staff recommends the Board proceed with advertising the budget as presented in Attachment C-1 and setting the public hearing date for March 21, 2024, at 2:00 p.m. at the Appomattox River Water Authority. A copy of the proposed budget resolution prepared by counsel is included as Attachment C-2.

Board Action Requested:

Staff requests the Board provide direction on the requested salary adjustment and set a public hearing date for March 21, 2024, at 2:00 pm at the Appomattox River Water Authority for the proposed FY24/25 budget.

# Appomattox River Water Authority



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

TO: Appomattox River Water Authority Board Utility Directors

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

DATE: December 14, 2023

SUBJECT: Proposed FY24/25 Budget Narrative  
Revision 001 – Comments from December 14<sup>th</sup> directors' meeting

The following members and staff attended the December 14<sup>th</sup> meeting:

George Hayes  
Matt Rembold  
Eddie Pearson  
Frank Haltom  
Todd Flippen  
Jerry Byerly  
Robert Wilson  
Jamie Gordon  
Melissa Wilkins

Chesterfield County  
Chesterfield County  
Dinwiddie County Water Authority  
Prince George County  
City of Colonial Heights  
City of Petersburg  
ARWA/SCWWA  
ARWA/SCWWA  
ARWA/SCWWA

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 current approved method for calculating the pro rata share for O&M costs and operating capital outlay costs is the previous five-year running average for each participating jurisdiction. For comparison, we also used the consumption estimates provided by each member.

The pro rata shares used to develop the O&M costs and operating capital outlay costs for FY24/25 are:



	5-year	5-year	
	Average	Average	
Member	FY24/25	FY23/24	% Change
Chesterfield County	<b>73.956%</b>	73.256%	0.956%
City of Colonial Heights	<b>5.255%</b>	5.374%	-2.214%
Dinwiddie County	<b>3.713%</b>	3.821%	-2.826%
City of Petersburg	<b>14.619%</b>	15.089%	-3.115%
Prince George County	<b>2.458%</b>	2.460%	-0.081%

The five-year data used for each member is included as Attachment 1.

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).

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

For the proposed FY24/25 Budget the operating and maintenance costs and operating capital outlay costs are developed by meeting with staff, setting priorities, and using up-to-date estimates. The proposed budget includes a 4.0% salary adjustment, which is a COLA as detailed in the Compensation and Classification Study. The selection of a 4.0% salary adjustment is from the Employment Cost Index (ECI). A copy of the supporting information is included as Attachment 2.

Mr. Flippen asked if the ECI recommended a 4.8% salary increase why is staff recommending a 4.0% increase. Mr. Wilson advised that we looked at both the ECI and the CPI (Consumer Price Index). The ECI was 4.8% and the CPI was 3.2%. We took the average of both indexes and came up with the requested salary adjustment of 4.0%. This is the average through September 2023.

Specific highlights for the proposed FY25 operating budget include (address line items with larger changes): Mr. Flippen requested we add the percentage change to each bullet. The percent change is also included as a column on the budget.

- 41000 -Salary. (+\$90,420, 4.22%) Even though a 4.0% salary adjustment is being requested, the potential increase is 4.22%. The reason for the difference in the two values

is we also anticipate when operators can sit for certain licenses and program in the estimated increases upon successful completion of these license exams and subsequent midyear raises by policy.

- 42000 – Employee Benefits. (+\$72,411, 8.38%) This increase is a result of increased employee taxes, increased health care costs, VRS and increased life insurance. The larger of the increase was anticipated health care cost increases. We used a value of 8% for estimating.
- 43000 – Contractual Services
  - 43180 – Potable Water Contract. (+\$39,411, 4.88%) This increase is for the carbon rental for the carbon caps on filters 23-32. These filters will have the carbon regenerated in FY24/25. Line-item value from contract with carbon vendor.
  - 43210 – Software Support. (+\$20,000, 40.00%) This line item reflects the new required software licensing with the commissioning of the new SCADA system.
- 45000 – Other Charges
  - 45110 – Electricity – Pumping. (+\$75,000, 12.50%) This is the power for the raw water pump stations. The increase is based on history and increase in the unit cost for power. This is in line with the current electrical costs for 2023.
  - 45111 – Electricity – Purification. (+\$100,000, 35.71%) This is the power for the plant. Same comment as raw water pumping. When the new elevated tanks are put in service in the future, this line item will closely mimic expense line item 45110.
  - 45308 – General Liability Insurance. Small, anticipated increase.
- 46000 – Materials and Supplies
  - 46004 – Laboratory Supplies. (+\$8,000, 9.41%) This increase is for consumables in the laboratory.
  - 46005 – Purification Chemicals. (+\$187,000, 4.99%) This increase is based on the increases that our various chemicals suppliers have advised for calendar year 2024. This is the third consecutive year with significant chemical cost increases. Chemical bids will be opened in January. At that time, we will input “as bid” numbers into the budget and adjust accordingly.
  - 46008 – Vehicle and Equipment Fuels. (+\$8,000, 20.00%) Increased fuel costs for both vehicles and generators.

The Operating Capital Outlay (58000 series) included the following changes for FY24/25:

- 58010 – Machinery and Motors – Process
  - \$50,000 is to purchase electric actuators for Filters 1-8 to install on the valves in the pipe gallery on the outlet side of the filters. The installation will be accomplished by maintenance and IT staff. This is a multi-year project.
  - \$50,000 is to purchase electric actuators for Filters 9-16 to install on the valves in the pipe gallery on the outlet side of the filters. The installation will be accomplished by maintenance and IT staff. This is a multi-year project.
- 58020 – Instrumentation

- \$30,000 to purchase PLC's to upgrade the PLC's on the sedimentation basins that operate the Clairvacs. The installation will be accomplished by maintenance and IT staff. This is year three of a three year project.
- \$30,000 to purchase materials for replacing PLC's at the field meter vaults for members. The installation will be accomplished by maintenance and IT staff. This is year two of a three year project.
- \$70,000 to replace the air burst panel for the controls that are used to blow-off the horizontal screens for raw water pump station #2. The existing control panel has both low and high voltage in the same panel.
- \$70,000 to add protection to the power feed to the plant. This adds protected relays by a third party electrical vendor.
- 58040 – Computer Equipment
  - \$5,250 – scheduled local area network (LAN) replacement – black box.
  - \$15,000 – IT replace two VMWare on two host servers. This is a reoccurring cost every five years.
  - Mr. Flippen asked how the authority addresses cybersecurity. Mr. Wilson advised we have a SIIT (System Integration and Instrumentation Technology) group with two employees. The SIIT group has separated our IT (business network) from our OT (operating network – SCADA). There are still ties with the OT network from the field meters. That information is transmitted on a private network. No system is fail safe, but we are confident the Authority's networks meet and exceed industry standards for cybersecurity. As new information is published, the SIIT group is making the necessary improvements.
- 58060 – Motor Vehicles
  - \$12,000 – this is to replace two golf carts.
- 58090 – Construction
  - \$300,000 – replace the roof on Clearwell #2. The roof system is delaminating.
  - \$110,000 – replace four brick air release vaults with 72" precast manholes on the transmission line.

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 2-8 – This project rebuilds the plant filters including replacing the underdrains for filters 2-8. The estimated cost is \$5.5 million. The estimated annual debt service for this project is \$404,633.
2. Lagoon Liners – In the renewal process for the VPDES permit for the lagoon discharge, DEQ is requiring a Site Characterization Plan be developed. In the permit package DEQ stated that there is contact between the lagoons and groundwater. The Site Characterization Plan will detail a sampling plan and from those results assist in outlining what the Authority will be required to do to remediate this situation. The appropriation shown, \$8.0 million, assumes the

Authority will have to line the existing lagoons and possibly build a third lagoon. Our assumption is it will take until FY2025/2026 to complete the necessary studies and negotiate a plan forward.

3. Elevated Tank Storage – currently staff is working with a consultant to complete the preliminary engineering report (PER) for the installation of two elevated tanks on the plant site. The appropriation shown in FY2025/2026 is the estimated construction cost to build two 2.5 million gallon elevated storage tanks.

Mr. Wilson reminded members to review the proposed rates for FY25/26 when the borrowing for the above projects is scheduled. This borrowing will have a proposed double digit increase to member rates. Members may want to review their rate structure.

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. However, we wanted to keep them on the horizon and illustrate the magnitude of the proposed costs so that the participating jurisdictions can discuss these projects further.

The Authority continues to maintain an Operating Reserve and Equipment Repair and Replacement Fund (ERRF). With the magnitude of the future transmission projects, consideration should be given to starting a Rate Stabilization Fund that would be funded annually to offset these significant future costs. The consensus of the utility directors for past budget discussions has been to borrow the funds at the time the projects are necessary and not appropriate funds on an annual basis for a Rate Stabilization Fund.

The transmission system was originally constructed in 1969 which makes it fifty-five years old. Recent coupons from wet taps show that the transmission mains are in excellent shape. There are no signs of the concrete lining failing nor pitting of the ductile iron pipe walls. The existing transmission system should have a remaining useful life of another thirty to forty years. Paralleling of the transmission system will most likely be the result of increased demands and the need for additional transmission capacity. As has been discussed in the past, the plant capacity is greater than the transmission capacity.

At the September 21<sup>st</sup> Board meeting Mr. Hayes, presented improvements Chesterfield County has made and is making to their water system. Chesterfield is implementing a number of capital and operational improvements that should mitigate some of the short and long-term impacts growth and economic development will have on the water demand needed from ARWA. This includes the eastern transmission leg. We continue to monitor actual consumptions on an annual basis as well as review any changes in trends.

At the bottom of the budget, we have added a “Total Replacement and Construction Budget” section. This section totals the amount of operating capital outlay projects and debt service. The reason we added this section was to show this total for both operating capital outlay projects and debt service and highlight how we are trying to minimize increases.

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 main influences for the FY25/26 budget increase are new projects that include rebuilding the original filters, lining the waste lagoons, and building two new elevated tanks.

There are minor reductions shown for the debt service for each issuance. This is consistent with the debt service schedules.

