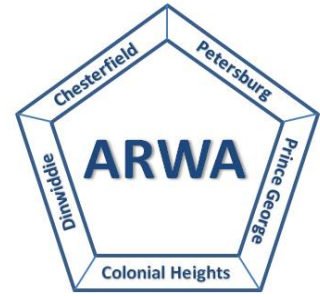


# Appomattox River Water Authority



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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: July 22, 2021

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 May 20, 2021 (Exhibit A, pages 2 to 7)
3. Public Comment (Exhibit B, Page 8)
4. Executive Director's Report:
  - Hydrilla Update (Exhibit C, pages 9 to 22)
  - Financial Policy Review and Update (Exhibit D, pages 23 to 46)
  - 2020 Gold Water Treatment Plant Performance Award for Excellence in Clarification, Filtration, and Backwash (Exhibit E, pages 47 to 49)
  - Status Report (Exhibit F, pages 50 to 52)
  - Transformer Project Update (Exhibit G, page 53)
  - Financials
5. Items from Counsel
6. Closed Session
7. Other items from Board Members/Staff Not on Agenda
8. Adjourn

**BOARD OF DIRECTORS MEETING**  
**Appomattox River Water Authority**  
**May 20, 2021, at 1:00 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)  
Lionel Lyons, (Petersburg)  
Joseph Casey, (Chesterfield)

**ALTERNATES PRESENT:**

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

**ABSENT:**

Percy Ashcraft, (Prince George)  
Todd Flippin, (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:**

Ted Cole (Davenport)  
Ben Wilson, (Davenport)  
Andrew Barnes, (Petersburg) (remote)  
Tangela Innis, (Petersburg) (remote)

The ARWA meeting was called to order following the SCWWA meeting by Mr. Smith, Chairman, at 1:56 p.m.

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

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

Mr. Smith stated Mr. Haltom would be joining the meeting by conference call. The policy adopted by the Authority does require that the Board vote to permit remote participation.

Upon a motion made by Mr. Lyons and seconded by Mr. Massengill the Board voted to approve Mr. Haltom to be present by conference call.

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

**2. Approval of Minutes: Minutes of the Regular Meeting of the Board on March 18, 2021**

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

**RESOLVED, that the Minutes of the Regular Meeting of the Board on March 18, 2021, are hereby approved:**

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

**3. Public Comment**

There were no Public Comments.

**4. FY2021/22 Operating Budget**

Mr. Wilson reported on the FY2021/22 Operating Budget. He stated that the budget was presented to the Board at the January 21, 2021, meeting, and a public hearing was held at the March 18, 2021, meeting. After the public hearing was closed, there were some additional items that needed to be revised on the budget. We changed the name for the "57000 – Equipment Replacement" to "Operating Capital Outlay". Under the operating expenses for the motor vehicles, we had those accumulating over time. These expenses were put in the year they will be purchased. He stated we did the same with equipment. The Brander Bridge Pump Station and Tank was taken out. It is still noted on the budget, but it does not show up in any of the budget forecast calculations. We removed the PAC project from the construction fund. He further stated this budget has a 3% across the board merit increase for employees. After we made the edits to the budget, we circulated those for the members to review. There was a typo that was brought to our attention. On the 2012 debt service we had put \$302,013, and it should have been \$302,103. That correction was made.

He stated that staff requests Board to approve the budget as presented.

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

**RESOLVED, that the Board approves the Resolution included in the Board package of the South Central Wastewater Authority approving the Budget for FY 2021/2022 and the payment schedule:**

**Vote:**

<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>Lionel Lyons</b>	<b>Aye</b>

**Absent During Vote:** **None**

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

- **Financial Policy Review and Update**

Mr. Wilson reported on the Financial Policy Review and Update. Back at the January 21, 2021, meeting we talked about a surplus in the revenue fund. One thing he did not do at that meeting was identify where that surplus came from. The majority of the surplus came from under spending the operating capital outlay, formally called Replacement Fund budget, approximately \$2.3 million and not spending budget funds towards the off-site reservoir, reservoir storage/management, and special studies, approximately \$2.15 million.

Mr. Wilson introduced Mr. Ted Cole and Mr. Ben Wilson, of Davenport. He stated Mr. Cole would go through a presentation of how the money goes through the various accounts in the trust, walk through a cash flow exercise and go over some of staff's recommendations for the surplus in the Revenue Fund. He further stated that today we are only requesting that the Board allow us to open two new bank accounts. Right now, the Operating Reserve is held by the Trustee. That is a financial policy that is internal to the Authority, so we want to move those funds into an account controlled by the Authority. The second account, also controlled by the Authority, is for the Surplus Funds in the Revenue Fund.

