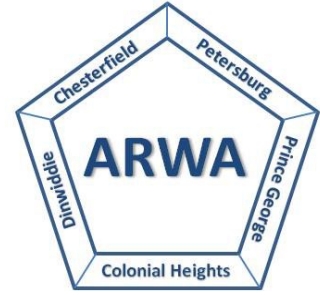


Appomattox
River
Water
Authority



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

APPOMATTOX RIVER WATER AUTHORITY

Board of Directors Meeting

DATE: August 18, 2022

TIME: 2:00 pm

LOCATION: **South Central Wastewater Authority**
Board Room, Administration Building
900 Magazine Road
Petersburg, VA 23803

AGENDA

1. Call to Order/Roll Call
2. Approval of Minutes: Minutes of the Board Meeting held on May 19, 2022 (Exhibit A, Page 2 to 5)
3. Public Comment (Exhibit B, Page 6)
4. Executive Director's Report:
 - Financial Policy – Investment Opportunities (Exhibit C, page 7 to 43)
 - Status Report (Exhibit D, Page 44 to 47)
 - Financials
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

May 19, 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)

ALTERNATES PRESENT:

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

ABSENT:

Joseph Casey, (Chesterfield)
Jeffrey Stoke, (Prince George)
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:

Andrew Barnes, (Petersburg)
Randall Williams, (Petersburg)

The ARWA meeting was called to order by Mr. Smith, Chairman, at 2:13 p.m.

1. Call to Order/Roll Call

The roll was called:	Doug Smith	Present
	Kevin Massengill	Present
	Frank Haltom	Present
	George Hayes	Present

Mr. Smith introduced Randall Williams, Interim Director of Public Works, and Utilities for the City of Petersburg. Mr. Williams stated the City of Petersburg will have a new Director starting on June 20, 2022. His name is Paul Johnson from Henrico County.

2. Approval of Minutes: Minutes of the Regular Meeting of the Board on March 17, 2022

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

RESOLVED, that the Minutes of the Regular Meeting of the Board on March 17, 2022, are hereby approved:

For: 4 Against: 0 Abstain: 0

3. Public Comment

There were no Public Comments.

4. Executive Director’s Report:

• **FY23 Budget Public Hearing**

Mr. Wilson reported on the proposed FY23 Budget, which was presented to the Board on March 17, 2022, He stated there have been no changes and requested the Board approve the budget as presented.

Mr. Smith opened the public comment period. There were no comments, so Mr. Smith closed the public hearing.

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

RESOLVED, that the Board approves the Resolution included with the Board package of the Appomattox River Water Authority approving the Budget for FY 2022/23 and the related water rates:

For: 4 Against: 0 Abstain: 0

Vote:	Doug Smith	Aye
	Kevin Massengill	Aye
	Frank Haltom	Aye
	George Hayes	Aye

Absent During Vote:

None

- **Taste and Odor Issues Week of May 2nd**

Mr. Wilson reported on the Taste and Odor Event. He stated the plant received one call from Colonial Heights on May 2nd. The ARWA operations manager mentioned that Chesterfield County operations called and advised they received a few complaints. Mr. Wilson contacted the plant manager at the Addison-Evans water plant who stated they had received ten complaints. Mr. Wilson stated Chesterfield County received over 80 complaints during the event. The ARWA lab manager took an MIB/Geosmin sample from the lake, and found the problem was MIB. The MIB was at 19 ng/L and taste and odor issues are noticed around 10 ng/L. He stated we are taking additional MIB/Geosmin samples and that we asked Dr. Rosenfeldt, who developed the Lake Chesdin and Plant Management Plan for Taste and Odor, to determine what additional sampling we need to do on the lake to prevent a similar occurrence in the future. Dr. Rosenfeldt will develop a proposal to go through the existing plan and sampling requirements and determine what new criteria and thresholds need to be considered. They have additional algae experts they can bring in to see what else needs to be considered. Mr. Hayes thanked Mr. Wilson for allowing them to participate in Tuesday's meeting. He stated Petersburg sent out a press release, but Chesterfield did not. He further stated to include in the action plan how to address press releases for taste and odor issues, and if the press release should be released first by ARWA and the municipalities follow. Mr. Smith stated that staff could look into the ideas of public information and liked the idea of the initial release coming from ARWA and the others following. Mr. Wilson stated the study would most likely be a six figure study, but we do have funding we could take out of the VWP permit, or operating reserves. He stated that we should have a study proposal by the next Board meeting

- **Status Report**

Mr. Wilson reported on the status report. He showed the porcelain balls that were in the bottom of the Robert's filter. He stated on top of the balls there is 12" of gravel, 12" of sand, and 12" of carbon, and these balls came all the way through the gravel and sand layer to the carbon layer. We brought in the manufacturer for the filters, and K.L. Shane, the contractor for the manufacturer, to see what the repair entailed. Filter #1 needs to be rebuilt at a cost of approximately \$225,000. This can be funded out of the operating reserve or the surplus revenue this year.

Maintenance staff put signs up where the river comes into the lake, where bass boats have been flying through. "Caution Slow Down/Blind Curve" is posted on both sides of the curve.

Mr. Haltom asked the age of the filters, and Mr. Wilson replied that we just regenerated the first eight, and this was the only one that showed this issue. The filters were rebuilt in 1983. Mr. Wilson stated that for FY25 in the Capital Improvement Program we call (review for rewording) to rebuild the first eight, so we will rebuild this one now instead of then. Mr. Hayes stated they replaced the porcelain balls with plastic inserts. Mr. Wilson stated we looked at that, but they indicated that the concrete and everything for ours was in such decent shape that they just recommend putting it back with the porcelain balls.

Mr. Hayes had a question on the Chesapeake Bay Journal article and asked if they are trying to make it a Conowingo dam issue. Mr. Wilson stated that Mr. Gordon put him onto a 1983 report that is specific to Lake Chesdin, where there has always been a phosphorus issue. The Conowingo Dam is on the Susquehanna River. In this case (Conowingo Dam) there is a significant phosphorus and nitrogen issue. Mr. Hayes stated this is a huge issue from a cost standpoint. The lake has never been dredged and they are trying to figure out who must pay this incredibly significant cost. In the case of Lake Chesdin, the sediment and nutrient issues are not as significant.

- **Financials**

Ms. Wilkins reported on the Financials.

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

Mr. Smith stated that at the next Board meeting there would be a performance evaluation for Mr. Wilson.

8. Adjourn

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

Upon a motion by Mr. Haltom and seconded by Mr. Massengill the meeting was adjourned at 2:33 p.m.

MINUTES APPROVED BY:

Frank Haltom
Secretary/Treasurer

RESOLUTION

**OF THE APPOMATTOX RIVER WATER AUTHORITY
APPROVING THE BUDGET FOR FISCAL YEAR 2023
AND SETTING THE RELATED WATER RATES**

WHEREAS, during 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 at the meeting held on March 17, 2022, presented the proposed budget and water rates to the Authority Board; and

WHEREAS, at the March 17, 2022 meeting the Authority Board provided its preliminary approval of the proposed budget and water rates for Fiscal Year 2023 and scheduled a public hearing to be held at its meeting held on May 19, 2022, in accordance with Virginia Code Section 15.2-5136(G); and

WHEREAS, the Authority Board held the public hearing on the proposed Fiscal Year 2023 budget and water rates at its meeting on May 19, 2022; and

WHEREAS, following the public hearing the Authority staff adjusted the proposed budget and water rates in response to comments received from representatives of the Authority's member jurisdictions;

NOW, THEREFORE, BE IT RESOLVED that the Board of the Appomattox River Water Authority hereby approves (a) the Fiscal Year 2023 budget submitted as an attachment to this resolution and (b) the water rates for Fiscal Year 2023 as set forth below:

RATES (cents/1,000 gallons)

	<u>FY2023</u>
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 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.

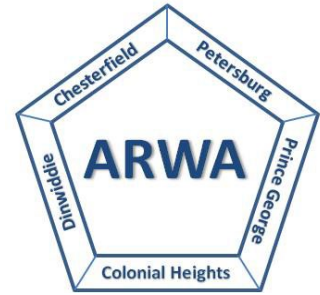
When two or more individuals are present from the same group, it is recommended that the group designate a spokesperson to present its comments to the Board and the designated speaker can ask other members of the group to be recognized by raising their hand or standing. Each spokesperson for a group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



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

Exhibit C

TO: Appomattox River Authority Board of Directors

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

DATE: August 18, 2022

SUBJECT: Financial Policy – Investment of Funds

At the January 20, 2022, meeting, the Board approved the Financial Policies. Paragraph E. of the policy addresses Investments. We asked Davenport to identify investment opportunities for both Authority and Trustee held accounts. These accounts include the debt service reserve, operating reserve and equipment repair and replacement fund (ERRF).