Statistics for the proposed FY24/25 budget:

- There will be an increase of \$613,742 from FY23/24 to FY24/25 or 6.34% for operating expenses.
- The increase cost for chemicals is \$187,000.
- Electrical costs increased significantly, \$175,000.
- The overall increase to the total budget is 6.25%.
- The required 50% operating reserve for FY24/25 is \$5,145,252. The current balance of the operating reserve is \$6,886,208 as of 9/30/2023.

The cost per 1,000 gallons for past five years plus proposed FY25 is as follows:

			Colonial		Prince
	Chesterfield	Petersburg	Heights	Dinwiddie	George
FY20	\$ 0.9797	\$ 0.9760	\$ 1.0083	\$ 1.4522	\$ 1.3698
FY21	\$ 0.9980	\$ 0.9946	\$ 1.0254	\$ 1.4457	\$ 1.3537
FY22	\$ 0.9857	\$ 0.9833	\$ 1.0140	\$ 1.4240	\$ 1.3345
FY23	\$ 0.9905	\$ 0.9874	\$ 1.0179	\$ 1.4198	\$ 1.3300
FY24	\$ 1.0616	\$ 1.0586	\$ 1.0889	\$ 1.4851	\$ 1.3898
FY25	\$ 1.1008	\$ 1.0979	\$ 1.1282	\$ 1.5271	\$ 1.4220

The change is cost per 1,000 gallons for the same time period is as follows:

			Colonial		Prince
	Chesterfield	Petersburg	Heights	Dinwiddie	George
FY20	1.90%	1.76%	6.10%	-4.27%	-2.19%
FY21	1.87%	1.91%	1.70%	-0.45%	-1.18%
FY22	-1.23%	-1.14%	-1.11%	-1.50%	-1.42%
FY23	0.49%	0.42%	0.38%	-0.29%	-0.34%
FY24	7.18%	7.21%	6.98%	4.60%	4.50%
FY25	3.69%	3.71%	3.61%	2.83%	2.32%

The capacity of the plant is governed by DEQ through the VWP permit and VDH through our operating Permit:

- VWP Permit #01-1719 (raw water)
  - A maximum daily withdrawal of 86.24 mgd.
  - A maximum monthly withdrawal of 2.289 BG.
  - A maximum annual withdrawal of 17.934 BG.
- VDH PWSID: 4041035 (finished water)
  - Six month rolling average for production cannot exceed 56 mgd.

The maximum daily withdrawal to date is 60.0 mgd (October 11, 2022); maximum monthly withdrawal to date is 1.425 BG (September 2022); and the maximum annual withdrawal to date is 13.961 BG (2021). The maximum six-month rolling average for production to date is 38.08 mgd (June – November 2022).

The debt service reserve and the ERRF are held by the trustee. In October 2023 both of these accounts were invested in U.S. Treasury Bonds for the next three years. In the event of an emergency, we would exhaust the Operating Reserve prior to accessing these funds.

Currently two of the members, the City of Colonial Heights and Chesterfield County, are participating in UMRC 5 to sample for PFAS compounds. The City of Colonial Heights has completed their sampling and found detects for PFBA. Chesterfield County is scheduled to sample in January 2024. Based on the results of both sampling events, we may be required to perform treatment upgrades in the future. At this time, EPA is only gathering information. The timeframe for possible implementation of PFAS limits for PFBA is not known.

For the proposed budget Construction Fund, we are moving forward with the engineering evaluation for the two elevated tanks, and therefore, Clearwell #4 is no longer a necessary project. Clearwell #4 was removed from the Construction Fund as a project greater than the ten year planning window.

We did not receive any comments or questions from the financial representatives.

Jurisdiction flows - Billed

	Chesterfield	Colonial Heights	Dinwiddie	Petersburg	Prince George	Total
FY2010	7,033,700,610	719,490,000	476,943,000	1,749,660,000	248,493,000	10,228,286,610
FY2011	6,846,975,000	688,308,000	488,614,000	1,730,680,000	248,016,000	10,002,593,000
FY2012	7,449,052,000	637,396,000	526,015,000	1,785,988,000	233,873,000	10,632,324,000
FY2013	6,524,488,000	625,837,000	498,544,000	1,734,797,000	221,989,000	9,605,655,000
FY2014	7,628,121,000	636,163,500	433,792,000	1,595,147,000	230,726,000	10,523,949,500
FY2015	7,785,489,000	618,103,000	407,641,000	1,752,198,000	250,836,000	10,814,267,000
FY2016	6,863,655,000	614,345,000	395,104,000	1,793,956,000	254,139,000	9,921,199,000
FY2017	7,248,528,000	610,200,000	412,835,610	1,718,782,000	260,034,000	10,250,379,610
FY2018	7,602,808,000	608,760,000	444,544,000	1,796,973,000	270,429,000	10,723,514,000
FY2019	7,949,658,140	579,252,000	402,737,000	1,737,450,000	260,573,000	10,929,670,140
FY2020	8,006,663,160	605,954,000	448,649,000	1,604,773,000	274,786,000	10,940,825,160
FY2021	9,424,198,330	631,720,000	432,028,000	1,653,480,000	284,972,000	12,426,398,330
FY2022	8,529,007,820	619,896,000	437,124,000	1,758,063,000	303,197,000	11,647,287,820
FY2023	9,095,289,410	618,846,000	438,347,000	1,746,837,035	305,758,000	12,205,077,445

Jurisdiction averages (annual usage)

	Chesterfield	Colonial Heights	Dinwiddie	Petersburg	Prince George	Total
FY11 - 1 yr avg	7,033,700,610	719,490,000	476,943,000	1,749,660,000	248,493,000	10,228,286,610
FY12 - 1 yr avg	6,846,975,000	688,308,000	488,614,000	1,730,680,000	248,016,000	10,002,593,000
FY13 - 2yr avg	6,986,770,000	631,616,500	512,279,500	1,760,392,500	227,931,000	10,118,989,500
FY14 - 3yr avg	7,200,553,667	633,132,167	486,117,000	1,705,310,667	228,862,667	10,253,976,167
FY15 - 4yr avg	7,346,787,500	629,374,875	466,498,000	1,717,032,500	234,356,000	10,394,048,875
FY16 - 5yr avg	7,250,161,000	626,368,900	452,219,200	1,732,417,200	238,312,600	10,299,478,900
FY17 - 5yr avg	7,210,056,200	620,929,700	429,583,322	1,718,976,000	243,544,800	10,223,090,022
FY18 - 5yr avg	7,425,720,200	617,514,300	418,783,322	1,731,411,200	253,232,800	10,446,661,822
FY19 - 5yr avg	7,490,027,628	606,132,000	412,572,322	1,759,871,800	259,202,200	10,527,805,950
FY20 - 5yr avg	7,534,262,460	603,702,200	420,773,922	1,730,386,800	263,992,200	10,553,117,582
FY21 - 5yr avg	8,046,371,126	607,177,200	428,158,722	1,702,291,600	270,158,800	11,054,157,448
FY22 - 5yr avg	8,302,467,090	609,116,400	433,016,400	1,710,147,800	278,791,400	11,333,539,090
FY23 - 5 yr avg	8,600,963,372	611,133,600	431,777,000	1,700,120,607	285,857,200	11,629,851,779

Jurisdiction percentages based of averages

	Chesterfield	Colonial Heights	Dinwiddie	Petersburg	Prince George	Total
FY2011 - 1 yr avg	68.767%	7.034%	4.663%	17.106%	2.429%	100.000%
FY2012 - 1 yr avg	68.452%	6.881%	4.885%	17.302%	2.480%	100.000%
FY2013 - 2yr avg	69.046%	6.242%	5.063%	17.397%	2.253%	100.000%
FY2014 - 3yr avg	70.222%	6.175%	4.741%	16.631%	2.232%	100.000%
FY2015 - 4yr avg	70.683%	6.055%	4.488%	16.519%	2.255%	100.000%
FY16 - 5yr avg	70.393%	6.082%	4.391%	16.820%	2.314%	100.000%
FY17 - 5yr avg	70.527%	6.074%	4.202%	16.815%	2.382%	100.000%
FY18 - 5 yr avg	71.082%	5.911%	4.009%	16.574%	2.424%	100.000%
FY19 - 5 yr avg	71.145%	5.757%	3.919%	16.716%	2.462%	100.000%
FY20 - 5 yr avg	71.394%	5.721%	3.987%	16.397%	2.502%	100.000%
FY21 - 5 yr avg	72.790%	5.493%	3.873%	15.400%	2.444%	100.000%
FY22 - 5 yr avg	73.256%	5.374%	3.821%	15.089%	2.460%	100.000%
FY23 - 5 yr avg	73.956%	5.255%	3.713%	14.619%	2.458%	100.000%

Jurisdiction averages (mgd)

	Chesterfield	Colonial Heights	Dinwiddie	Petersburg	Prince George	Total
FY2011 - 1 yr avg	19.270	1.971	1.307	4.794	0.681	28.023
FY2012 - 1 yr avg	18.759	1.886	1.339	4.742	0.679	27.404
FY2013 - 2yr avg	19.142	1.730	1.404	4.823	0.624	27.723
FY2014 - 3yr avg	19.728	1.735	1.332	4.672	0.627	28.093
FY2015 - 4 yr avg	20.128	1.724	1.278	4.704	0.642	28.477
FY16 - 5yr avg	19.863	1.716	1.239	4.746	0.653	28.218
FY17 - 5yr avg	19.754	1.701	1.177	4.710	0.667	28.008
FY18 - 5yr avg	20.344	1.692	1.147	4.744	0.694	28.621
FY19 - 5 yr avg	20.521	1.661	1.130	4.822	0.710	28.843
FY20 - 5 yr avg	20.642	1.654	1.153	4.741	0.723	28.913
FY21 - 5 yr avg	22.045	1.663	1.173	4.664	0.740	30.285
FY22 - 5 yr avg	22.746	1.669	1.186	4.685	0.764	31.051
FY23 - 5 yr avg	23.56	1.67	1.18	4.66	0.78	31.863