Mr. Cole referred to the section "Overview Authority Flow of Funds" of Attachment #2 of the Board package. He stated revenue is collected and sent to the Trustee, who is US Bank. That money goes into a revenue fund and that is where it is held. Every month the Trustee is supposed to be sweeping that money out of that account if it has a balance greater than \$100,000. There may be months that they do not sweep it out because there is not enough money in it given the way the Authority bills, which is quarterly. That is what is supposed to be happening monthly. The revenue fund can go to zero. We and others along the way have categorized that as a minimum level balance. That is not the case. It is only swept if there is a balance greater than \$100,000 but it can go to zero. The first place it is swept is to an Authority held operating fund. What should be swept over there is an amount equal to the next four months of operating expenses. Dr. Casey asked about the monies that are residual laying there and if they are invested in something, and Mr. Cole answered that they have money market accounts that is yielding a basis point. Dr. Casey asked if that applied to all the various reserves that may be on the gray side of the ledger, and Mr. Cole replied yes that is held by the Trustee. He stated with some of them the money is in and out relatively quickly, and others like the Debt Service Reserve Fund, the money might be held there on a longer-term basis. You may be able to direct them to do something better with that investment if it meets the requirements of the indenture.

Mr. Cole referred to page 3 and stated that on the gray side are the Trustee held accounts and on the green side there are essentially three accounts held at the Authority. The Operating Fund that is already established. Staff is recommending the Operating Reserve Fund, which is currently controlled by the Trustee be placed under Authority control and then create an additional Surplus Fund for excess funds swept from the Revenue Fund. The Surplus Fund would be Authority controlled and not Trustee controlled, and it would be where all the excess surplus dollars fall, at which point it would be up to the Authority Board to determine what to do with it.

Mr. Cole referred to page 4 about monthly cash flow. He stated the Authority bills each member quarterly (September 30, December 31, March 31, and June 30). The payment is due the 25<sup>th</sup> day of the following month, and the cash is available to the Authority the following month after that. For example: payment is due on October 25<sup>th</sup>, by the time it gets to the Trustee, it is transferred into the revenue fund, and they go through the process of what they are supposed to do, which is disburse it, another five to seven days are added. This is an idea of how that revenue flows. Debt service, principal, and interest are due on September 25<sup>th</sup>, and there must be enough there to make the payment on October 1<sup>st</sup>. The interest only payment is on April 1<sup>st</sup>, so enough money must be there on March 25<sup>th</sup>. Technically the document says the money needs to be there to make the debt payment on the 25<sup>th</sup> day of the month preceding the payment, but the flow of funds that he walked through requires that it gets pushed into those accounts as revenues are available.

Mr. Cole referred to page 5 about projected monthly flows. He stated this gives you a sense of how flows made over FY22 obviously projected, which is the basis for the budget. It is based on the prior five years actual flows averaged by member jurisdictions. By the table at the bottom of the page, you can see for each member jurisdiction what the estimated monthly flows are for FY22, the budget you are about to go into based on the five prior years. You can see

what percentage of the flow every month represents. All the way over to the far right is the aggregate level of the projected flows based on historicals for FY22. That sums up to the total expected flow of 28.9 MGD.

Mr. Cole referred to page 6 of estimated revenue and operating expense cash flows. This is to correlate flow to dollars. You start with month ending the remainder of FY21, go into a full twelve months of FY22, and it was extended to FY23 using the same budget as FY22. Column "C" is the estimated flow based on the historical actions. Column "D" is the dollars and using FY22 rates it is the dollars that would be earned from that flow. If everything hits the budget, this is the dollars that would be generated or earned in Column "D", recognized and available in Column "E". It is a quarterly payment; you must pay it the next month but does not become available until the following month after that. Dr. Casey asked about the May 2021 payment and if the billing period was through April 30th or through March, and Mr. Cole answered it is through March. Mr. Cole stated that with flows or billings through March 31<sup>st</sup> you must make that payment through April 25<sup>th</sup>, and it takes to early May before those funds flow through. Dr. Casey stated it is a minimum of a sixty day lag and that does not even count the expenses of the first day of quarterly cycling, which is probably another thirty days that you are incurring the costs before you get the revenue. Mr. Wilson stated that mechanically they do not let us do anything electronically, and Ms. Wilkins must FedEx them the checks that we receive. Mr. Cole stated that Column "E" is how we get from expected flow to dollars available. Columns "F", "G", and "H" are expenditure assumptions. Column "J" is important. It is measuring what the next four months of expenditures are, which ties back to the operating fund requirement, which is the first fund the Trustee sends money to. Column "J" is for any given month what the next four months expenditures are based on the 2022 budget.