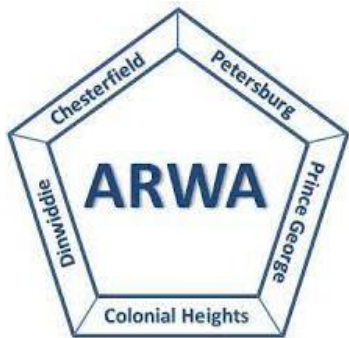
Ted Cole from Davenport will present the investment opportunities they have identified. A copy of his presentation is included as Attachment #1.

Board Action Requested:

Staff requests authorization to proceed with investing the debt service reserve, operating reserve and ERRF.

Discussion Materials | Investment of Funds

Appomattox River Water Authority



August 18, 2022

Contents / Agenda



1 Background | Investment Options & Current Considerations

2 Debt Service Reserve Fund

3 Equipment Repair & Replacement Fund

4 Other Funds Held at Trustee

5 Next Steps

Appendix

A Master Trust Agreement | Article VII | Investments and Security for Deposits

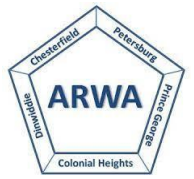
B Financial Policies and Procedures

C Outstanding Debt Details

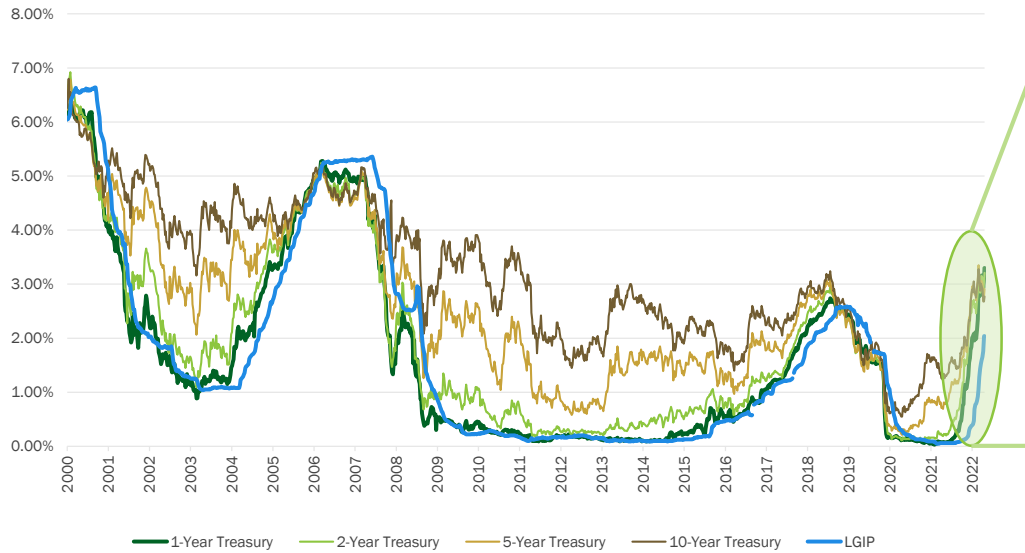


1. Background | Investment Options & Current Considerations

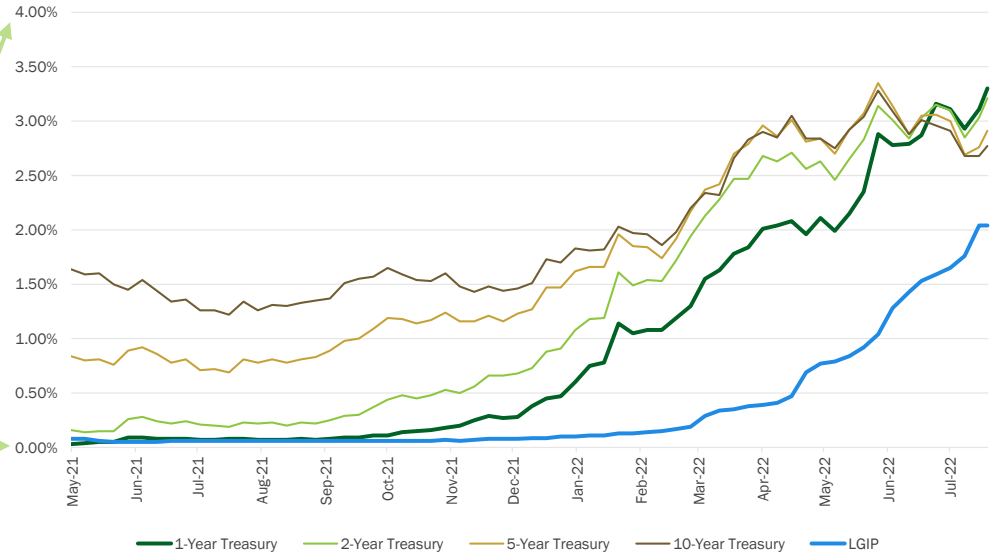
Alternative Investment Options | Historical View



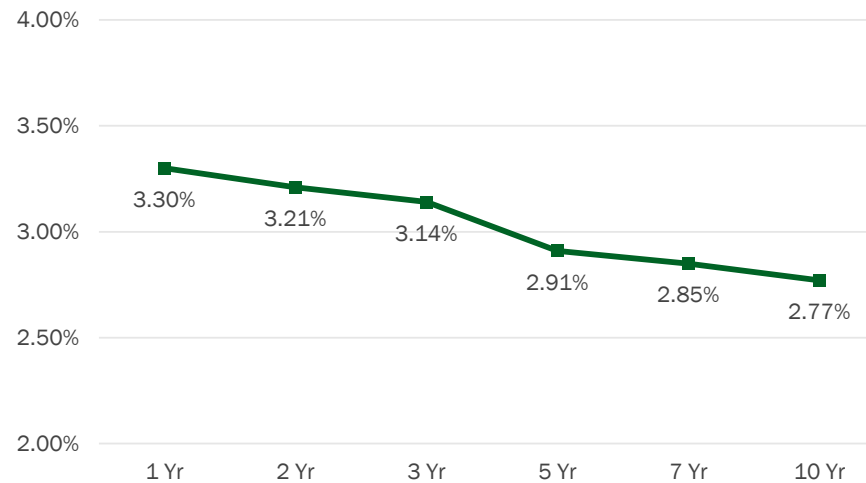
Interest Rates: 2000 - Present



Interest Rates: May 2021 - Present



Treasury Yield Curve
As of 8/8/2022



Background | Investment Options

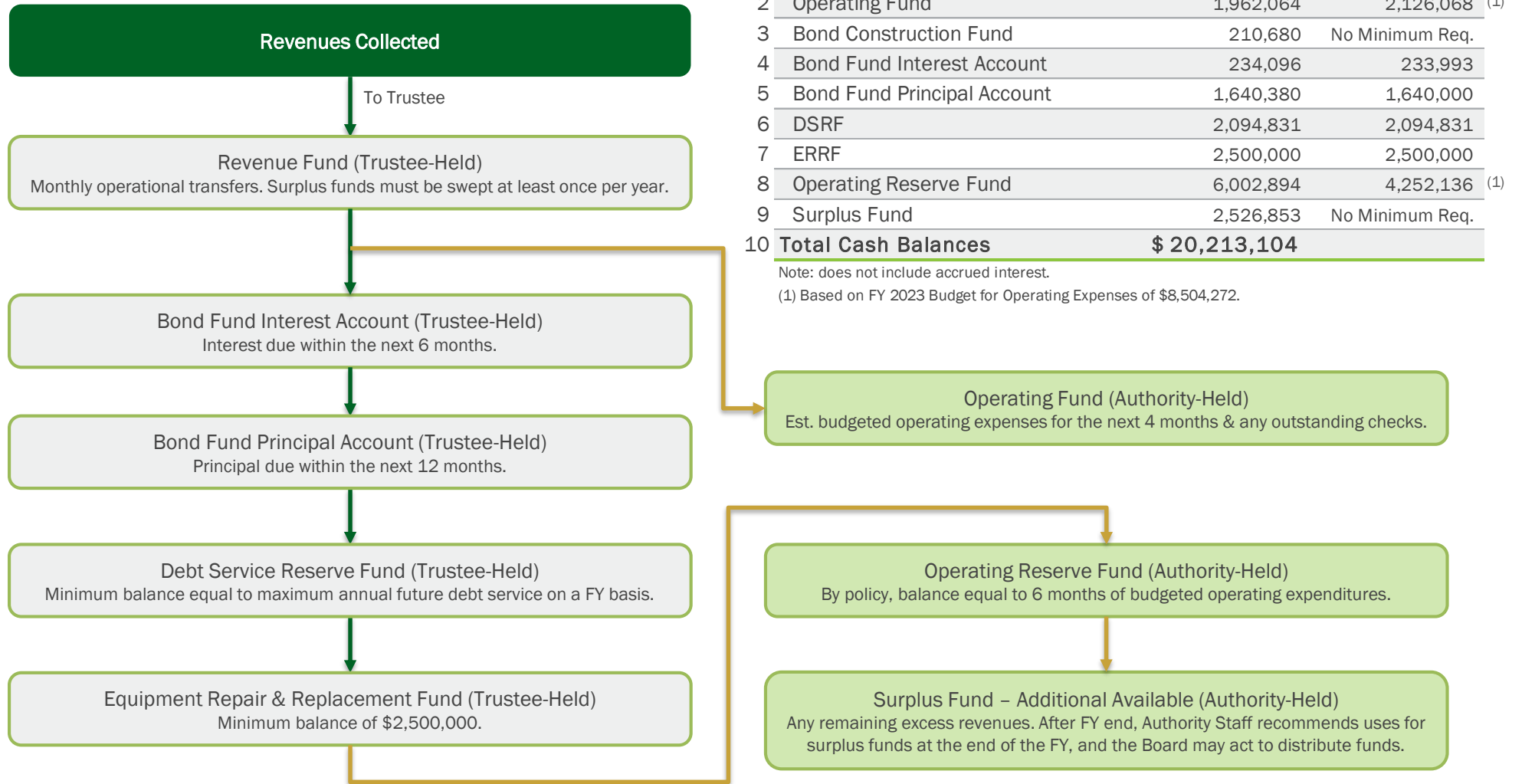
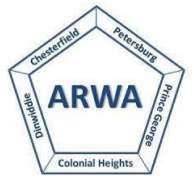