# NEWS RELEASE

## BUREAU OF LABOR STATISTICS

U. S. D E P A R T M E N T O F L A B O R



Transmission of material in this release is embargoed until  
8:30 a.m. (ET) Tuesday, October 31, 2023

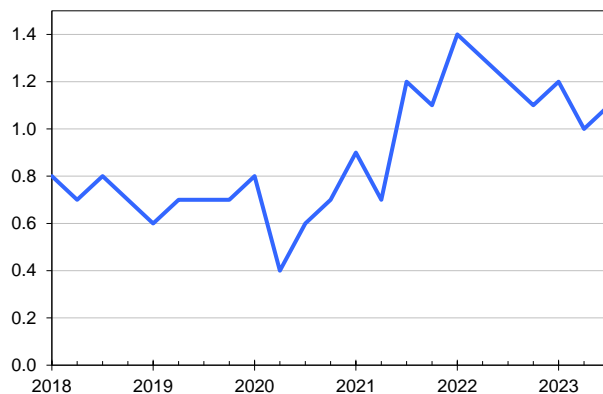
USDL-23-2314

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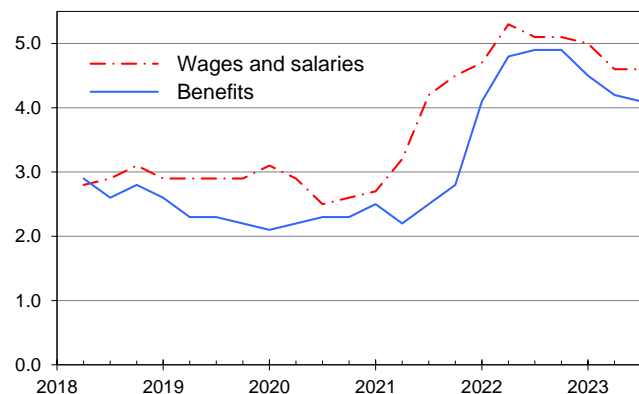
### EMPLOYMENT COST INDEX – SEPTEMBER 2023

**Compensation costs** for civilian workers increased 1.1 percent, seasonally adjusted, for the 3-month period ending in September 2023, the U.S. Bureau of Labor Statistics reported today. **Wages and salaries** increased 1.2 percent and **benefit costs** increased 0.9 percent from June 2023. (See chart 1 and tables A, 1, 2, and 3.)

**Chart 1. Three-month percent change, seasonally adjusted, civilian workers, total compensation**



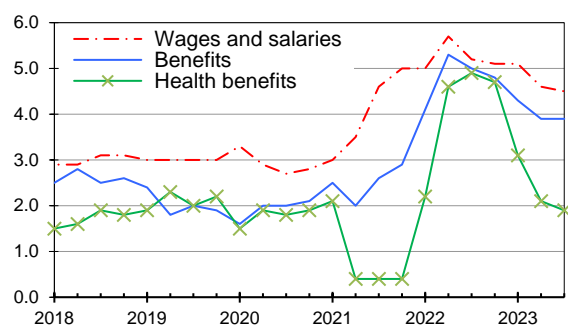
**Chart 2. Twelve-month percent change, not seasonally adjusted, civilian workers**



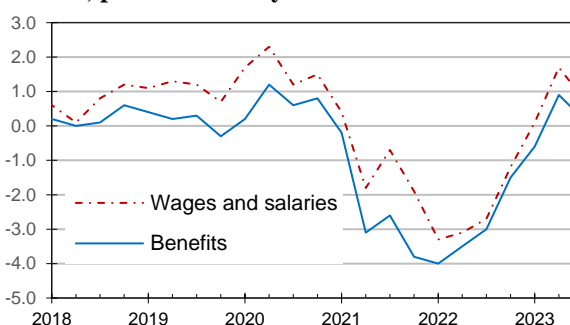
**Compensation costs** for civilian workers increased 4.3 percent for the 12-month period ending in September 2023 and increased 5.0 percent in September 2022. **Wages and salaries** increased 4.6 percent for the 12-month period ending in September 2023 and increased 5.1 percent for the 12-month period ending in September 2022. **Benefit costs** increased 4.1 percent over the year and increased 4.9 percent for the 12-month period ending in September 2022. (See chart 2 and tables A, 4, 8, and 12.)

**Compensation costs** for private industry workers increased 4.3 percent over the year. In September 2022, the increase was 5.2 percent. **Wages and salaries** increased 4.5 percent for the 12-month period ending in September 2023 and increased 5.2 percent in September 2022. The cost of **benefits** increased 3.9 percent for the 12-month period ending in September 2023 and increased 5.0 percent in September 2022. Inflation-adjusted (constant dollar) compensation costs for private industry increased 0.6 percent for the 12-month period ending in September 2023. Inflation-adjusted wages and salaries increased 0.8 percent for the 12 months ending September 2023. Inflation-adjusted benefit costs in the private sector increased 0.2 percent over that same period. (See charts 3, 4, and tables A, 5, 9, and 12.)

**Chart 3. Twelve-month percent change, current dollar, private industry workers**



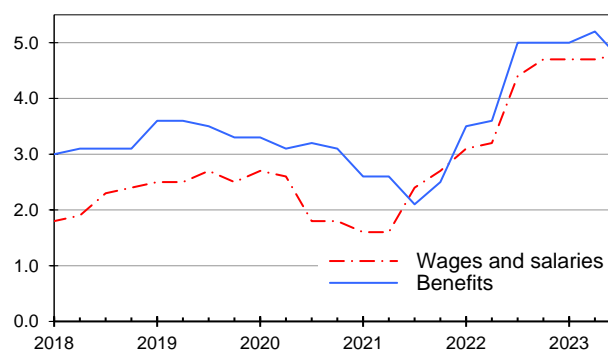
**Chart 4. Twelve-month percent change, constant dollar, private industry workers**



Among private industry **occupational groups**, compensation cost increases for the 12-month period ending in September 2023 ranged from 3.9 percent for production, transportation, and material moving occupations to 4.5 percent for service occupations. Within **industry supersectors**, compensation cost increases ranged from 3.7 percent for manufacturing to 4.9 percent for both education and health services and for other services, except public administration. (See table 5.)

**Compensation costs** for state and local government workers increased 4.8 percent for the 12-month period ending in September 2023, compared with an increase of 4.6 percent in September 2022. **Wages and salaries** increased 4.8 percent for the 12-month period ending in September 2023 and increased 4.4 percent a year ago. **Benefit costs** increased 4.7 percent for the 12-month period ending in September 2023. The prior year increase was 5.0 percent. (See chart 5 and tables A, 7, 11, and 12.)

**Chart 5. Twelve-month percent change, not seasonally adjusted, state and local government workers**



**Table A. Major series of the Employment Cost Index**  
[Percent change]

Category	3-month, seasonally adjusted		12-month, not seasonally adjusted, current dollar			12-month, not seasonally adjusted, constant dollar		
	Jun. 2023	Sep. 2023	Sep. 2022	Jun. 2023	Sep. 2023	Sep. 2022	Jun. 2023	Sep. 2023
<b>Civilian workers<sup>1</sup></b>								
Compensation <sup>2</sup> .....	1.0	1.1	5.0	4.5	4.3	-2.9	1.6	0.6
Wages and salaries.....	1.0	1.2	5.1	4.6	4.6	-3.0	1.7	0.9
Benefits.....	0.9	0.9	4.9	4.2	4.1	-3.0	1.2	0.4
<b>Private industry</b>								
Compensation <sup>2</sup> .....	1.0	1.0	5.2	4.5	4.3	-2.8	1.5	0.6
Wages and salaries.....	1.0	1.1	5.2	4.6	4.5	-2.7	1.7	0.8
Benefits.....	0.9	0.8	5.0	3.9	3.9	-3.0	0.9	0.2
Health benefits.....	—	—	4.9	2.1	1.9	—	—	—
<b>State and local government</b>								
Compensation <sup>2</sup> .....	1.0	1.5	4.6	4.9	4.8	-3.3	1.9	1.0
Wages and salaries.....	0.8	1.8	4.4	4.7	4.8	-3.5	1.7	1.0
Benefits.....	1.0	1.2	5.0	5.2	4.7	-3.0	2.1	1.0

<sup>1</sup> Includes private industry and state and local government.

<sup>2</sup> Includes wages and salaries and benefits.

Note: All estimates in the table can be found in the public database at [www.bls.gov/eci/data.htm](http://www.bls.gov/eci/data.htm). Dashes indicate data not available.

# APPOMATTOX RIVER WATER AUTHORITY

Proposed: January 18, 2024

Approved:

Revised:

Revision Approved:

## PROPOSED OPERATION & MAINTENANCE BUDGET 2024/2025

	<u>FY2023/2024</u>	<u>FY2024/2025</u>	<u>FY23/24 to FY24/25</u>	
	Budget	Budget	\$ Change	% Change
<b>O&amp;M EXPENSES</b>				
<b>41000 · Salary</b>	<b>\$2,142,321</b>	<b>\$2,232,741</b>	<b>\$90,420</b>	<b>4.22%</b>
<b>42000 · Employee Benefits</b>	<b>\$864,051</b>	<b>\$936,462</b>	<b>\$72,411</b>	<b>8.38%</b>
42100 · Employer FICA	\$163,888	\$170,805	\$6,917	4.22%
42200 · Virginia Retirement System	\$49,916	\$52,023	\$2,107	4.22%
42210 · Deferred Comp 457	\$0	\$0	\$0	0.00%
42300 · Hospitalization Insurance	\$606,440	\$668,615	\$62,175	10.25%
42400 · VRS Group Life Insurance	\$28,707	\$29,919	\$1,212	4.22%
42500 · Group Term Life	\$2,100	\$2,100	\$0	0.00%
42600 · Unemployment Insurance	\$1,000	\$1,000	\$0	0.00%
42800 · Employee Promotions	\$10,000	\$10,000	\$0	0.00%
42900 · Other Fringe Benefits - EAP	\$2,000	\$2,000	\$0	0.00%
42950 · OPEB Health Insurance Adj	\$0	\$0	\$0	
42952 · Net Pension Adjustment				
<b>43000 · Contractual Services</b>	<b>\$1,218,289</b>	<b>\$1,277,700</b>	<b>\$59,411</b>	<b>4.88%</b>
43121 · Auditing Services	\$13,000	\$13,000	\$0	0.00%
43122 · Accounting Services	\$16,000	\$16,000	\$0	0.00%
43124 · Part-Time Summer Interns	\$5,000	\$5,000	\$0	0.00%
43130 · Legal/Engineering and Reservoir Studies	\$50,000	\$50,000	\$0	0.00%
43140 · Consulting Engineers	\$75,000	\$75,000	\$0	0.00%
43150 · Legal Services	\$85,000	\$85,000	\$0	0.00%
43152 · Medical - Testing	\$5,000	\$5,000	\$0	0.00%
43155 · Other Consulting Services	\$0	\$0	\$0	0.00%
43156 · Admin and Maintenance Svc-SCWWA	\$0	\$0	\$0	0.00%
43160 · Trustee Services	\$12,000	\$12,000	\$0	0.00%