Mr. Cole referred to page 7 of minimum cash balances. He stated this chart is of July 1<sup>st</sup>. Staff is recommending the replacement fund be called the ERRF fund, and it is supposed to have \$500,000. The operating reserve fund, which is by policy and what we are moving over to the Authority has \$3,750,300, which is six months of operating expenses excluding operating capital outlay expenses.

Mr. Cole went over the big sheet that was handed out, which shows where we are today and how the actual dollars should flow based on what the indenture prescribes. You see the beginning balance in the Revenue Fund is \$8,450,000. When you go down to the Operating Fund it has \$3,587,000. Expenses being paid out of that based on budget is \$732,000. What would need to be made from there is \$170,000 to bring that account to its required minimum, which we know from page 6, of \$3,025,000. You have got \$3,500,000 but based on your budget you are going to spend \$732,000. The way the flow of funds works is \$170,000 should go in there, and you bring that up to its fully funded status. If you do that, you go to line 19, and what that is saying is how much is left out of the revenue fund. We had \$8,450,000, we transferred \$170,000, and now we have \$8,279,000. The next order of operations is to bring the interest account current. We need \$155,000 more. So, if we do that, we only have \$98,000 now so we bring in \$155,000 and get that account fully funded at \$253,000. If you do that, then you go down to line 31. Now we have \$8,100,000 to disburse. We are incrementally showing you where the excess in the revenue fund needs to go. We fully fund the principal account, and to do that (line 36), we need to put in \$933,000. That would bring us to \$1,600,000. We now have \$7,190,000 to disburse. We go to the Debt Service Reserve Fund, and it is over funded by \$46,000. That becomes additional disburseable dollars. Then we go down to line 55 where we have \$7,200,000. Our Replacement Fund (ERRF) is underfunded right now at \$118,000. If we fund that, we bring it up the current minimum of \$500,000. We go to line 67 and we have \$7,100,000, which is the Operating Reserve Fund. It is over funded, and we would need to transfer that out, and what it leaves on line 79 is about \$7,300,000 million and that is "excess for surplus". He further stated that in a memo in the agenda packet, there was a \$1,200,000 VWP Permit upgrade that is in the works and expected to need to be paid. The thought was to set that aside out of the \$7,300,000 million. Mr. Wilson stated that right now as we set to do the bank account the whole \$7,300,000 is going to be transferred into the Surplus Fund. He asked Mr. Cole to run the analysis showing the \$1.2 million used for the VWP permit renewal, but it is still up for discussion, but we asked them to run the analysis showing pulling that out. Dr. Casey asked if that was in the FY22 budget and Mr. Wilson answered no.

Mr. Cole stated that if we kind of fix what is going on in the Trust Indenture, line 79 becomes what is the excess dollars that need a home somewhere else, and the thought was to move that to a new account created by the Authority called Surplus Fund. That would be \$7,300,000. Mr. Cole stated that you can see some "red" on the chart. With the operating fund for the next month, you do not have any revenue coming in because you bill quarterly. You are going to keep spending money out of the operating fund and on line 17 we are calling it "excess balance or shortfall". You are not underfunded it is just tracking how much below four months you are. It cannot be funded because there is no money in the revenue fund, but it will catch up when that next quarterly payment comes in. This applies to the interest and principal account. If you billed monthly this would be happening on a monthly basis. Dr. Casey stated that if that red line is higher than the operating reserve then we may need to come back and readdress the appropriate operating reserve, and Mr. Cole replied yes. You will spend that down over June and July and additional dollars will be made available and that would be the first bucket that you would refill. You have got the cash flow, and you have got the balance in that operating fund to pay your expenses based on the budget. Dr. Casey asked if there was anything from the reporting requirement on the bond indenture that is monthly, or is the point in time June 30, which is an important date as audits and budgets reflect that. If we had a large expense at the beginning of the quarter for which you are not having the billing come in for three more months, that adversely affects it. That in itself is not a reportable condition, but it is probably a point in time of the year that we need to be sure that the reserve is sufficient enough to cover any temporary drawdown. Mr. Cole stated we talked about having some strong early quarters in the year. If the Trustee is doing what they are supposed to do, they would flush out all the way over to that surplus account that is Authority held. If you have a weaker billing or flow in the latter part of the year there could be a situation where the Authority would have to take some monies from the surplus funds and cycle them back. Mr. Anderson stated that is what we have talked about.

Mr. Wilson stated the last two things when we get to the recommendations will be either Board designated projects or a true up. Mr. Cole stated that is right and you would need to work on engineering costs. You can cash flow a project and then reimburse yourself when the borrowing is done.

Mr. Cole stated pages 9 and 10 are straightforward. All of this assumes that revenues and expenditures are recognized the way they are budgeted and because everything is billed on flow you have got some exposure as an Authority. Many of your expenses have nothing to do with flow. All of your revenues are tied to flow. He stated on page 9 the second bullet lays out in written form the flow of funds priority.