- Article VII of the Master Trust Agreement (see Appendix A) addresses the allowable investment options for funds held with the Trustee.

- Funds held in the Equipment Repair & Replacement Fund (ERRF), Construction Fund, Revenue Fund, and Operating Fund may be invested in any of the vehicles below:
 - U.S. Treasury indebtedness;
 - Commonwealth of Virginia indebtedness;
 - Alternative money market instruments (i.e., LGIP);
 - Any other investment permitted by the Investment of Public Funds Act, Chapter 45 of Title 2.2 of the Code of Virginia.
 - Obligations of Federal Agencies; and
 - Prime Quality Commercial Paper (as established in §2.2-4502 of the Code of Virginia).

- Article VII is slightly more restrictive for monies held in the Bond Fund and Debt Service Reserve Fund (DSRF), allowing for the Authority to direct the Trustee to invest in:
 - U.S. Treasury indebtedness;
 - Commonwealth of Virginia indebtedness;
 - Alternative money market instruments (i.e., LGIP); or
 - Any other investment permitted by the Investment of Public Funds Act, Chapter 45 of Title 2.2 of the Code of Virginia (except Obligations of Federal Agencies and Commercial Paper).

Overview of Funds



Current Considerations



- The Authority may want to consider an investment strategy that could potentially generate additional interest earnings, while maintaining the Authority's desired/required liquidity.

- The funds held at the Trustee are currently invested in a Money Market account (First American Government Obligation Fund) earning 1.92% as of 8/8/2022.

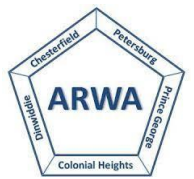
- As it pertains to the DSRF and ERRF, the Authority has the opportunity to select longer-term investments, which would allow the Authority to:
 - Potentially achieve a higher rate of return by investing further out on the yield curve; and
 - Meet its obligations on a timely basis.

- Under the Authority's Master Trust Agreement, any investment securities in the DSRF and ERRF are required to be valued no less than twice per year.
 - If securities (e.g. Treasury Bonds) are purchased between 98%-102% of par, they will be valued at par. Otherwise, they will be marked-to-market.
 - If the marked-to-market value is less than the required balance of the DSRF or ERRF, the Authority would be required to make a deposit for the difference.

- Additionally, the Master Trust Agreement limits any DSRF or ERRF investment to a maximum maturity of ten (10) years from the time of purchase.
 - For the Operating and Bond Funds, the Master Trust Agreement limits investments to mature no later than the date on which the funds will be needed to make payments (for operating expenses or principal/interest payments, respectively).



2. Debt Service Reserve Fund



Debt Service Reserve Fund | Overview

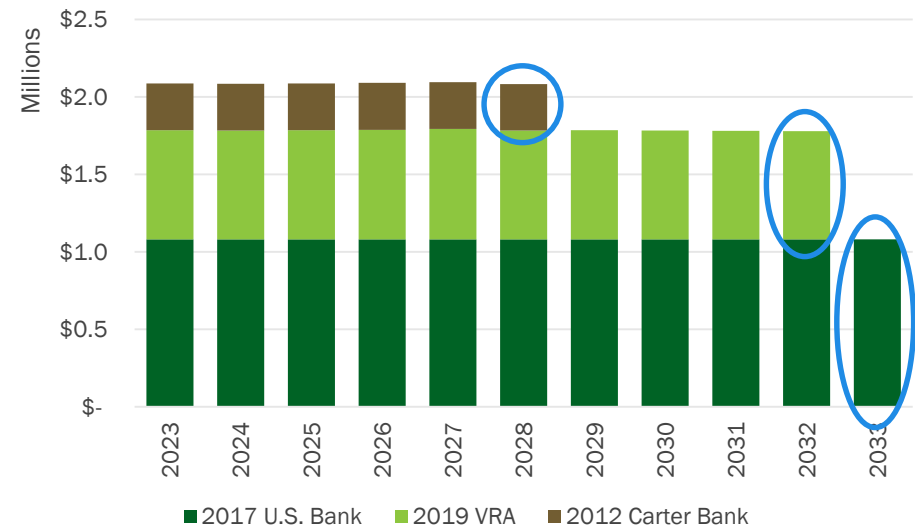
- Per the Definitions in the Master Trust Agreement, the DSRF is required to maintain “an amount equal to the maximum amount payable on account of annual debt service on the Bonds [secured under the Master Trust Agreement], which shall include the principal of (whether at maturity or by mandatory sinking fund redemption) and interest on the Bonds (excluding Bond Anticipation Notes) in any Fiscal Year.”
 - As of 6/30/2022, the required balance was equal to the debt service scheduled to be paid in FY 2027, which is \$2,094,831.

- With each issuance of revenue bonds, the Authority borrows funds to deposit in the DSRF that will satisfy the covenant outlined above.
 - Because the requirement ends when a certain issuance is paid in full (at final maturity or upon prepayment), the amount in the DSRF associated with each issuance can be used for the final debt service payment.

- As a result, the Authority could invest in Treasury securities with a maximum maturity date equal to the lesser of the final maturities of its three existing revenue bond issuances or ten (10) years:
 - 2012 Carter Bank Revenue Bonds – 10/1/2027
 - 2019 VRA Revenue Bonds – 10/1/2031
 - 2017 U.S. Bank Revenue Bonds – 10/1/2032

FY	Principal	Interest	Total
Totals	\$ 18,222,000	\$ 2,517,226	\$ 20,739,226
2023	1,640,000	447,876	2,087,876
2024	1,679,000	406,952	2,085,952
2025	1,723,000	364,483	2,087,483
2026	1,770,000	320,106	2,090,106
2027	1,821,000	273,831	2,094,831
2028	1,858,000	225,855	2,083,855
2029	1,605,000	180,777	1,785,777
2030	1,644,000	138,753	1,782,753
2031	1,685,000	95,220	1,780,220
2032	1,730,000	49,950	1,779,950
2033	1,067,000	13,423	1,080,423

Existing Revenue Bond Debt Service





Debt Service Reserve Fund | Investment Options

- The table below reflects the estimated annual earnings on the portions of the DSRF associated with each of the Authority’s three outstanding revenue bond issuances, as determined by the debt service due on each issuance in FY 2027 (when the Authority’s maximum annual debt service occurs).
 - As noted below, portions of the DSRF may not be eligible for longer-term investments due to their final maturities.
 - U.S. Bank has indicated that an annual fee of \$1,200 would be charged should the DSRF be invested in LGIP.

A	B	C	D	E	F	
	Existing Loan	2012 Carter Bank	2019 VRA	2017 U.S. Bank	Total DSRF Rqmt.	
	Min. Requirement	\$301,671	\$712,224	\$1,080,936	\$2,094,831	
	Final Maturity	10/1/2027	10/1/2031	10/1/2032		
	Years Remaining	5.3	9.3	10.3		
	Avg. Cpn. Remaining	3.100%	2.514%	2.516%		
	Arbitrage Yield	3.100%	N/A (Taxable)	2.516%		
	Current Rate as of 8/8/2022	Estimated Annual Earnings*				
Current Investment	1.92%	\$5,792	\$13,675	\$20,754	\$40,221	
LGIP						
Total Earnings	2.04%	\$6,154	\$14,529	\$22,051	\$42,735	
Less: U.S. Bank Fee		(\$173)	(\$408)	(\$619)	(\$1,200)	
Net Earnings		\$5,981	\$14,121	\$21,432	\$41,535	
Treasuries						
1-Year	3.30%	\$9,955	\$23,503	\$35,671	\$69,129	
2-Year	3.21%	\$9,684	\$22,862	\$34,698	\$67,244	
3-Year	3.14%	\$9,472	\$22,364	\$33,941	\$65,778	
5-Year	2.91%	\$8,779	\$20,726	\$31,455	\$60,960	
7-Year	2.85%	N/A	\$20,298	\$30,807	\$51,105	
10-Year	2.77%	N/A	N/A	\$29,942	\$29,942	
		Estimated Annual Earnings if Invested in Treasuries to Maximum Final Maturity				\$59,019

*Estimated annual earnings subject to change based upon actual purchase price and terms of investments.