43162 - Bank Service Charges	\$2,100	\$2,100	\$0	0.00%
43170 - Research	\$17,500	\$17,500	\$0	0.00%
43180 - Potable Water Contract	\$585,589	\$625,000	\$39,411	6.73%
43190 - Samples and Tests	\$50,000	\$50,000	\$0	0.00%
43200 - Lake Patrol	\$4,000	\$4,000	\$0	0.00%
43201 - Reservoir Management - Invasive Control Program	\$25,000	\$25,000	\$0	0.00%
43210 - Software Support	\$50,000	\$70,000	\$20,000	40.00%
43220 - VPDES Permit Fee	\$15,000	\$15,000	\$0	0.00%
43310 - Repair Services	\$25,000	\$25,000	\$0	0.00%
43320 - Service Contracts	\$125,000	\$125,000	\$0	0.00%
43500 - Printing and Binding	\$1,000	\$1,000	\$0	0.00%
43600 - Grounds Maintenance	\$57,100	\$57,100	\$0	0.00%
<b>45000 - Other Charges</b>	<b>\$1,197,100</b>	<b>\$1,382,600</b>	<b>\$185,500</b>	<b>15.50%</b>
45110 - Electricity - Pumping	\$600,000	\$675,000	\$75,000	12.50%
45111 - Electricity - Purification	\$280,000	\$380,000	\$100,000	35.71%
45120 - Heating Fuel	\$65,000	\$65,000	\$0	0.00%
45130 - Trash Pickup	\$8,100	\$8,100	\$0	0.00%
45210 - Postal Services	\$1,500	\$1,500	\$0	0.00%
45220 - Freight	\$10,000	\$10,000	\$0	0.00%
45230 - Telecommunications	\$35,000	\$35,000	\$0	0.00%
45308 - General Liability Insurance	\$125,000	\$130,000	\$5,000	4.00%
45410 - Lease/Rent of Equipment	\$20,000	\$20,000	\$0	0.00%
45510 - Mileage Allowance			\$0	0.00%
45530 - Meals and Lodging	\$2,500	\$3,000	\$500	20.00%
45540 - Education and Training	\$25,000	\$30,000	\$5,000	20.00%
45550 - Safety Supplies	\$25,000	\$25,000	\$0	0.00%
<b>46000 - Materials and Supplies</b>	<b>\$4,255,000</b>	<b>\$4,461,000</b>	<b>\$206,000</b>	<b>4.84%</b>
46001 - Office Supplies	\$10,000	\$10,000	\$0	0.00%
46004 - Laboratory Supplies	\$85,000	\$93,000	\$8,000	9.41%
46005 - Purification Chemicals	\$3,750,000	\$3,937,000	\$187,000	4.99%
46006 - Purification Process and Janitorial Supplies	\$10,000	\$10,000	\$0	0.00%
46007 - Repair & Maint Supplies-Shop	\$210,000	\$210,000	\$0	0.00%
46008 - Vehicle and Equipment Fuels	\$40,000	\$48,000	\$8,000	20.00%
46009 - Vehicle and Equipment Supplies	\$15,000	\$15,000	\$0	0.00%
46010 - Equipment Parts and Small Equipment Purchases	\$25,000	\$25,000	\$0	0.00%
46011 - Uniforms	\$15,000	\$15,000	\$0	0.00%
46012 - Dues and Subscriptions	\$35,000	\$38,000	\$3,000	8.57%
46014 - Repair & Maint Supplies-IT	\$35,000	\$35,000	\$0	0.00%

46015 · Small Equipment Purchases	\$0	\$0	\$0	0.00%
46016 · Operations Supplies and Maintenance	\$25,000	\$25,000	\$0	0.00%
<b>Total Operating Expenses</b>	<b>\$9,676,761</b>	<b>\$10,290,503</b>	<b>\$613,742</b>	<b>6.34%</b>
<b>58000 · Operating Capital Outlay</b>	<b>\$585,500</b>	<b>\$742,250</b>	<b>\$156,750</b>	<b>26.77%</b>
Debt - 2010 Issue (Refunded as 2019 series)	\$0	\$0	\$0	0.00%
Debt - 2012 Issue	\$302,293	\$302,016	-\$277	-0.09%
Debt - 2017 Issue	\$1,080,648	\$1,079,973	-\$675	-0.06%
Debt - 2019 Issue (2010 Refunded)	\$703,011	\$705,495	\$2,484	0.35%
<b>Total Debt</b>	<b>\$2,085,952</b>	<b>\$2,087,483</b>	<b>\$1,532</b>	<b>0.07%</b>
<b>Reserve Policy</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>0.00%</b>
<b>Total Expenses</b>	<b>\$12,348,213</b>	<b>\$13,120,236</b>	<b>\$772,024</b>	<b>6.25%</b>

FY Budget Year		Revenues					
2024/2025		Appomattox River Water Authority					
Proposed		1/18/20224		Adopted		Revised	
		Revision Adopted					
		Chesterfield	Colonial Heights	Dinwiddie	Petersburg	Prince George	Total
<b>1) Operations and Maintenance Base Rate</b>							
<b>O&amp;M Rate</b>							
	<b>\$/1000 gallons</b>	<b>\$ 1.0979</b>	<b>\$ 1.0979</b>	<b>\$ 1.0979</b>	<b>\$ 1.0979</b>	<b>\$ 1.0979</b>	<b>\$ 1.0979</b>
Estimated (\$/quarter)	\$	2,360,745	\$ 167,740.57	\$ 118,512	\$ 466,640	\$ 78,461	\$ 3,192,097.33
Total annual allocation	\$	9,442,979	\$ 670,962	\$ 474,047	\$ 1,866,559	\$ 313,842	\$ 12,768,389
% of flows		73.956%	5.255%	3.713%	14.619%	2.458%	100.000%
Estimated (mgd)		23.564	1.674	1.183	4.658	0.783	31.863
Calc. annual usage (bg)		8.601	0.611	0.432	1.700	0.286	11.630
O&M =	\$ 10,290,503	Op. Cap. Outlay	\$ 742,250	54.38% 2019 Debt (maintenance)	\$ 383,648		
Int./Misc. Income	\$ 30,000	100% 2012 Debt	\$ 302,016	100% 2017 Debt	\$ 1,079,973	Reserve Policy	\$0
<b>BASE RATE</b>	<b>\$/1000gals</b>	<b>\$ 1.0979</b>	<b>\$ 1.0979</b>	<b>\$ 1.0979</b>	<b>\$ 1.0979</b>	<b>\$ 1.0979</b>	
<b>2) Expansion Rate</b>							
<b>Bonds</b>	% Financed						
Rate (cents/1000 gals)		\$ 0.0029	\$ 0.0303	\$ 0.4292	\$ -	\$ 0.3241	
2019 expansion (\$/year)	45.62%	\$ 25,329	\$ 18,538	\$ 185,319	\$ -	\$ 92,660	\$ 321,847
% allocation	7.87%		5.76%	57.58%	0.00%	28.79%	100.00%
FY22/23 Bond Payments	2019 refunding =	\$ 705,495					
<b>TOTAL DEBT SERVICE RATE</b>	<b>\$/1000 gals</b>	<b>\$ 0.0029</b>	<b>\$ 0.0303</b>	<b>\$ 0.4292</b>	<b>\$ -</b>	<b>\$ 0.3241</b>	
	\$/year	\$ 25,329	\$ 18,538	\$ 185,319	\$ -	\$ 92,660	\$ 321,847
<b>3) Total Rate</b>							
<b>TOTAL RATE (BASE + EXPANSION)</b>	<b>\$/1000gals</b>	<b>\$ 1.1008</b>	<b>1.1282</b>	<b>1.5271</b>	<b>1.0979</b>	<b>1.4220</b>	<b>\$ 1.2552</b>
Estimated annual charges	\$/year	\$ 9,468,309	\$ 689,501	\$ 659,366	\$ 1,866,559	\$ 406,502	\$ 13,090,236
<b>4) Budget Comparison (see note 1)</b>							
FY23/24 Total Rate	\$/1000 gals	\$ 1.1008	\$ 1.1282	\$ 1.5271	\$ 1.0979	\$ 1.4220	\$ 1.2552
FY22/23 Total Rate	\$/1000 gals	\$ 1.0616	\$ 1.0889	\$ 1.4851	\$ 1.0586	\$ 1.3898	\$ 1.2168
<b>Total Rate Difference</b>	<b>\$/1000 gals</b>	<b>\$ 0.0392</b>	<b>\$ 0.0393</b>	<b>\$ 0.0420</b>	<b>\$ 0.0393</b>	<b>\$ 0.0323</b>	<b>\$ 0.0384</b>
<b>Total Rate Difference</b>	<b>%</b>	<b>3.69%</b>	<b>3.61%</b>	<b>2.83%</b>	<b>3.71%</b>	<b>2.32%</b>	<b>3.16%</b>
FY23/24 Revenues	\$/year	\$ 9,468,309	\$ 689,501	\$ 659,366	\$ 1,866,559	\$ 406,502	\$ 13,090,236
FY22/23 Revenues	\$/year	\$ 8,814,096	\$ 663,274	\$ 643,051	\$ 1,810,334	\$ 387,457	\$ 12,318,213
<b>Annual Cash Difference</b>	<b>\$/year</b>	<b>\$ 654,213</b>	<b>\$ 26,227</b>	<b>\$ 16,315</b>	<b>\$ 56,224</b>	<b>\$ 19,044</b>	<b>\$ 772,024</b>
FY24/25 Expenses	\$ 13,120,236	FY 24/25 Income Revenue	\$ 13,120,236				