Mr. Lyons stated he wanted to make sure based on Mr. Cole's observation and based on what was said was the reason for the presentation, which was the focus on the Authority held bank accounts. When you go down to page 10 in terms of the observations and recommendations are we only focusing on the Authority held bank accounts or are we focusing on the replacement minimum of \$500,000, and Mr. Wilson stated it was just the bank accounts. What we are requesting now is when we work with the trustee to formally do what the indenture says and for him to sweep the accounts. First of all is to get the operating reserve to Authority control because that is an internal financial policy, then create an account so when they sweep it, we have a true account to keep the money for transparency for the Board. We would like to get permission to continue to work with Davenport and engage with the various financial staff from each member to go through this and come back on the 22<sup>nd</sup> with recommendations. On the 22<sup>nd</sup> we may not be in a position to know where to move all the funds, but we can make our recommendations and make sure each member jurisdiction understands what we are asking and have a follow up discussion from that. Right now, it is just creating the two bank accounts that we are requesting.

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

**RESOLVED, that the Board approves Staff's recommendation for establishing the two accounts for Surplus Funds from the revenue fund, and for transferring funds from the Trustee Operating Reserve to an Authority Operating Reserve plus continuing to work with Davenport and related staff:**

Dr. Casey stated the presentation was sound and we should do this periodically. You present the revenues and flow funds as if we are just one entity but there are nuances among the five of us of how we fund different elements of this operation especially when it comes to bond financed projects. When you present the budgets and the rate structures, it is almost five columns that equals the grand total, especially when we go into a capital budget and the debt financing. Right, wrong, or indifferent you could have something from eighteen years ago we are paying for in a certain way. It does not matter whether we are consuming one gallon of water or hundred percent of the water. He is not versed in as far as how the mechanisms work, because we are presenting these things in grand totals, when really they are five sub totals each time with how they fill up. It may be a different manner in which it is trued up and disbursed back out. Mr. Cole stated there is already a true up, which is that fourth quarter billing for the expansion cost, which is really about debt that everybody paid in the first three quarters based on flow and based on a rate. Come the fourth quarter you may recognize that x, y, z paid too much, and it is that true up that is reflected in the fourth quarter billing already by practice. Then the discussion is in the subsequent or any given fiscal year truing up from surpluses. Mr. Wilson stated the expansion rate is identified, separated and easy to calculate. He further stated that another thing that can come up from the presentation Mr. Cole just gave is we need to sit down with the various finance people and walk through that too and see what kind of questions they might generate. Dr. Casey suggested there may be need to have some type of finance committee assistance to you and maybe the treasurer of ARWA and SCWWA can serve as the conduit to rounding up the local fiscal people and accessing Davenport and Mr. Cole's resources as need be. He asked as you talk about what could be future financing of ARWA or SCWWA, if there was anything that lends itself to having the financing be together to get ARWA's rating and credit worthiness. This can help change the interest rate for SCWWA side of the equation. Mr. Anderson stated we do have two separate entities and we could merge them. Each Authority maintains separate debt and funding streams and member interest is different between the two Authorities. We do monthly billing at SCWWA. One thing that has been so hugely helpful working with Davenport is having the quarterly billing with flows, the need to stroke checks every month, getting it on paper and being able to manipulate that a little and see how it works. Mr. Smith stated this walk through had been helpful, and it is different when you see the bullet point of here is what it is versus looking at it in a column.

Mr. Smith asked about the FedEx of checks and if there was a way for them to get in a more modern way. Ms. Wilkins stated not at this time, but we are hoping that once we begin to put these new policies and action items together, we can do a sit down. Currently she has a hard time with them responding to emails to transfer the O&M money on a quarterly basis. She is not sure how they are going to progress with their technology. Mr. Wilson stated we are not sure on their policy because we send them a check, they deposit it and they electronically put it back to us. Ms. Wilkins stated that six years ago when she joined the Authority she was in contact with each member to see if you would be willing to send their payments to US Bank. US Bank will not allow that. Mr. Smith stated the Board would appreciate a follow up and to continue discussions on those issues, and if there is any way the Board can help to please let the Board know.

**Vote:**

<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>Lionel Lyons</b>	<b>Aye</b>

**Absent During Vote:**

**None**

- **Status Report**

Mr. Wilson reported on the status report. He stated that he was happy to see that the East Coast Fuel Line opened back up. On March 1, 2021, the lake level was plus thirteen and on April 30, 2021, we were at plus one. He tracked the last five years on lake level. As we sit today at plus one and a half we are on track with 2019. Usually during the month of May we get a good rainfall to pick things back up.