2. Equipment Repair & Replacement Fund

Equipment Repair & Replacement Fund | Overview



- As of 6/30/2022, the balance in the ERRF was equal to the required balance, which is \$2,500,000.

- Per the Section 609 of the Master Trust Agreement and the Authority’s updated Financial Policies and Procedures, the ERRF is to be used in the following order of priority:
 - To pay Operating Expenses if the Operating Fund is insufficient;
 - To make transfers to the Bond Fund as needed to pay debt service;
 - To make transfers to the DSRF to restore its minimum balance; and
 - To pay reasonable and necessary expenses with respect to the system for major repairs and replacements, system reconstruction or the construction of additions to, or extensions of, the system.

- Although the Master Trust Agreement authorizes a wider range of uses, the Authority intends to reserve the ERRF to address catastrophic events.
 - If funds are used for such events, the Authority’s Financial Policies and Procedures require that the balance be restored to \$2,500,000 over a period of not more than five years.
 - Because the ERRF is only intended to be used in cases of emergency, the Authority would likely desire a certain level of liquidity be maintained.

Equipment Repair & Replacement Fund | Investment Options



- The table below reflects the estimated annual earnings on the full or partial balances of the ERRF.
 - The Authority could consider investing a portion of the ERRF in Treasury securities with a “laddered” approach while maintaining liquidity in the remaining portion with LGIP or another money market instrument.
 - U.S. Bank has indicated that an annual fee of \$1,200 would be charged should the ERRF be invested in LGIP.
 - The ERRF is required to maintain a minimum balance of \$2.5 Million.

Investment Type	Current Rate as of 8/8/2022	Estimated Annual Earnings Based on \$ Amount Invested			
		\$250,000	\$500,000	\$1,000,000	\$2,500,000
Current Investment	1.92%	\$4,800	\$9,600	\$19,200	\$48,000
LGIP					
Total Earnings	2.04%	\$5,100	\$10,200	\$20,400	\$51,000
Less: U.S. Bank Fee		(\$1,200)	(\$1,200)	(\$1,200)	(\$1,200)
Net Earnings		\$3,900	\$9,000	\$19,200	\$49,800
Treasuries					
1-Year	3.30%	\$8,250	\$16,500	\$33,000	\$82,500
2-Year	3.21%	\$8,025	\$16,050	\$32,100	\$80,250
3-Year	3.14%	\$7,850	\$15,700	\$31,400	\$78,500
5-Year	2.91%	\$7,275	\$14,550	\$29,100	\$72,750
7-Year	2.85%	\$7,125	\$14,250	\$28,500	\$71,250
10-Year	2.77%	\$6,925	\$13,850	\$27,700	\$69,250

*Estimated annual earnings subject to change based upon actual purchase price and terms of investments.



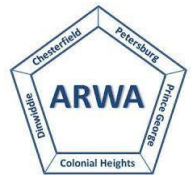
3. Other Funds Held at Trustee

Other Funds Held at Trustee | Overview



- While the purposes of the DSRF and ERRF are better suited for longer-term investments, the remaining Funds held at the Trustee are restricted (by the Master Trust Agreement) to shorter investment horizons (i.e., 12 months or less) and require more liquidity.
 - **Revenue Fund (\$3,041,306 as of 6/30/2022)** – balances deposited here are typically transferred out within 12 months or less.
 - Though it accumulates revenues as they are paid on a quarterly basis, the Authority also makes monthly transfers out of this Fund to ensure the Operating Fund is sufficiently supported.
 - Any surplus monies not used during a fiscal year are swept out to Authority-held accounts at least once per year.
 - **Operating Fund (\$1,962,064 as of 6/30/2022)** – balances deposited here are typically used within a 4-month timeframe.
 - This Fund is used to pay for operational expenditures and is replenished monthly from the Revenue Fund on an as-needed basis to have sufficient funds to pay for the following 4 months' expenditures.
 - **Bond Fund (\$1,874,476 as of 6/30/2022)** – balances deposited here are used within a 6 to 12-month timeframe.
 - Semi-annual interest and annual principal payments are paid from this fund.
 - **Construction Fund (\$210,680 as of 6/30/2022)** – the timeframe for spending of the balances deposited here is dependent on their purpose.
 - The total amount in other Funds held at the Trustee that was available to invest was **\$7,088,526** as of 6/30/2022.

Other Funds Held at Trustee | Investment Options



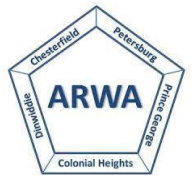
- Like the DSRF and ERRF, the other Funds held by the Trustee are currently invested in a Money Market account (First American Government Obligation Fund) earning 1.92% as of 8/8/2022.
 - The Authority could consider alternative short-term investment vehicles such as LGIP that would allow for the same level of liquidity.
 - U.S. Bank has indicated that an annual fee of \$1,200 would be charged for each account invested in LGIP.

A		B		C		D		E		F		G	
Investment Type	Current Rate as of 8/8/2022	Estimated Annual Earnings Based on Current Balance in Each Fund											
		Revenue Fund \$3,041,306	Operating Fund \$1,962,064	Bond Fund \$1,874,476	Construction Fund \$210,680	Total \$7,088,526							
Current Investment	1.92%	\$58,393	\$37,672	\$35,990	\$4,045	\$136,100							
LGIP													
Total Earnings	2.04%	\$62,043	\$40,026	\$38,239	\$4,298	\$144,606							
Less: U.S. Bank Fee		(\$1,200)	(\$1,200)	(\$1,200)	(\$1,200)	(\$4,800)							
Net Earnings		\$60,843	\$38,826	\$37,039	\$3,098	\$139,806							

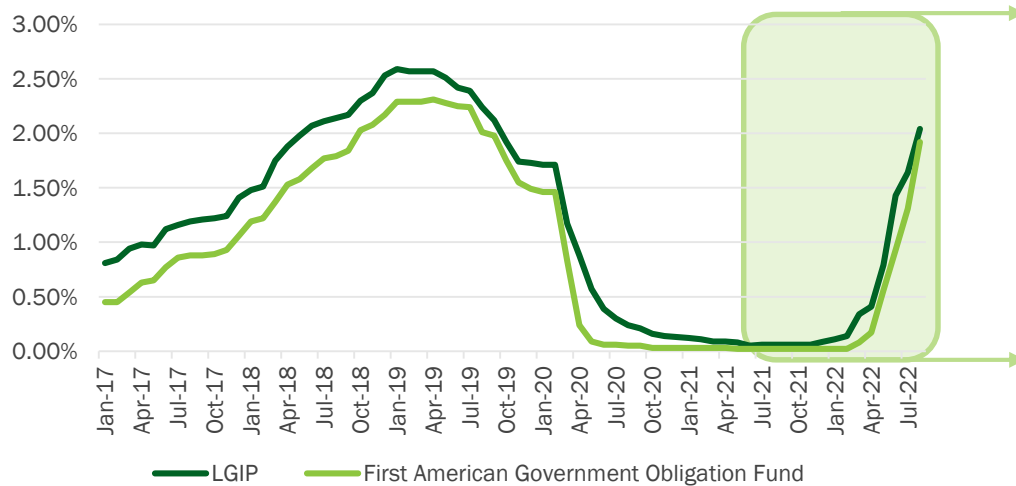
Investment Type	Current Rate as of 8/8/2022	Estimated Annual Earnings Based on \$ Amount Invested				
		\$250,000	\$500,000	\$1,000,000	\$1,500,000	\$2,000,000
Current Investment	1.92%	\$4,800	\$9,600	\$19,200	\$28,800	\$38,400
LGIP						
Total Earnings	2.04%	\$5,100	\$10,200	\$20,400	\$30,600	\$40,800
Less: U.S. Bank Fee		(\$1,200)	(\$1,200)	(\$1,200)	(\$1,200)	(\$1,200)
Net Earnings		\$3,900	\$9,000	\$19,200	\$29,400	\$39,600

*Estimated annual earnings subject to change based upon actual purchase price and terms of investments.