NOTES:

#### Reserve Policy:

Reserve Policy Calculation

#### Appomattox River Water Authority FY24/25

ARWA O&M Budget	Reserves as of 6/30/2023	Revenue for FY2023/2024	Total expected reserves on 6/30/2024	Recommended 50% O&M Reserves	Annual Charge to achieve 50% Reserves
\$10,290,503	\$6,761,468	\$0	\$6,761,468	\$5,145,252	\$0

**APPOMATTOX RIVER WATER AUTHORITY**  
**Operating Capital Outlay - 58000**  
**FY24/25**

Acct#	Current Budget 23/24	Proposed Budget 24/25	INFORMATIONAL & PLANNING									
			25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	
58010 - Machinery and Motors-Process	\$ 157,500	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
58020 - Instrumentation	\$ 68,000	\$ 200,000	\$ 115,000	\$ 60,000	\$ 70,000	\$ 35,000	\$ 25,000	\$ -	\$ -	\$ -	\$ -	
58030 - SCADA	\$ -	\$ -	\$ 15,750	\$ -	\$ -	\$ 10,000	\$ -	\$ 20,500	\$ -	\$ -	\$ 12,800	
58040 - Computer Equipmment	\$ 5,000	\$ 20,250	\$ 5,500	\$ 25,800	\$ 11,000	\$ 6,400	\$ 51,720	\$ 7,000	\$ 7,300	\$ 13,900	\$ 8,200	
58050 - Furniture and Fixtures	\$ 20,000	\$ -	\$ 130,000	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
58060 - Motor Vehicles	\$ -	\$ 12,000	\$ 46,667	\$ 80,000	\$ 40,000	\$ 35,000	\$ -	\$ 110,000	\$ -	\$ -	\$ -	
58065 - Maintenance Equipment	\$ -	\$ -	\$ 115,000	\$ 35,000	\$ -	\$ 15,000	\$ -	\$ -	\$ -	\$ -	\$ -	
58090 - Construction	\$ 315,000	\$ 410,000	\$ 595,000	\$ 410,000	\$ 360,000	\$ 110,000	\$ -	\$ 75,000	\$ -	\$ -	\$ -	
TOTALS:	\$ 565,500	\$ 742,250	\$ 1,122,917	\$ 710,800	\$ 581,000	\$ 211,400	\$ 76,720	\$ 212,500	\$ 7,300	\$ 13,900	\$ 21,000	

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

**Construction Fund (Capital Projects)**  
**FY24/25**

Project Cost Estimate	Budget 23/24	Proposed Budget 24/25	INFORMATIONAL & PLANNING									
			25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	
ITEM												
2012 Bond	\$ 302,293	\$ 302,016	\$ 302,475	\$ 301,671	\$ 301,604	\$ -	\$ -	\$ -				
2017 Bond	\$ 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	\$ 1,080,423	\$ -	
2019 Bond (2010 Rebonding)	\$ 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	\$ 404,633	\$ 404,633	
Lagoon Liners \$ 8,000,000			\$ 588,558	\$ 588,558	\$ 588,558	\$ 588,558	\$ 588,558	\$ 588,558	\$ 588,558	\$ 588,558	\$ 588,558	
Elevated Tank Storage \$ 12,000,000			\$ 1,052,107	\$ 1,052,107	\$ 1,052,107	\$ 1,052,107	\$ 1,052,107	\$ 1,052,107	\$ 1,052,107	\$ 1,052,107	\$ 1,052,107	
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	\$ 2,085,952	\$ 2,087,483	\$ 4,135,404	\$ 4,140,129	\$ 4,129,153	\$ 3,831,075	\$ 3,828,051	\$ 3,825,518	\$ 3,825,248	\$ 3,125,721	\$ 2,045,298	

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											
23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	32/33	33/34	
\$ 2,651,452	\$ 2,829,733	\$ 5,258,321	\$ 4,850,929	\$ 4,710,153	\$ 4,042,475	\$ 3,904,771	\$ 4,038,018	\$ 3,832,548	\$ 3,139,621	\$ 2,066,298	



**ARWA Budget comparisons**

Year	O&M Expenses	Operating Capital Outlay	Debt Service 2010 issue	Debt Service 2012 issue	Debt Service 2017 issue	See Note (1) Debt Service 2019 issue	See Note (2) Debt Service 2026 issue	Reserve Policy	Total	Difference	% change	Comments
23/24	\$ 9,676,761	\$ 565,500		\$ 302,293	\$ 1,080,648	\$ 703,011		\$ -	\$ 12,328,213			
24/25	\$ 10,260,503	\$ 742,250		\$ 302,016	\$ 1,079,973	\$ 705,495		\$ -	\$ 13,090,236	\$ 762,024	6%	Reserve Fund is 50% of O&M
25/26	\$ 10,568,318	\$ 1,122,917		\$ 302,475	\$ 1,080,744	\$ 706,888	\$ 2,045,298	\$ -	\$ 15,826,639	\$ 2,736,403	21%	
26/27	\$ 10,885,368	\$ 710,800		\$ 301,671	\$ 1,080,936	\$ 712,224	\$ 2,045,298	\$ -	\$ 15,736,297	\$ (90,342)	-1%	
27/28	\$ 11,211,929	\$ 581,000		\$ 301,604	\$ 1,080,550	\$ 701,702	\$ 2,045,298	\$ -	\$ 15,922,082	\$ 185,785	1%	
28/29	\$ 11,548,287	\$ 211,400		\$ -	\$ 1,080,572	\$ 705,204	\$ 2,045,298	\$ -	\$ 15,590,761	\$ (331,321)	-2%	

Notes:

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

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

Rebuild filters \$ 404,633 replace filters 1-8, end of life - \$5.5M

Lagoon Liner \$ 588,558 regulatory driven by DEQ based on groundwater monitoring program - \$8.0M

Elevated Storage \$ 1,052,107 construction of elevated storage tanks, line in and out of tanks, connections to the Chesdin 42 and 72 water mains at ARWA - \$12,000,000

**ARWA Projected Annual Cost**

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

**Series, and estimated 2026 Series**

	Chesterfield	Colonial Heights	Dinwiddie	Petersburg	Prince George	total
	73.956%	5.255%	3.713%	14.619%	2.458%	100.000%
FY 24/25	\$ 9,442,979	\$ 670,962	\$ 474,047	\$ 1,866,559	\$ 313,842	\$ 12,768,389
FY 25/26	\$ 11,466,241	\$ 814,723	\$ 575,617	\$ 2,266,489	\$ 381,086	\$ 15,504,157
FY 26/27	\$ 11,397,627	\$ 809,848	\$ 572,172	\$ 2,252,927	\$ 378,806	\$ 15,411,380
FY 27/28	\$ 11,538,577	\$ 819,863	\$ 579,248	\$ 2,280,788	\$ 383,490	\$ 15,601,966
FY 28/29	\$ 11,292,364	\$ 802,369	\$ 566,888	\$ 2,232,120	\$ 375,307	\$ 15,269,047

Note: Budget % based on five year average flow consumption (FY17/18 to FY21/22)

Need to include miscellaneous revenue in O&M Expenses to match up rates from revenue page

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

	Chesterfield	Colonial Heights	Dinwiddie	Petersburg	Prince George	total
Capacity	7.870%	5.760%	57.580%	0.000%	28.790%	100.000%
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
FY 27/28	\$ 25,193	\$ 18,439	\$ 184,323	\$ -	\$ 92,161	\$ 320,116
FY 28/29	\$ 25,319	\$ 18,531	\$ 185,243	\$ -	\$ 92,622	\$ 321,714

**5 year projections - \$/year**

	Chesterfield	Colonial Heights	Dinwiddie	Petersburg	Prince George	TOTAL
FY 23/24	\$ 9,468,309	\$ 689,501	\$ 659,366	\$ 1,866,559	\$ 406,502	\$ 13,090,236
FY 24/25	\$ 11,491,621	\$ 833,298	\$ 761,302	\$ 2,266,489	\$ 473,929	\$ 15,826,639
FY 25/26	\$ 11,423,198	\$ 828,563	\$ 759,259	\$ 2,252,927	\$ 472,349	\$ 15,736,297
FY 26/27	\$ 11,563,770	\$ 838,302	\$ 763,571	\$ 2,280,788	\$ 475,652	\$ 15,922,082
FY 27/28	\$ 11,317,683	\$ 820,899	\$ 752,131	\$ 2,232,120	\$ 467,929	\$ 15,590,761

**5 year projections - \$/1000 gallons**

	Chesterfield	Colonial Heights	Dinwiddie	Petersburg	Prince George	Average
Annual consumptions (1000 gallons)						11,629,852
Five year average flows (FY17/18 to FY21/22)	73.956%	5.255%	3.713%	14.619%	2.458%	100.000%
FY 24/25	\$ 1.1008	\$ 1.1282	\$ 1.5271	\$ 1.0979	\$ 1.4220	\$ 1.2552
FY 25/26	\$ 1.3361	\$ 1.3635	\$ 1.7632	\$ 1.3331	\$ 1.6579	\$ 1.4908
FY 26/27	\$ 1.3281	\$ 1.3558	\$ 1.7585	\$ 1.3252	\$ 1.6524	\$ 1.4840
FY 27/28	\$ 1.3445	\$ 1.3717	\$ 1.7684	\$ 1.3415	\$ 1.6639	\$ 1.4980
FY 28/29	\$ 1.3159	\$ 1.3432	\$ 1.7419	\$ 1.3129	\$ 1.6369	\$ 1.4702

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 2025 AND**  
**THE RELATED WHOLESALE WATER RATES**

**WHEREAS**, in the fall and winter of 2023 and 2024 the staff of the Appomattox River Water Authority (the "Authority") developed the Authority's proposed budget and wholesale water rates for Fiscal Year 2025 and has presented the proposed budget and wholesale water rates to the Authority Board at this meeting held on January 18, 2024; and

**WHEREAS**, Virginia Code Section 15.2-5136(G) requires an authority to hold a public hearing on the fixing of any rates, fees and charges following the preliminary approval of such rates, fees and charges.