- **In Plant Projects**

Mr. Wilson reported on the transformer replacement. He stated it feeds the whole back half of the plant, which also feeds our Rapid Mix. All our treatment comes through one area where the chemicals get added. We would like to pay for this with the money left from in plant projects. We would like to purchase the transformer and have A & R Electric perform the installation.

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

**RESOLVED, that the Board authorizes the executive director to purchase the transformer to replace PMT – 3 in the amount of \$114,297 and contract with A & R Electric, Inc., in the amount of \$60,703 to perform the transformer replacement:**

**Vote:**

<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>Lionel Lyons</b>	<b>Aye</b>

**Absent During Vote:**

**None**

- **Financials**

Ms. Wilkins reported on the Financials. Year-to-date our expenses and revenues are in line with budget. Our balance sheet currently is just a traditional one. Historically ARWA does not do true ups or move around the restrictions or the required liabilities until the audit takes place. If there are different ways members would like to see the development throughout the year we will be more than happy to adjust these reports. We are more than open to change these statements on your behalf. Mr. Wilson stated we had the Authority association meeting the other day. Authorities cannot get the American Rescue Plan Act funds directly. They have to team with the locality and then the locality helps to get the money to the Authorities.

**6. Items from Counsel**

There were no items from Counsel.

**7. Closed Session**

There was no Closed Session.

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

Mr. Smith stated he would like to ask for Board approval for compensation for Mr. Wilson for the following items: (1) \$1,000 bonus to be paid during the current fiscal year; and (2) 3% base salary increase effective July 1, 2021.

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

**RESOLVED, that the Board approves compensation for Mr. Wilson for the following items: (1) \$1,000 bonus to be paid during the current fiscal year; and (2) 3% base salary increase effective July 1, 2021:**

**Vote:**

<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>Lionel Lyons</b>	<b>Aye</b>

**Absent During Vote:**

**None**

Ms. Wilkins asked the Chairman to follow up with an email to her as she needs to have this in writing for audit purposes and also to go into Mr. Wilson's personnel file. Mr. Smith stated he would.

Mr. Haltom stated he would like to thank everyone for allowing him to join the meeting by conference call.

**9. 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. Lyons the meeting was adjourned at 3:07 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.

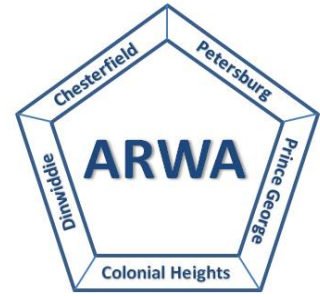
During the Public Comment Period, the Board will attempt to hear all members of the public who wish to speak on a subject, but it must be recognized that on rare occasion presentations may have to be limited because of time constraints. If a previous speaker has articulated your position, it is recommended 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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2300 Chesdin Rd. - S. Chesterfield, VA 23803 - Phone (804) 590-1145 - Fax (804) 590-9285

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## EXHIBIT C

TO: Appomattox River Authority Board of Directors

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

DATE: July 22, 2021

SUBJECT: Hydrilla Update

Mr. Peter Nash of Golder Associates will present an update on the hydrilla project. His presentation will also include some recommendations for residents for management of hydrilla around their docks and shorelines. A copy of his presentation is included as Attachment 1.

I have notified customers via email about this presentation. As residents call in about hydrilla, we are creating a database so we can make them aware of these types of presentations and as other information becomes available.

### Board Action Requested:

No Board action is requested.



# Hydrilla Management Plan Update

APPOMATTOX RIVER WATER AUTHORITY

July 2021

# AGENDA

**Introduction**

**2020 Aquatic Vegetation Surveys**

**Tuber Survey**

**Hydrilla Emergent Survey**

**Hydrilla Management**

# Hydrilla Management Plan Update

## INTRODUCTION

### Recent Activities

- Continuing from 2019, *Hydrilla verticillate* surveys to determine distribution of *Hydrilla* in Lake Chesdin were performed in July and September 2020.
- *Hydrilla* tuber survey was performed in March 2020.
- *Hydrilla* emergence surveys were performed in the spring of 2020 and 2021.