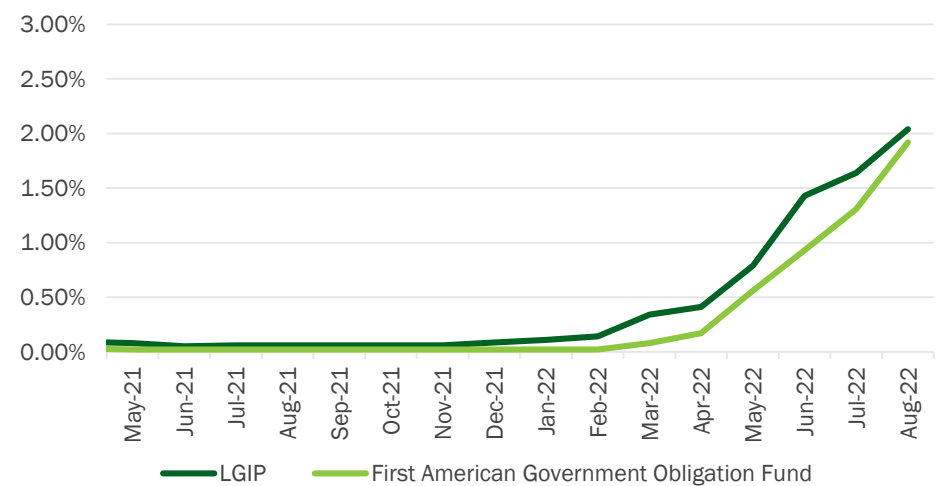
Short-Term Investment Options | Historical View



Short-Term Interest Rates: 2017 - Present



Short-Term Interest Rates: May 2021 - Present



January 2017 to Present

	LGIP	First American Govt. Obl. Fund
Maximum	2.59%	2.31%
Average	1.18%	0.94%
Minimum	0.05%	0.02%
Current	2.04%	1.92%

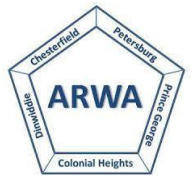
May 2021 to Present

	LGIP	First American Govt. Obl. Fund
Maximum	2.04%	1.92%
Average	0.46%	0.32%
Minimum	0.05%	0.02%
Current	2.04%	1.92%



4. Next Steps

Next Steps



- Evaluate alternative investment options and determine preferred approach/timing for maximizing investment earnings while maintaining the desired liquidity, including, but not limited to, the following considerations:

- Investment Horizons

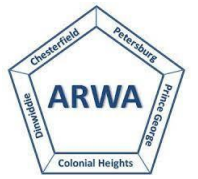
- Completely Liquid Daily
- Short-term 0 to 2 Years
- Medium-term 3 to 5 Years
- Long-term 5 to 10 Years

- Type of Investment

- Money Market (e.g., First American Government Obligation Fund/LGIP)
- Security (e.g. U.S. Treasury)

- Amount to Invest

- By Fund
- By Investment Horizon
- By Type of Investment



Appendix A

Amended and Restated Agreement of Trust

Article VII

Investments and Security for Deposits

Section 612. Bond Anticipation Notes. Notwithstanding any other provisions of this article, Bond Anticipation Notes shall not be secured by moneys in the Bond Fund or the Debt Service Reserve Fund, and any transfer required to be made to such funds pursuant to Sections 607 and 608 upon the issuance of Bonds shall not be required upon the issuance of Bond Anticipation Notes.

Section 613. Acceptance of Other Monies. The Trustee is authorized to accept any monies the Authority may transfer to the Trustee from any reserve, surplus or other funds or accounts maintained by the Authority outside of this Master Trust Agreement. The Trustee shall deposit into any of the funds and accounts established under this Master Trust Agreement and apply such monies for the purposes of such funds or accounts as may be directed by an Authorized Representative of the Authority.

ARTICLE VII

INVESTMENTS AND SECURITY FOR DEPOSITS

Section 701. Bank Accounts. All amounts held by the Authority or the Trustee under this Master Trust Agreement in excess of the amount guaranteed by the Federal Deposit Insurance Corporation or other federal agency shall be continuously held in savings accounts, time deposits, demand deposits or other transaction accounts, or certificates of deposit of qualified public depositories provided that the amounts are secured in the manner required by the Virginia Security for Public Deposits Act, Chapter 44 of Title 2.2 of the Code of Virginia of 1950, as amended, or any successor provision of law; provided, however, that this provision shall not apply to amounts used to purchase investments permitted under Section 702 below.

Section 702. Investment of Moneys in Funds. (a) Any moneys held in the Construction Fund, the Revenue Fund, the Operating Fund and the ERRF may be separately invested and reinvested by the Authority, or if the holder of such fund is the Trustee, by the Trustee as directed by an Authorized Representative of the Authority in the following, so long as such investments are at the time legal investments for public funds of the type to be invested under Virginia law, including without limitation the Investment of Public Funds Act, Chapter 45 of Title 2.2 of the Code of Virginia of 1950, as amended:

(1) bonds, treasury notes and other evidences of indebtedness of the United States of America and securities unconditionally guaranteed as to the timely payment of principal and interest by the United States of America;

(2) obligations of the Federal Home Loan Banks, Federal Farm Credit Banks, Federal Intermediate Credit Banks and Federal Banks for Cooperatives;

(3) bonds, notes and other evidences of indebtedness of the Commonwealth of Virginia and securities unconditionally guaranteed as to the timely payment of principal and interest by the Commonwealth of Virginia;

(4) commercial paper with a maturity of 270 days or less that complies with the requirements of Section 2.2-4502 of the Code of Virginia of 1950, as amended;

(5) investments pursuant to the Local Government Investment Pool Act, Chapter 46 of Title 2.2 of the Code of Virginia of 1950, as amended;

(6) investments pursuant to the Government Non-Arbitrage Investment Act, Chapter 47 of Title 2.2 of the Code of Virginia of 1950, as amended; and

(7) such other investment as may be permitted for public funds of the type to be invested under Virginia law, including without limitation the Investment of Public Funds Act, Chapter 45 of Title 2.2 of the Code of Virginia of 1950, as amended; provided at the time of purchase the investment is rated in one of the two highest debt rating categories by at least one of the nationally-recognized rating agencies.

(b) Any amounts held in the Bond Fund or the Debt Service Reserve Fund shall be separately invested and reinvested by the Trustee as directed by an Authorized Representative of the Authority in investments described in subsection (a)(1), (3), (5), (6) and (7) of this section so long as such investments are authorized for investment of public sinking funds by Section 2.2-4500 of the Code of Virginia of 1950, as amended, or any other provision of Virginia law.

(c) Any investments described in subsection (a)(1), (2) and (3) of this section may be purchased by the Authority or the Trustee pursuant to a repurchase agreement with any bank, including an affiliate of the Trustee, within or without the Commonwealth of Virginia having a combined capital, surplus and undivided profits of not less than \$50,000,000 and acceptable to the Authority or the Trustee, as the case may be, provided that the obligation of the bank to repurchase is within 12 months at the date the investment is purchased. Such repurchase agreement shall be considered a purchase of such securities even if title to and/or possession of such securities is not transferred to the Authority or the Trustee, as the case may be, so long as (i) the repurchase obligation of the bank is collateralized by the securities themselves, (ii) such investments have on the date of the repurchase agreement a fair market value equal to at least 100% of the amount of the repurchase obligation of the bank, including principal and interest, (iii) such securities are held by a third party as agent for the benefit of the Trustee as fiduciary for the holders of the Bonds and not as agent for the bank serving as Trustee in its commercial capacity or any other party and are segregated from securities owned generally by such third party, and (iv) a perfected security interest in such securities is created for the benefit of the holders of the Bonds under the Uniform Commercial Code of Virginia or book entry procedures prescribed at 31 C.F.R. 306.1 et seq. or 31 C.F.R. 350.0 et seq. In addition, investments in a money market or other fund, investments of which fund are exclusively in obligations or securities described in subsection (a)(1), (2) and (3) of this section, shall be considered investments in obligations described in subsection (a)(1), (2) and (3) of this section.

(d) Any such investments shall be held by or under the control of the Authority or the Trustee, as the case may be, and while so held shall be deemed a part of the fund in which such moneys were originally held. The interest accruing thereon and any profit realized therefrom shall be credited to such fund, and any loss resulting from such investments shall be charged to such fund. The Authority or the Trustee shall sell and reduce to cash a sufficient amount of such investments whenever the cash balance in any fund is insufficient for the purposes thereof.

(e) Investments held in the following funds shall have the following maximum terms to maturity:

(1) Construction Fund - not later than the dates on which such moneys will be needed to pay the Costs of the System;

(2) Revenue Fund - not later than the 25th day of the month in which such moneys shall be transferred pursuant to Section 605;

(3) Operating Fund - not later than the date on which such moneys will be needed to pay Operating Expenses;

(4) Bond Fund - not later than the date on which such moneys will be needed to pay principal of or interest on the Bonds;

(5) Debt Service Reserve Fund - not to exceed ten years from the date of acquisition of the investment; and

(6) ERRF - not to exceed ten years from the date of acquisition of the investment.

(f) For purposes of subsection (e) investments shall be considered as maturing on the date on which they are redeemable without penalty at the option of the holder or the date on which the Authority or the Trustee may require their repurchase pursuant to a repurchase agreement.