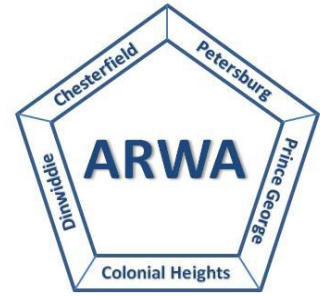
**NOW, THEREFORE, BE IT RESOLVED** that the Board of the Appomattox River Water Authority hereby (a) provides preliminary approval of (i) the proposed Fiscal Year 2025 budget submitted as an attachment to this resolution and (ii) the proposed wholesale water rates for Fiscal Year 2025 as set forth below, (b) schedules a public hearing on the proposed Fiscal Year 2025 budget and wholesale water rates at the Authority's next scheduled Board meeting on March 21, 2024, 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):

**WHOLESALE WATER RATES**  
**(\$/1,000 gallons)**

	FY2025
Chesterfield County	1.1008
City of Colonial Heights	1.1282
Dinwiddie County	1.5271
City of Petersburg	1.0979
Prince George County	1.4220

**BE IT FURTHER RESOLVED** that the Authority Board acknowledges that the above-stated wholesale 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 2025.

# Appomattox River Water Authority



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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: January 18, 2024

SUBJECT: Approval of the Alternative Analysis Update Contract

At the November 16, 2023, meeting staff recommended updating the Alternative Analysis for the raw water supply for Lake Chesdin. The Board agreed to move forward with this update.

Staff prepared the appropriate RFP request and posted it on the website. In addition, firms that had shown an interest in the past to provide professional services for this update were also sent a notification. The Authority only received one response from the same engineering firm, Black & Veatch, that performed the initial Alternative Analysis in 2012 that was part of the VWP permit renewal.

A copy of the requested scope is included as Attachment D-1. Black & Veatch's response to the RFP is included as Attachment D-2. As identified in their response, there could be additional tasks assigned if there are additional alternatives identified that require further investigation such as permitting and regulatory meetings. This is similar to the 2012 response.

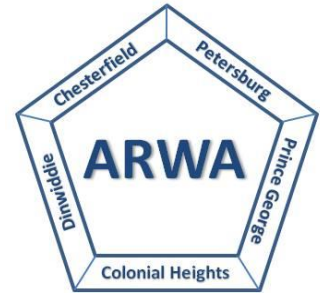
Staff reviewed the cost proposal. Staff reviewed the scope, the cost of this analysis in 2012, the Consumer Price Index for engineering and architectural services, inflation, and the more in-depth detail we have requested for the existing alternatives and recommend Black & Veatch be awarded this contract in the lump sum amount of \$240,000. In the event we do not utilize all the hours budgeted, we would only be billed for the hours used.

This project is being funded out of the VWP permit renewal appropriation, \$1,200,000. This task was identified as part of the VWP renewal.

### Board Action Requested:

Staff requests the Board award the Alternative Analysis update to Black & Veatch in the amount of \$240,000 and authorize the executive director to execute the necessary documents.

# Appomattox River Water Authority



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

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**RFP#: 23-1129**

## **Alternative Analysis Update**

The Appomattox River Water Authority is seeking proposals to update the 2012 Alternative Analysis for the Raw Water Supply. The scope of this project will include:

- Review of the original six alternatives.
- Determine if there are additional alternatives for consideration
- Updating cost estimates for the original six alternatives
- Providing cost estimates for any new alternatives identified
- Determining if each alternative can be permitted
- Reviewing the original evaluation criteria and determining if additional factors need to be considered.
- Performing a new matrix evaluation and ranking alternatives
- Scheduling and attending meetings with regulatory agencies
- Making a formal presentation to the Board of Directors

The proposed schedule is to make a selection by January 18<sup>th</sup> and complete the project within six months thereafter.

Interested respondents should submit three copies of their proposal to the Appomattox River Water Authority, 21300 Chesdin Road, South Chesterfield, VA 23083 by 2:00 p.m. on Friday, December 22, 2023. All questions should be addressed to Robert B. Wilson at (804) 590-1145 ext. 101 and [rwilson@arwava.org](mailto:rwilson@arwava.org).

**Attachment A**

**Scope of Services**

**Alternatives Analysis Update**

**For**

**Appomattox River Water Authority**

**Task 1 –Project Management, Support, and Meetings**

Black & Veatch will communicate with regulatory agencies for guidance and input, including but not limited to the US Army Corps of Engineers and the Virginia Department of Conservation and Recreation's Dam Safety Program. Black & Veatch will conduct formal meetings and workshops for collaboration with ARWA staff and to present findings:

1. Kickoff Meeting – The Black & Veatch team conducts a hybrid meeting (video conference/in-person) with ARWA staff to develop preliminary criteria and weighting for analyses.
2. Site Visit – Key Black & Veatch key team members will visit Brasfield Dam, SCWWA, the Lake Chesdin area, and the offsite storage location.
3. Workshop 1 - The Black & Veatch team conducts a hybrid meeting (video conference/in-person) with ARWA staff to review assessment criteria and preliminary results.
4. Workshop 2 - The Black & Veatch team conducts a hybrid meeting (video conference/in-person) with ARWA staff to present scoring matrix and draft technical memorandum
5. Presentation to the Board – Black & Veatch will assist in the development of a presentation for ARWA's Board. A representative from Black & Veatch will attend the meeting in-person to present and be available for questions.

**Task 2 – Update Existing Alternatives**

Under this task, Black & Veatch will review the original criteria for evaluating alternatives for increasing the safe yield for the Lake Chesdin Reservoir as identified in the Raw Water Supply Alternatives Analysis by Black & Veatch dated September 25, 2012.

Under this task, Black & Veatch will review and update the original six alternatives for increasing the safe yield for the Lake Chesdin Reservoir as identified in the Raw Water Supply Alternatives Analysis by Black & Veatch dated September 25, 2012. The six alternatives to be evaluated are as follows:

1. Brasfield Dam Raise – 18"
2. Brasfield Dam Raise – 24"
3. Brasfield Dam Raise – 36"
4. Offsite Storage Reservoir
5. Relocate SCWWA Effluent
6. Dredge Chesdin Lake Reservoir

For the evaluation, we will:

- Calculate and discuss the impact on ARWA's overall system safe yield using ARWA's provided hydraulic budget model.
- Verify, for the alternatives raising the reservoir level, the dam's safety is not compromised. This will include structural review of the dam and appurtenances for new design conditions.
- Review and update the assessment of the effect of the rise of reservoirs on the future operation of the existing hydropower facility through coordination with Krueger Energy.
- Update conceptual level of probable construction costs for each alternative. These costs will include significant construction elements and appropriate levels of contingency.
- Identify permits that may be required for each additional alternative.
- Identify non-economic factors include system redundancy and reliability, regulatory and permitting issues, community impacts/acceptance, availability of pipeline corridors, constructability, and environmental impacts of construction.
- Through consultation and collaboration with ARWA staff, Black & Veatch will determine additional factors and scoring criteria that need to be considered. Black & Veatch will develop and update the evaluation criteria matrix. Develop evaluation scoring matrix for purposes of comparing/selecting preferred alternatives.

### **Task 3 – Additional Alternatives**

Under this task, Black & Veatch will determine if there are any additional alternatives for consideration for increasing the safe yield for the Lake Chesdin Reservoir. At the time of this scoping, no additional alternatives have been identified or quantified. Black & Veatch will conduct a regional water resource assessment and meet with ARWA staff to collaboratively develop a list of potential additional alternatives for consideration. For this evaluation, we will:

- Develop mapping to better define the alternative.
- Identify permits that might be required for each additional alternative.
- Consider non-economic factors, including system redundancy and reliability, regulatory and permitting issues, community impacts/acceptance, availability of pipeline corridors, constructability, and environmental impacts of construction.

Black & Veatch has included services for only a high-level look at these additional alternatives. Detailed sizing, facility requirements, and cost opinions for potential additional alternatives are not included.

### **Task 4 – Technical Memorandum**

Black & Veatch will develop a technical memorandum summarizing the updated original alternatives analysis, any new alternatives analyzed, and workshop results. The technical memorandum will include the updated evaluation matrix with a ranking of alternatives. Black & Veatch will submit draft for review and comments by Owner. Black & Veatch will incorporate/finalize TM and submit finals in pdf format.

## **Deliverables**

1. Technical memorandum
2. Presentation to the Board

## **Schedule**

This proposal is based on receiving a notice to proceed by mid-January 2024. Once a notice to proceed has been received, Black & Veatch will perform the associated work on the following schedule:

<u>Activity/Milestone</u>	<u>TIME PERIOD</u>
Kickoff Meeting	February 2024
Site Visits	April 2024
Workshop 1	May 2024
Workshop 2	July 2024
Submit Technical Memorandum	August 2024

## **ARWA Responsibilities**

The ARWA will furnish, as required by the work and not at the expense of the Black & Veatch, the following items:

1. Provide information regarding the cost of land or easement purchase.
2. Most recently updated hydraulic budget model.
3. Most recently completed bathymetric survey.
4. All available, including most recently completed sediment analyses from Lake Chesdin Reservoir.
5. All maps, drawings, reports, records, audits, annual reports, and other data that are available in the ARWA files and may be useful in the work involved under this contract.
6. Access to public and private property when required to perform the Black & Veatch 's services.
7. Manage the performance of other consultants under direct contract to ARWA necessary for the Project. (Coordination and sharing of information with other consultants for the purpose of related project issues is included in this scope of services and compensation).