# Hydrilla Management Plan Update

## HYDRILLA VISUAL SURVEY UPDATE

### 2020 Survey of the *Hydrilla* distribution and biomass during growing season

- Lake Chesdin gridded into 313 parcels based on bathymetry contours and habitats. The zones were georeferenced for locating while in the field using GPS.
- Surveys consisted of visual identification as well as rake surveys. The distribution and biomass (% of water column) was mapped.
- Water Quality measurements for general water quality parameters, plus nitrate and phosphate.
- Total impacted area is consistent with previous surveys (approx. 2,400 acres)

# Assessment Monitoring

## TUBER SURVEY

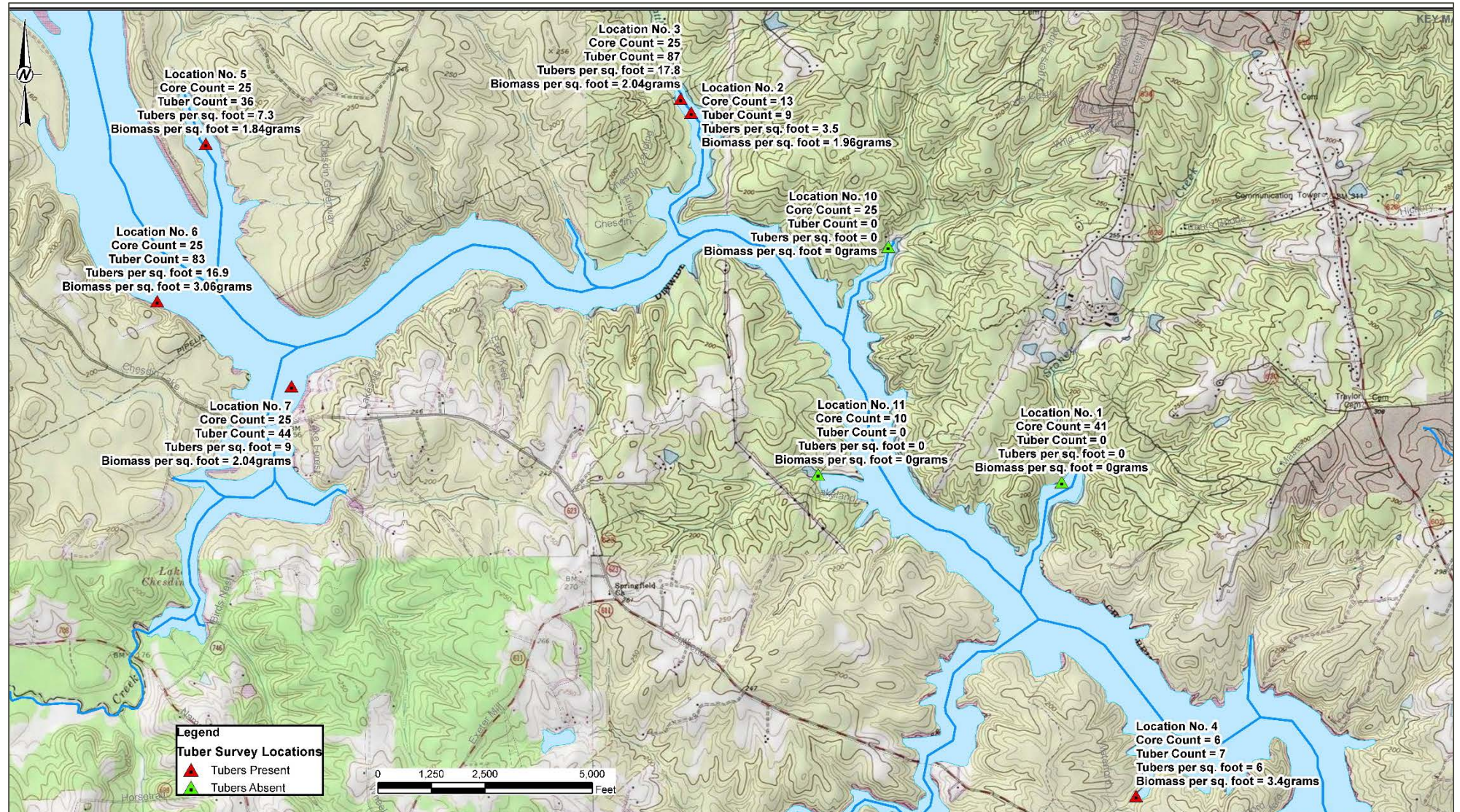
*Hydrilla* Tuber survey conducted in March 2020.

- Sediment samples collected at five locations with known infestations and six locations deemed suitable for infestations.
- 200 sediment tube samples were collected, ranging from 6 to 41 samples per location. The number of Hydrilla tubers were recorded and the tubers were weighed.
- Turions (propagating buds from the plants that settle to the bottom) were observed but were not systematically surveyed due to their small size and fragile nature. Turions were identified at 3 locations.
- The total number of tubers at each location ranged from 0 to 87. Where infestations have been observed the number of tubers ranged from 4 to 18 tubers/ per square foot.