Section 703. Valuation of Investments. In computing the amount in any fund created by this Master Trust Agreement, the Trustee shall value investments on deposit in the fund at cost or the market value thereof, whichever is lower, exclusive of unpaid accrued interest, except for investments in the Debt Service Reserve Fund and the ERRF. The Trustee shall value investments in the Debt Service Reserve Fund and the ERRF at par, exclusive of unpaid accrued interest; provided, however, that any investment purchased at a price of less than 98% of par or in excess of 102% of par shall be valued at its market value, exclusive of unpaid accrued interest. The Trustee shall make such valuations semiannually and at such other times as the Authority may reasonably request.

Section 704. Investments Made By Trustee. The Trustee may make investments permitted by Section 702 through its own bond department.

ARTICLE VIII

PARTICULAR COVENANTS

Section 801. Payment of Bonds; Limited Obligations. The Authority shall promptly pay when due the principal of (whether at maturity or call for redemption or otherwise) and premium, if any, and interest on the Bonds at the places, on the dates and in the manner provided herein and in the Bonds according to the true intent and meaning thereof; provided, however, that such obligations are payable solely from the net revenues of the Authority and other funds pledged thereto, and the claim for such principal and premium, if any, and interest shall be a valid claim



Appendix B

Financial Policies and Procedures

Financial Policies and Procedures
Appomattox River Water Authority
Effective Date: January 20, 2022

A. 1986 Agreement of Trust

The Appomattox River Water Authority (ARWA) is governed by the 1986 Agreement of Trust as amended and restated in January 2022 (Trust Agreement). The Trust Agreement established five funds to be applied as described below:

- **Revenue Fund.** This is the fund where all revenue from billing the five participating jurisdictions is deposited. It is held by U.S. Bank as Trustee (Trustee). Participating jurisdictions are billed on a quarterly basis—9/30 (payment due 10/25), 12/31 (due 1/25), 3/31 (due 4/25), and 6/30 (due 7/25). Currently, on a monthly basis, the Trustee makes deposits to the other four funds in the order described below and illustrated in the chart attached as Annex 1. ARWA (acting through the business manager) normally directs the Trustee through each step of the process.
- **Operating Fund.** This is the fund that ARWA uses to pay all the expenses for operating and maintenance including Operating Capital Outlay Expenses (Operating Expenses). This fund is held by ARWA. On a monthly basis the business manager advises the Trustee of the upcoming Operating Expenses for the next four months. The Trustee transfers from the Revenue Fund to the Operating Fund the amount necessary, less any money already on deposit, to pay any outstanding checks plus the next four months of Operating Expenses based on the current ARWA annual budget. ARWA then processes checks on the Operating Fund for payment of Operating Expenses. The reason for the four months amount of Operating Expenses is that participating jurisdictions are billed quarterly and have until the 25th of the following month to pay their invoice, which works out to four months.
- **Bond Fund.** This is the fund for the principal and interest payments for each fiscal year on ARWA's bond. This fund is held by the Trustee. Once the Trustee has transferred sufficient money to ARWA to fully fund the Operating Fund, the Trustee then transfers money to the Interest Account of the Bond Fund to make the next six months of interest payments and to the Principal Account of the Bond Fund enough to make the next 12 months of principal payments. The Trust Agreement is designed to accommodate ideally fixed rate bonds that pay interest semiannually and principal once a year. The Trustee applies the balances in the Interest Account and Principal Account to make the debt service payments on each bond when due.

- **Debt Service Reserve Fund.** The Debt Service Reserve Fund is held by the Trustee and is designed to maintain a minimum balance of the maximum annual debt service on all of the outstanding bonds. If there is ever a deficiency in the Bond Fund to pay debt service on the bonds and the deficiency is not covered by amount in the Operating Reserve Fund, the Surplus Fund and the ERRF (as described below), the Trustee will apply the Debt Service Reserve Fund to the extent necessary to cover the deficiency. Each month after the Trustee makes the required transfers from the Revenue Fund to the Operating Fund and the Bond Fund, the Trustee will then transfer the amount, if any, necessary to restore the Debt Service Reserve Fund to its minimum balance.
- **Equipment Repair and Replacement Fund (ERRF).** The ERRF is held by the Trustee. The ERRF is to be used in the following order of priority:
 - To pay Operating Expenses if the Operating Fund is insufficient.
 - To make transfers to the Bond Fund as needed to pay debt service.
 - To make transfers to the Debt Service Reserve Fund to restore its minimum balance.
 - To pay reasonable and necessary expenses with respect to the System for major repairs and replacements, System reconstruction or the construction of additions to, or extensions of, the System.

Although the Trust Agreement authorizes a wider range of uses, ARWA intends to reserve the ERRF to address catastrophic events. After the Trustee makes the required transfers from the Revenue Fund to the Operating Fund, Bond Fund and Debt Service Reserve Fund, it will then transfer from the Revenue Fund to the ERRF the amount, if any, necessary to restore the balance in the ERRF to \$2,500,000 over a period of not more than five years.

The Trust Agreement provides that, not less frequently than annually, any amount in the Revenue Fund in excess of \$100,000 be transferred to ARWA; provided that all of the required transfers to the Operating Fund, the Bond Fund, the Debt Service Reserve Fund and the ERRF have been made as of the date of the transfer. ARWA intends to request the Trustee to make the transfer within 30 days after ARWA's audited financials have been presented to and accepted by the ARWA Board. The Trust Indenture permits ARWA to apply the transferred funds for any of several listed purposes, including to pay the cost of System improvements or extensions and for any other lawful purpose permitted by the Virginia Water and Waste Authorities Act and the Trust Indenture. ARWA intends to deposit the transferred funds into the below-described ARWA reserves and apply them as set forth below.

B. ARWA Reserves

In addition to the five funds required in the Trust Agreement, ARWA maintains two reserve funds:

- **Operating Reserve Fund.** The Operating Reserve Fund is intended to be ARWA’s first source of funding to pay any Operating Expenses and debt service on ARWA’s bonds in the event current revenues from the participating jurisdictions is insufficient. The Operating Reserve Fund may be eliminated or its purpose changed at any time by the ARWA Board and nothing in these policies is intended to create a pledge of the Operating Reserve Fund to secure ARWA’s bonds.

The minimum balance for the Operating Reserve Fund is six months of Operating Expenses for the current fiscal year. For purposes of the Operating Reserve Fund, the term “Operating Expenses” does not include budgeted Operating Capital Outlay Expenses. If the balance in the Operating Reserve Fund falls below the minimum requirement, the shortfall will be included in the budget for the next fiscal year. The maximum balance in the Operating Reserve Fund is twelve months of Operating Expenses. The difference between the minimum and maximum balances will consist of excess funds swept from the Revenue Fund.

- **Surplus Fund.** The Surplus Fund is a placeholder for all excess funds collected and swept from the Revenue Fund after the audited financials have been presented to and accepted by the ARWA Board. These excess funds are generated from user fees collected from the participating jurisdictions that are not spent in the fiscal year. User fees are non-expansion fees included in the “Base Rate” for operation and maintenance costs under ARWA’s Service Agreements. Therefore, the excess funds in the Surplus Fund are to be designated for non-expansion projects (“Improvements” under the Service Agreements) or a true-up back to the participating jurisdictions. The amount of surplus funds available for each fiscal year is determined by the audit team during the annual audit. After the audit team determines the amount of the surplus, if any, and presents the audit findings to the Board, the Executive Director will make a recommendation to the ARWA Board for the allocation or distribution of the surplus funds. ARWA Board action is required for distribution of funds from the Surplus Fund account except in the case of a shortfall in the Trust Agreement funds and the Operating Reserve Fund to make the required deposits under the Trust Agreement.

C. Monthly Cash Flow

ARWA bills its member jurisdictions on a quarterly basis in arrears based on actual consumption occurring in the prior quarter:

Quarter	First	Second	Third	Fourth
Invoice Date	September 30	December 31	March 31	June 30
Due Date	October 25	January 25	April 25	July 25

Each jurisdiction sends payment to ARWA by the 25th of the following month billed. ARWA, in turn, makes electronic transfers into the Revenue Fund and the amounts in the Revenue Fund are applied as described above.

D. Budget Process

The proposed fiscal year budget for the succeeding fiscal year is discussed with the member jurisdiction utility directors in December of each year. After that presentation, a Budget Narrative is prepared with the proposed budget and the budget is presented to the Board at the January meeting.

The budget is broken down into five categories:

- Operating Expenses (other than Operating Capital Outlay Expenses)
- Operating Capital Outlay Expenses
- Debt Service
- Operating Reserve Fund
- Construction Fund

The Operating Expenses are the proposed expenses to support daily operations and maintenance for the next fiscal year.

The Operating Capital Outlay expenses are large, budgeted projects that either rehabilitate or replace an existing asset and are approved on an annual basis. To meet this criteria, the project must be at least \$5,000. These projects are not “improvement” or “expansion” projects within the meaning of the Service Agreements.