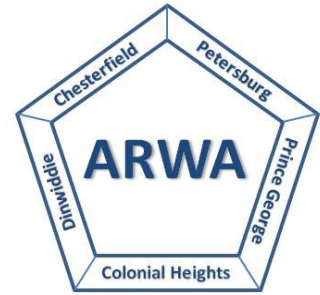
## **Clarifications**

1. Meetings with regulatory agencies will be virtual.
2. Scope, schedule, and fee exclude subcontracted services.

## **Fee**

For the services related to as described above, the Owner agrees to pay the Black & Veatch \$240,000 on a lump sum basis.

# Appomattox River Water Authority



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

## Exhibit E

TO: Appomattox River Water Authority Board of Directors

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

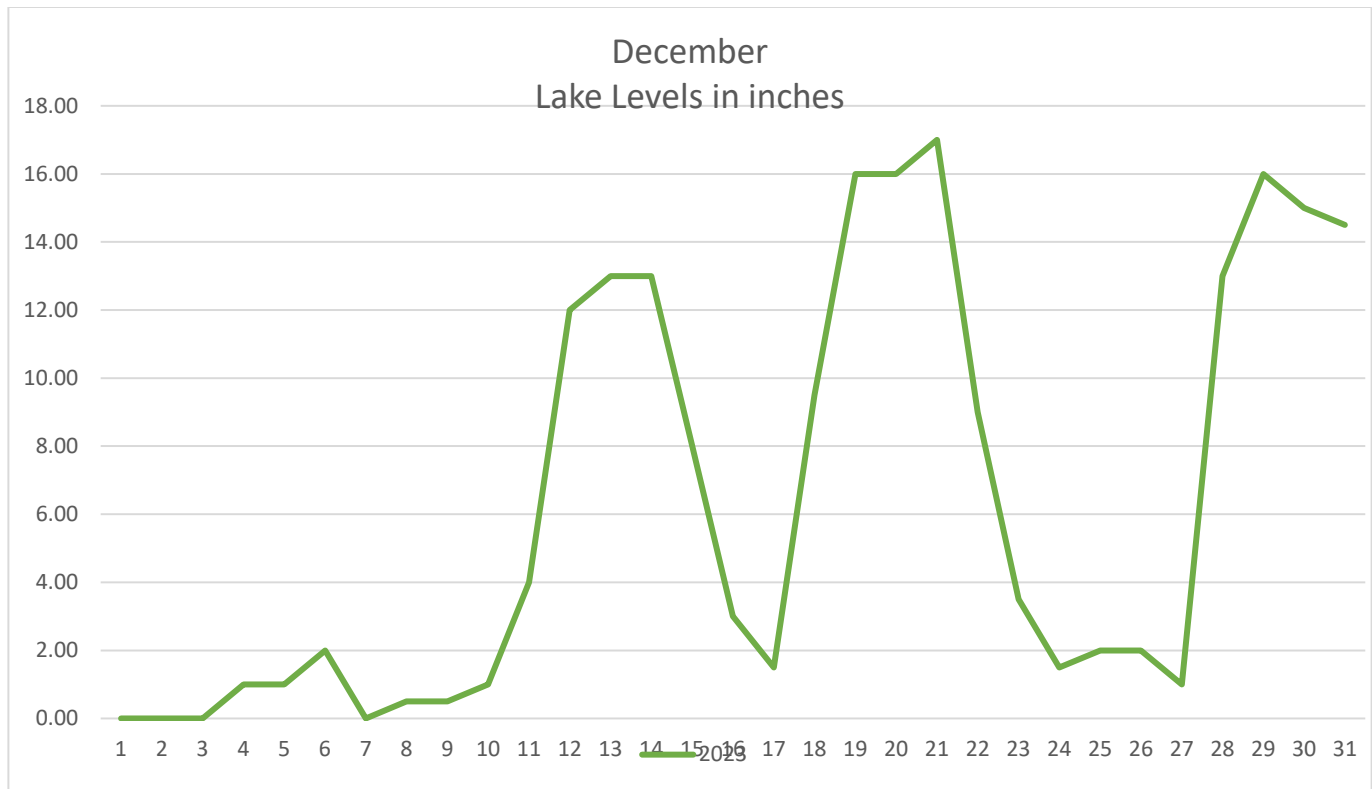
DATE: January 18, 2024

SUBJECT: Status Report

➤ General

- The next meeting is scheduled for March 21, 2024, at the Appomattox River Water Authority.

➤ Lake Level Update



➤ Operations

- Flushed and cleaned flume.
- Cleaned Basins 1 through 6.
- Cleaned flocculators 1 through 4.
- Maintenance on powder lime system and put in service for winter treatment.
- Calibrated filter NTU monitors.
- Filter drop (calibration) tests completed.
- Proficiency testing for operators and assistants for lab.
- Filter floor painting completed in front of filters 17 through 32.
- New assistant operator on A shift.

➤ Maintenance

- P-24 motor installed and put back in service.
- Moved flow from east lagoon to west lagoon – changed valving in distribution box.
- Boats taken out of water and cleaned.
- Training additional mechanics on Miss Utility locating.
- Flocculator #4 sheared a shaft. Contractor assisting with repair.
- P-20 taken out of service and motor sent out for repair.
- Repaired lights in tunnel between basin #3 and #4.



- Poured pad and containment for new fluoride building.
  - Chlorine dioxide feeder #2 – replaced valves and check valves.
  - Filled an open maintenance mechanic/locator position.
- Instrumentation
- Replacing laptops – setup, deploying and decommissioning old laptops.
  - Partitioning servers so each department has a drive and responsibility for their data.
  - Continued cybersecurity training.
- Laboratory
- Monthly eDMR submittals to DEQ for November and December. This is for lagoons.
  - Monthly Compliance Monitoring Data Portal (CMDP – bac-t and chemistry) submitted to VDH.
  - Monthly Water Quality Reports submitted to industries.
  - Providing laboratory training for new operator – A shift.
  - Triannual Audit completed by DCLS for lab certification, passed with one finding. The one finding was to add a chain of custody form to the operations and maintenance manual. The chain of custody is outlined in the manual, but a copy of the form was not included. The chain of custody form is now part of the manual.
- Liquid Lime System
- Poured turndown footer for chemical feed building
  - Completed housekeeping pads for vertical tanks.
  - Poured pads for structural steel platform support and new stairs at basin #6 and #7.
  - Electrician continues to rough in conduit from Rapid Mix to new chemical building.
- Hydrilla
- Scheduling a virtual meeting for the week of January 22<sup>nd</sup>.
  - Evaluating a pilot project to use a barrier to see if it would inhibit hydrilla growth.
- Lead and Copper Rule
- We are forwarding information to members via email as we get it.
  - As a reminder, the service inventory for each member is due to VDH by **October 16, 2024**.
- Elevated Tank Study
- Comments sent to engineer on preliminary layout of tanks.
  - Engineer working on hydraulic analysis for transmission system.
  - Securing geotechnical consultant for soil bearing analysis.

- Inundation Study for waste lagoons
  - DCR has approved inundation study.
  - Emergency Operations Plan (EAP) has been submitted and approved by DCR. Copies of the plan were submitted to the three residents affected – Mr. Dyson, Mr. Radcliffe and Mr. Radcliffe, Sr.
  - Scheduling a tabletop exercise for February. This will be a notification exercise to ensure phone numbers are correct and residents can be notified.
- VPDES renewal for waste lagoons
  - WSP is working on Site Characterization Study which is due by April 1<sup>st</sup>.
- Surplus Materials
  - A list of surplus materials was sent to members. There was no interest in any of the equipment.
- VA Hydro
  - Mr. Gordon has completed the VA Hydro spreadsheet. This spreadsheet includes information for each member.
- River Flow Report
  - Calendar year 2023 river flow report completed and submitted to DEQ.

**EXHIBIT F**

**Appomattox River Water Authority-Balance Sheet**

**For Month Ending December 31, 2023**

**Assets**

**Current Assets**

Petty Cash	\$	400
SunTrust Operating Fund	\$	600,150
SunTrust Replacement Fund	\$	-
<b>Total Unrestricted Cash</b>	<b>\$</b>	<b>600,550</b>

Water Revenue	\$	3,316,033
LGIP-O&M Reserve	\$	6,950,086
LGIP-Revenue Surplus	\$	2,503,917
ERRF (Equipment Repair/Replacement)	\$	2,558,975
Debt Service Reserve	\$	2,145,487
Bond Principal/Interest	\$	676,000
Bond Construction	\$	472
<b>Total Restricted Cash</b>	<b>\$</b>	<b>18,150,970</b>

<b>Total Checking/Savings</b>	<b>\$</b>	<b>18,751,520</b>
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Accounts Receivable	\$	2,889,410
Other Current Assets	\$	59,471
Inventory	\$	907,236

<b>Total Current Assets</b>	<b>\$</b>	<b>22,607,637</b>
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**Fixed Assets**

Right to Use Lease Assets	\$	21,869
Accum amort-right of use lease	\$	(11,841)
Land and Land Rights	\$	1,044,167
Water System	\$	99,933,139
Equipment	\$	1,893,883
Hydro	\$	34,873
Construction in Progress	\$	635,475
Accumulated Amortization	\$	(34,705)
Accumulated Depreciation	\$	(56,760,355)

<b>Total Fixed Assets</b>	<b>\$</b>	<b>46,756,502</b>
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**Other Assets**

Def Outflow-OPEB GLI	\$	20,809
Def Out Res-Post ER Pension Costs	\$	-
Deferred Outflow-OPEB GLI	\$	-
Def Out Res-Net Dif Pension Inv	\$	-
Def Out Res-OPEB Experience	\$	24,843
Def Out Res-OPEB Assumptions	\$	3,182
Def Out Res-OPEB Subsequent	\$	13,173

<b>Total Other Assets</b>	<b>\$</b>	<b>62,007</b>
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<b>Total Assets</b>	<b>\$</b>	<b>69,426,146</b>
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# Appomattox River Water Authority-Balance Sheet