# Assessment Monitoring

## TUBER SURVEY RESULTS





# Assessment Monitoring

## HYDRILLA EMERGENCE SURVEY

*Hydrilla* emergence monitored in the spring of 2020 and 2021

- Surveys performed at the Lake Chesdin Campground and the Lake Chesdin Golf Course landing to record tuber emergence from dormancy in March and April.
- Surveyed 10 sediment samples collected at each location and counted the Tubers and Turions. The proportion of sprouted samples also counted.
- Tuber counts generally greater than Turion counts (3-4 times greater).
- The survey indicated the Turions begin sprouting in early April and all Turions had sprouted by Mid-April. The Tuber sprouting is delayed, and all Tubers did not sprout. The Tubers may remain dormant for the current growing season.



# Assessment Monitoring

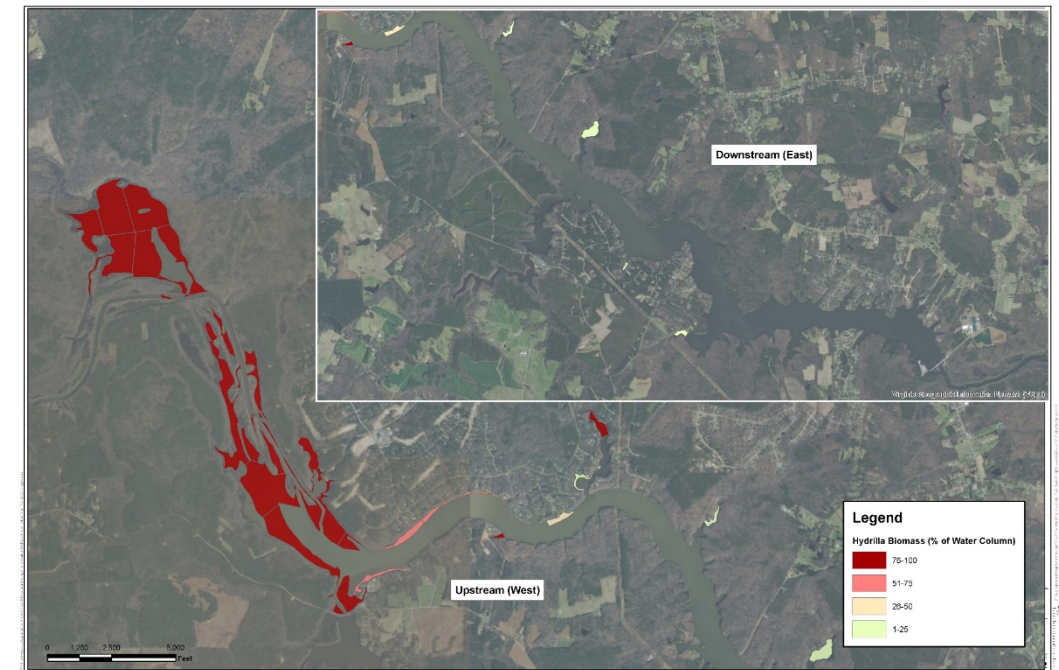
## SURVEY FINDINGS

- *Hydrilla* is widespread throughout the upper section of Lake Chesdin (upstream of Namozine Creek), except in the main channel. *Hydrilla* is observed growing to the surface in most areas in dense clumps in water depths of 5 feet or less.
- Downstream of Namozine Creek, *Hydrilla* is isolated to a couple of tributaries and along the waterfront of Chesdin Landing. *Hydrilla* was observed in Cattle Creek, Stoney Creek, Miry Run, and two unnamed tributaries, one on the south side between Whipponock Creek and Miry Run and the other between Cattle and Stoney Creek on the north side. The distribution is likely associated with protection from wave action, water depth, and the presence of lake bottom sediment. No *Hydrilla* was observed in the main waterbody along the rocky exposed shorelines.