The debt service portion of the budget is broken down by issuance to identify the annual debt service payment. This portion of the budget fills up the Bond Fund for the next fiscal year. In addition, we are also required to maintain an amount at least equal to the maximum annual debt service for all of the outstanding bonds in the Debt Service Reserve Fund. The Debt Service Reserve Fund should remain fully funded and only require minimum adjustments with changes in debt service per set debt service payment schedules. For the final year of an issuance, the debt service reserve for that issuance should make the final payment.

In the event the Operating Reserve Fund is less than six months of budgeted Operating Expenses (less Operating Capital Outlay Expenses), there will be an amount shown in the Operating Reserve Fund section of the budget to increase the Operating Reserve Fund to six months of Operating Expenses. The Operating Reserve Fund should remain fully funded to at least the six-month requirement and not require additional funding annually.

The Construction Fund identifies proposed large projects within the ten year planning window that will most likely require an issuance (debt service) to finance. This section is provided for members for planning purposes. The estimated debt service for these proposed projects is included in future rate estimates for the members to illustrate potential impact to their future water rates. Structurally, the fiscal budget is approved on an annual basis. Once a large project is approved and there is a debt issuance approved by the Board, this cost

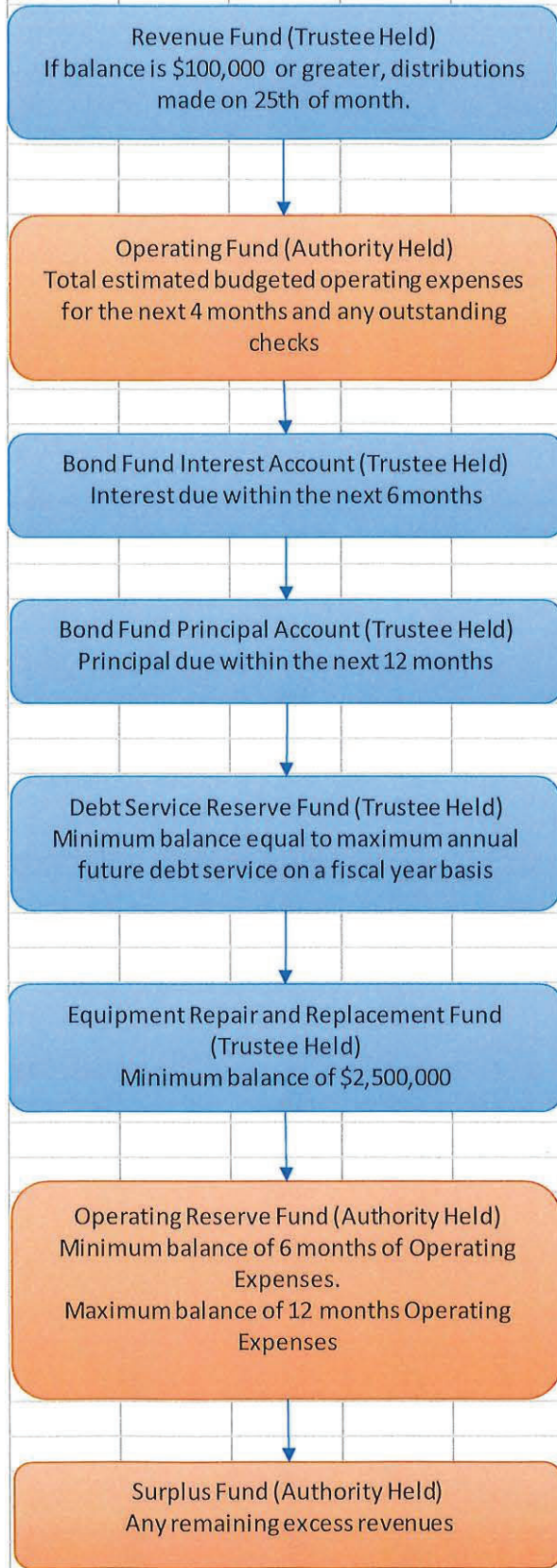
moves to the debt service portion of the budget. In addition, a deposit may need to be made to the Debt Service Reserve Fund to maintain the balance at maximum annual debt service.

E. Investments

The funds held by the Trustee are invested by the Trustee at ARWA's direction in permitted investments under the Trust Agreement. The funds held by the Authority are invested in interest bearing accounts in the Local Government Investment Pool (LGIP) or such other investment option as approved by the Board. Investments are reviewed quarterly with recommendations to the Board for any changes in investment strategy.

F. ARWA Bonds – Post-Issuance Tax Compliance – See Annex 2

Annex 1



Annex 2

ARWA Bonds – Post-Issuance Tax Compliance

General. ARWA has historically debt financed its large improvement and expansion projects with tax-exempt governmental bonds. The Internal Revenue Code (Tax Code) contains numerous requirements to qualify and maintain tax-exempt status for these bonds, many of which are addressed on or before closing with the assistance of ARWA’s counsel and financial advisor. However, the two most important requirements call for on-going post-issuance compliance. Those requirements are that, following the date of issuance of any tax-exempt governmental bonds:

- The issuer will take no deliberate action to cause the bonds to become “private activity bonds” under Section 141 of the Tax Code; and
- The issuer will comply with the arbitrage yield restriction and rebate requirements under Section 148 of the Tax Code.

ARWA’s Executive Director is the officer charged with the responsibility of maintaining the tax-exempt status of ARWA’s bonds.

Avoiding Private Activity Bond Status. The easiest way for a wholesale utility operator such as ARWA to keep its bonds from becoming “private activity bonds” is to avoid any post-issuance “private business use.”

Use of bond proceeds or bond-financed property by a nongovernmental person in furtherance of a trade or business activity is considered private business use.

A “nongovernmental person” is any corporation, partnership or any other entity or person (including a natural person), except for a state or local governmental unit. Note that the federal government is considered a nongovernmental person for purposes of Section 141 of the Tax Code.

For this purpose, any trade or business activity of a natural person is treated as a trade or business, and any activity carried on by a person (including a governmental entity or corporation) other than a natural person is treated as a trade or business.

Private business use can arise in a number of ways. In most cases, private business use results if a nongovernmental person has “special legal entitlements” to use bond-financed property under an arrangement with the issuer.

For ARWA, private business use is likely to arise from the following three types of special legal entitlements:

- Ownership of bond-financed property by a nongovernmental person (including through a post-issuance sale);
- Leases of bond-financed property to a nongovernmental person; and

- Management or service contracts under which a non-governmental person provides services involving all, a portion of, or any function of, bond-financed property, other than contracts for services that are solely incidental to ARWA's primary governmental function or the functions of the bond-financed property (for example, contracts for janitorial, office equipment repair, billing, or similar services).

The Executive Director will maintain an inventory of ARWA's bond-financed property and update it at least annually. The Executive Director will seek the advice of counsel before entering into any arrangement providing to a nongovernmental person a special legal entitlement to use any of the proceeds of ARWA's tax-exempt governmental bonds or the property financed or refinanced with such proceeds. The purpose of seeking such advice is to preserve ARWA's ability to (i) avoid private business use by applying certain provisions of the Tax Code, the Treasury Regulations and other pronouncements of the Internal Revenue Service or (ii) take advantage of the remedial action provisions of the Treasury Regulations, all of which have strict time requirements measured from the date the deliberate action is deemed to have occurred.

Compliance with the Arbitrage Requirements. Section 103 of the Tax Code provides generally that interest on an "arbitrage bond" is not excluded from gross income for federal income tax purposes. Under Section 148 of the Tax Code, arbitrage bond status will result from violation of either (i) the "yield restriction" rule of Section 148(a) or (ii) the arbitrage rebate requirement of Section 148(f).

Under Section 148(a) of the Tax Code, arbitrage bond status generally results from the investment of gross proceeds in higher yielding investments and requires a comparison of the yield on the related issue of bonds to the yield on investments acquired with the gross proceeds of those bonds. Not all gross proceeds are required to be yield-restricted. For example, properly sized debt service reserve funds and gross proceeds eligible for "temporary periods" may be invested without yield restriction, either throughout the term of the bonds or for the duration of the temporary period.

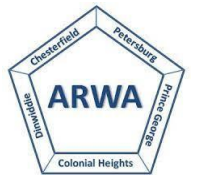
Contemporaneously with the closing of each ARWA bond issue, the Executive Director will work with counsel and ARWA's financial advisor to develop a list of the gross proceeds that are required to be yield-restricted, either from the closing date or starting at a later date. As part of the quarterly review of investments as described in the section above "Investments," the Executive Director will update the list and work with counsel and financial advisor to ensure each of ARWA's bonds is in compliance with the applicable yield restriction requirements.

Under Section 148(f) of the Tax Code, arbitrage bond status also results from a failure of an issuer to "rebate" to the Internal Revenue Service amounts attributable to investments of gross proceeds at a yield in excess of the yield on the related bonds. Even gross proceeds that may be invested at an unrestricted yield are generally subject to the rebate requirement.