For Month Ending December 31, 2023

## Liabilities & Equity

### Current Liabilities

Accounts Payable	\$	411,300
Retainage Payable	\$	10,161
Accrued Interest Payable	\$	106,942
Accrued Interest-GASB 87	\$	23
Lease Liability-current portion	\$	6,010

### Total Current Liabilities

**\$ 534,436**

### Long Term Liabilities

Def Inf Res-Net Dif Pension Inv	\$	468,320
Def Inf Res-Pen Chg Assumptions	\$	(62,672)
Def Inf Res-Pens Dif Proj/Act E	\$	215,138
Net Pension Liability	\$	(1,738,602)
Def Infl-OPEB Chg of Assumptions	\$	13,925
Deferred Inflow-OPEB GLI	\$	25,976
Deferred Inflow-Expect & Actual	\$	55,359
Bonds Payable-2010	\$	-
Bonds Payable-2012	\$	1,399,000
Bonds Payable-2017	\$	8,702,000
Bonds Payable-2019 Refunding Bond Payment	\$	5,065,000
Bonds Payable-2019 Def Amt on Refunding	\$	(74,959)
Lease Liability-non-current	\$	4,265
Accrued Leave Payable	\$	215,938
Post Employment Benefit	\$	37,888
OPEB Liability-GLI	\$	83,805

### Total Long-Term Liabilities

**\$ 14,410,380**

## Total Liabilities

**\$ 14,944,816**

## Equity

Retained Earnings	\$	1,366,502
Reserve for Water Revenue	\$	16,498,969
Reserve for Operations	\$	-
Reserve for Suplus	\$	-
Reserve for Replacements	\$	2,500,000
Reserve for Bond Interest	\$	106,942
Reserve for Debt Service	\$	2,094,831
Reserve for Bond Principal	\$	-
Reserve for Reserve	\$	-
Fixed Assets, Net of Debt	\$	31,970,278

Net Income \$ (56,192)

### Total Equity

\$ 54,481,330

## Total Liabilities & Equity

**\$ 69,426,146**

\$ -

Appomattox River Water Authority  
YTD Income Statement for the period ending December 31, 2023

Water Rate Center

Revenues and Expenses Summary

Budget	Budget	Actual	YTD Budget	Variance
FY 23/24	Year-to-Date	Year-to-Date	vs. Actual	Percentage

**Operating Budget vs. Actual**

**Revenues**

Board Approved True-Up-Prior FY	\$ -	\$ -	\$ (500,070)	\$ (500,070)	#DIV/0!
Water Sales	\$ 12,318,213	\$ 6,159,106	\$ 7,073,687	\$ 914,581	14.85%
Rent/Misc. Income	\$ 30,000	\$ 15,000	\$ 1,601	\$ (13,399)	-89.33%
<b>Total Operating Revenues</b>	<b>\$ 12,348,213</b>	<b>\$ 6,174,106</b>	<b>\$ 6,575,219</b>	<b>\$ 401,113</b>	<b>6.50%</b>

**Expenses**

Personnel Cost	\$ 3,006,372	\$ 1,503,186	\$ 1,411,621	\$ (91,565)	-6.09%
Contractual/Professional Services	\$ 1,218,289	\$ 611,645	\$ 554,680	\$ (56,965)	-9.31%
Utilities	\$ 953,100	\$ 476,550	\$ 553,021	\$ 76,471	16.05%
Communication/Postal/Freight	\$ 46,500	\$ 23,250	\$ 28,073	\$ 4,823	20.75%
Office/Lab/Janitorial Supplies	\$ 105,000	\$ 52,500	\$ 72,359	\$ 19,859	37.83%
Insurance	\$ 125,000	\$ 125,000	\$ 139,423	\$ 14,423	11.54%
Lease/Rental Equipment	\$ 20,000	\$ 10,000	\$ 6,138	\$ (3,862)	-38.62%
Travel/Training/Dues	\$ 62,500	\$ 31,250	\$ 23,084	\$ (8,166)	-26.13%
Safety/Uniforms	\$ 40,000	\$ 20,000	\$ 10,461	\$ (9,539)	-47.69%
Chemicals	\$ 3,750,000	\$ 1,875,000	\$ 2,180,385	\$ 305,385	16.29%
Repair/Maintenance Parts & Supplies	\$ 350,000	\$ 175,000	\$ 149,792	\$ (25,208)	-14.40%
<b>Total Operating Expenses</b>	<b>\$ 9,676,761</b>	<b>\$ 4,903,381</b>	<b>\$ 5,129,038</b>	<b>\$ 225,657</b>	<b>4.60%</b>
<b>Operating Results Suplus/(Deficit)</b>	<b>\$ 2,671,452</b>	<b>\$ 1,270,726</b>	<b>\$ 1,446,181</b>	<b>\$ 175,456</b>	<b>13.81%</b>

**Replacement Outlay Budget vs. Actual**

Machinery & Motors-Process	\$ 157,500	\$ 157,500	\$ 26,942	\$ (130,558)	-82.89%
Instrumentation	\$ 68,000	\$ 68,000	\$ 39,536	\$ (28,464)	-41.86%
Computer Equipment	\$ 15,000	\$ 15,000	\$ -	\$ (15,000)	-100.00%
Furniture/Fixtures	\$ 30,000	\$ 30,000	\$ 46,809	\$ 16,809	56.03%
Motor Vehicles	\$ -	\$ -	\$ 36,603	\$ 36,603	#DIV/0!
Maintenance Equipment	\$ 115,000	\$ 115,000	\$ 123,466	\$ 8,466	7.36%
Valve Replacement	\$ -	\$ -	\$ 72,118	\$ 72,118	#DIV/0!
Roof Repairs	\$ -	\$ -	\$ 35,653	\$ 35,653	#DIV/0!
Elevated Tank-Engineering Report	\$ 200,000	\$ 200,000	\$ 33,235	\$ (166,766)	-83.38%
<b>Total Capital Outlay</b>	<b>\$ 585,500</b>	<b>\$ 585,500</b>	<b>\$ 414,362</b>	<b>\$ (171,138)</b>	<b>-29.23%</b>

**Construction Outlay Budget vs. Actual**

In-Plant Capital Upgrade	\$ -	\$ -	\$ -	\$ -	#DIV/0!
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**BOD Designated Surplus Fund**

Liquid Lime System	\$ -	\$ -	\$ 966,646	\$ -	#DIV/0!
Repair Material For Pipeline	\$ -	\$ -	\$ 109,291	\$ 109,291	#DIV/0!
Replacement Doors	\$ -	\$ -	\$ -	\$ -	#DIV/0!
VWP Permit	\$ -	\$ -	\$ -	\$ -	#DIV/0!
FlowCam	\$ -	\$ -	\$ 2,868	\$ -	#DIV/0!

**Debt Service Budget vs. Actual**

Interest Income	\$ -	\$ -	\$ 418,843	\$ 418,843	#DIV/0!
Other (Income)	\$ -	\$ -	\$ -	\$ -	#DIV/0!
Sell of Asset	\$ -	\$ -	\$ -	\$ -	#DIV/0!
Interest Expense	\$ 406,952	\$ 203,476	\$ 213,883	\$ 10,407	5.11%
Int on Purchase of US Treas	\$ -	\$ -	\$ (48,832)	\$ (48,832)	#DIV/0!
Bond Issuance Cost	\$ -	\$ -	\$ -	\$ -	#DIV/0!
Principal Payments	\$ 1,679,000	\$ 1,679,000	\$ 263,000	\$ (1,416,000)	-84.34%

**Other Income/Other Expense**

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

**Appomattox River Water Authority  
Executive Review  
Cash And Debt Highlights  
As of December 31, 2023**

<b>Highlights: ARWA Cash Positions</b>		<b>30-Jun-23</b>		<b>31-Dec-23</b>	<b>Change</b>	<b>Explanation</b>
Unrestricted Cash & Investments:						
Petty Cash	\$	400.00	\$	400.00	\$ -	see explanation (a) below
SunTrust Operating Account	\$	455,919.40	\$	600,150.33	\$ 144,230.93	see explanation (b) below
SunTrust Replacement Fund	\$	-	\$	-	\$ -	see explanation (c) below
Restricted Cash and Investments:						
Water Revenue	\$	3,090,283.77	\$	3,316,032.71	\$ 225,748.94	see explanation (d) below
LGIP-O&M Reserve	\$	6,761,467.76	\$	6,950,086.10	\$ 188,618.34	see explanation (e) below
LGIP-Revenue Surplus	\$	2,783,851.20	\$	2,503,916.70	\$ (279,934.50)	see explanation (f) below
ERRF (Equipment Repair/Replacement)	\$	2,558,975.00	\$	2,558,975.00	\$ -	see explanation (g) below
Debt Service Reserve	\$	2,089,495.89	\$	2,145,486.52	\$ 55,990.63	see explanation (h) below
2012 Bond Principal/Interest	\$	619,851.45	\$	348,847.98	\$ (271,003.47)	
2017 Bond Principal/Interest	\$	492,972.60	\$	161,709.45	\$ (331,263.15)	
2019 Bond Principal/Interest	\$	752,898.33	\$	165,442.97	\$ (587,455.36)	
2017 Construction	\$	146,998.32	\$	472.07	\$ (146,526.25)	
<b>Total Cash and Investments</b>	<b>\$</b>	<b>19,753,113.72</b>	<b>\$</b>	<b>18,751,519.83</b>	<b>\$ (1,001,593.89)</b>	

<b>Highlights: ARWA Outstanding Bonds</b>		<b>30-Jun-23</b>		<b>31-Dec-23</b>	<b>Change</b>
2012 Bond	\$	1,399,000.00	\$	1,399,000.00	\$ -
2017 Bond	\$	9,553,000.00	\$	8,702,000.00	\$ (851,000.00)
2019 Bond	\$	5,630,000.00	\$	5,065,000.00	\$ (565,000.00)
2019 Bond-Def Amt on Refund	\$	(74,959.43)	\$	(74,959.43)	\$ -
<b>Total Bonds Outstanding</b>	<b>\$</b>	<b>16,507,040.57</b>	<b>\$</b>	<b>15,091,040.57</b>	<b>\$ (1,416,000.00)</b>

**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.