Contemporaneously with the closing of each ARWA bond, the Executive Director will collaborate with counsel and the financial advisor to identify any applicable exceptions to the rebate requirement. Two of the more commonly used exceptions are the six-month and two-year spending exceptions, by which an issuer can avoid the rebate requirement on certain gross proceeds by spending them within certain time periods following closing. The Executive Director will take

reasonable and appropriate steps to qualify the gross proceeds of ARWA bonds for the applicable exceptions. In addition, the Authority will engage an arbitrage rebate calculation service as required to calculate any rebate amount owed to the Internal Revenue Service.

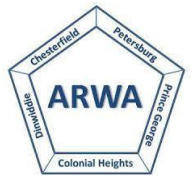
Updates to Post-Issuance Tax Compliance Policy. Contemporaneously with the closing of each issue of ARWA bonds, the Executive Director will review the post-issuance tax compliance policy and work with counsel and the financial advisor to update it to address changes in applicable law or ARWA's circumstances and to cover any new type of tax-exempt or tax-advantaged bonds that ARWA may issue.



Appendix C

Outstanding Debt Details

Outstanding Debt Details



\$3,623,000
Water Revenue Bond, Series 2012 (Carter Bank & Trust)

FY	Coupon	Principal	Interest	Total
Totals		\$ 1,654,000	\$ 158,379	\$ 1,812,379
2023	3.100%	255,000	47,322	302,322
2024	3.100%	263,000	39,293	302,293
2025	3.100%	271,000	31,016	302,016
2026	3.100%	280,000	22,475	302,475
2027	3.100%	288,000	13,671	301,671
2028	3.100%	297,000	4,604	301,604
2029				
2030				
2031				
2032				
2033				

Dated Date: 5/30/2012 Next Call: Whole/Part, Any Time, No Penalty
 Purpose: Repair & Maintenance Project Insurance: None
 Coupon Dates: 4/1, 10/1 Maturity Date: 10/1/2027
 Source: Closing Memo

\$6,820,000
Taxable Water Revenue Refunding Bond, Series 2019 (VRA)

FY	Coupon	Principal	Interest	Total
Totals		\$ 6,185,000	\$ 856,506	\$ 7,041,506
2023	2.060%	555,000	149,760	704,760
2024	2.136%	565,000	138,011	703,011
2025	2.236%	580,000	125,495	705,495
2026	2.395%	595,000	111,888	706,888
2027	2.452%	615,000	97,224	712,224
2028	2.575%	620,000	81,702	701,702
2029	2.661%	640,000	65,204	705,204
2030	2.726%	655,000	47,762	702,762
2031	2.805%	670,000	29,439	699,439
2032	2.905%	690,000	10,021	700,021
2033				

Dated Date: 11/20/2019 Next Call: 11/1/2029
 Purpose: Refunding of 2010 VRA Bonds Insurance: None
 Coupon Dates: 4/1, 10/1 Maturity Date: 10/1/2031
 Source: Closing Memo

\$13,500,000
Water Revenue Bond, Series 2017 (U.S. Bank)

FY	Coupon	Principal	Interest	Total
Totals		\$ 10,383,000	\$ 1,502,341	\$ 11,885,341
2023	2.516%	830,000	250,795	1,080,795
2024	2.516%	851,000	229,648	1,080,648
2025	2.516%	872,000	207,973	1,079,973
2026	2.516%	895,000	185,744	1,080,744
2027	2.516%	918,000	162,936	1,080,936
2028	2.516%	941,000	139,550	1,080,550
2029	2.516%	965,000	115,572	1,080,572
2030	2.516%	989,000	90,991	1,079,991
2031	2.516%	1,015,000	65,781	1,080,781
2032	2.516%	1,040,000	39,929	1,079,929
2033	2.516%	1,067,000	13,423	1,080,423

Dated Date: 12/21/2017 Next Call: Any Payment Date
 Lesser of 103% & Make Whole
 Purpose: New Money Insurance: None
 Coupon Dates: 4/1, 10/1 Maturity Date: 10/1/2032
 Source: Closing Memo, Ninth Supplemental Agreement of Trust

Municipal Advisor Disclosure



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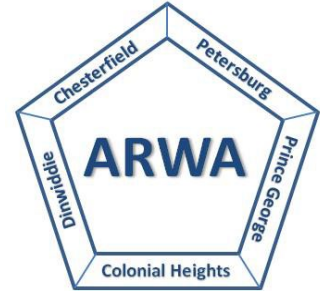
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Appomattox River Water Authority



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

Exhibit D

TO: Appomattox River Authority Board of Directors

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

DATE: August 18, 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, September 22, 2022 at the South Central Wastewater Authority at 2:00 pm.
- Plant Manager, Mike Callen, just had his 30-year anniversary with the Authority.
- The executive director gave a presentation on sediment, nitrogen and phosphorous entering the lake in Dinwiddie County at the Soil and Water Conservation breakfast on August 9th. The ARWA Dinwiddie Board representative was present.

➤ Operations

- Filter #1 repair update:
 - Vacuumed out all the media.
 - Pressure washed the Wheeler filter bottom.
 - Performing engineering analysis on backwash system.
 - Remaining items – clean out well below filter bottom, reinstall filter media, set new stainless steel air wash dissipaters, test and put back in service.
- Completed quarterly basin cleaning and flocculator inspections.
- Continue to look for a Class 1 operator.
- Finished water met all permit requirements for May, June, and July.
- The average daily finished water consumption for May was 29.90 mgd and the total withdrawn from the lake was 1.086 BG. The average daily finished water consumption for June was

37.97 mgd and the total withdrawn was 1.285 BG. The average daily finished water consumption for July was 40.78 mgd and the total withdrawn was 1.412 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 May 1st lake level was 1.32” and the July 31st lake level was -3.12.

➤ Maintenance

- Removed metal garage and carport behind sedimentation basin #6. Created new storage area – slab, new carport and fencing across from maintenance garage. The area behind sedimentation basin #6 will be the location for the new liquid lime system.
- Locating transmission line on Temple Ave for cable installation.
- Completed main gate electrical for gate relocation.
- Working on check valve for P24 in RWPS #2. Issue getting repair parts.
- Working with contractor on filter #1 – window removal.
- Added new radar unit for basin level – pacing equipment.
- Completed fire alarm rehabilitation – now functional.
- Treated lake for algae per Taste and Odor Control Plan.
- Inspected flocculators
- Put up additional caution signs on blind curve on river west of Nooning Creek.

➤ Instrumentation

- Worked with vendor to install Woodward system for power transfer between utility and generator. Tested system for closed transition power transfer.
- PLC’s replaced on clarivacs 1 and 2.

➤ Laboratory

- Met all the VPDES requirements for May, June and July for the outfalls.
- Achieved compliance for WET and TRC parameters in VPDES Permit Part I.A.I. and I.A.2. Annual report was submitted to DEQ.
- Semi Annual River Flow Report for 2022 submitted to VDH as required by VWP No. 01-1719.
- Began VPDES permit renewal process. HRSD onsite and completed compliance sampling for both outfalls. We have not received the final results.
- Successful Q2 compliance sampling for VPDES groundwater monitoring and whole effluent toxicity as well as VDH bacti and chlorine requirements.
- Seasonal reservoir water quality monitoring in process – Lake Study, Depth Study, and algae

- counts.
- Working with Hazen on revising Taste and Odor Plan.
- Phase II In-plant Project
 - Contractor completed this project.
- 30” Transmission Fortification
 - New purchase order cut with Southern Construction to perform this work.
 - Contractor is scheduling work.
- Replace PMT-2
 - Project was completed in May and new transformer is in service.
 - Kept transformer taken out of service for a backup. Authority has three similar transformers in service.
- Liquid Lime System
 - 90% plans have been submitted, reviewed and comments back to engineer.
 - Maintenance staff removed shed and garage where system will be installed.
- Hydrilla
 - First stakeholder’s meeting was held on June 30th. In addition to ARWA staff, Mr. Hayes, and Mr. Nash from Golder there were two representatives from Chesdin Landing that participated. Since that meeting I have found a representative from Dinwiddie County, Julie Catlin. Information was forwarded to Mr. Nash.
 - Mr. Nash provided a similar presentation given to the Board to the participants.
 - We also discussed the issues Lake Gaston is currently addressing where they tried to eradicate hydrilla and ended up with a worse issue with lymgrya.
 - Mr. Hayes provided an overview of what Chesterfield County has accomplished to date with their hydrilla management program.
- Docks

Date	Address	Locality	Construction
5/19/2022	20230 Oak River Court	Chesterfield	New
5/20/2022	13201 Chesdin Landing Drive	Chesterfield	Rehab.
7/13/2022	18360 Whipponock Way	Dinwiddie	Addition

➤ Bathymetric Study – New Project

- As part of the VWP permit the bathymetric study is to be updated by October 2023.
- We will be using Ocean Surveys to complete the fieldwork. Ocean Surveys performed the 2001 and 2011 bathymetric studies.
- Ocean Surveys is scheduled to perform the bathymetric study in April 2023 for \$130K. The bathymetric study is being funded out of the VWP money.