# Impacts to Lake Chesdin

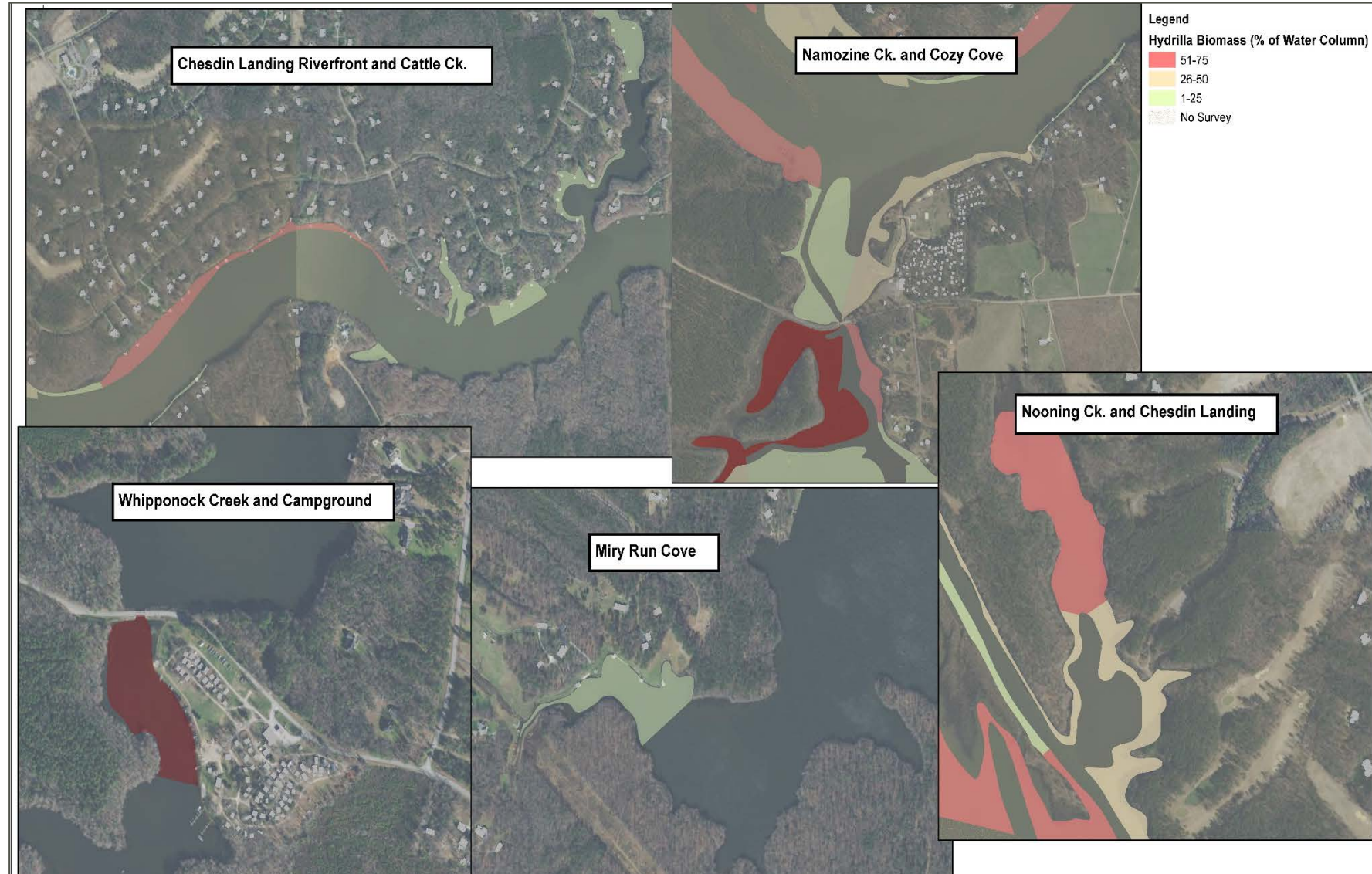
## BOATING IMPACTS

- Boating access from docks and launches is affected, particularly for docks located in tributaries.
- *Hydrilla* impacts to boating mostly upstream away from the main channel.



# Impacts to Lake Chesdin

## RESIDENTIAL WATERFRONT PROPERTIES



# Lake Chesdin Hydrilla Survey

## SOLUTIONS

Complete removal of Hydrilla from Lake Chesdin unlikely. A management approach targeting heavy infestations that affect residents and recreational use will be developed as part of the Management Plan.

Currently the best options for waterfront properties and docks include:

- Clear the vegetation. Must be removed from water to prevent redistributing *Hydrilla* downstream. Turions readily break off and reestablish infestation.
- Benthic Mats. Applied after start of growing season to smother vegetation. Remove after 4-6 weeks. Effective for infestations from Turions but may need repeating over several seasons to eradicate *Hydrilla* Tubers.

# Lake Chesdin Hydrilla Survey

## BENTHIC MATS

Benthic mats block sunlight and prevent growth of vegetation beneath the mats. The application timing is important for allowing tubers to sprout prior to applying the mats. The mats will affect all vegetation.

Benthic matting can be bought ready-made or using suitable available materials. The basic materials include:

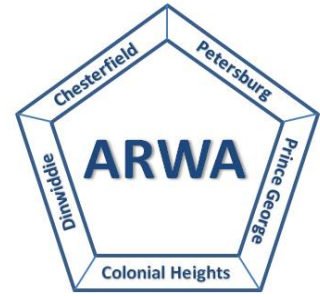
- Light blocking material (sheet or roll) preferably breathable fabric to allow gas to escape
- Hold-down frames or weights
- Marker buoys to alert boaters and swimmers

Construction guides are available. Pre-made roll-out and framed mats are available.





# 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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## EXHIBIT D

TO: Appomattox River Water Authority Board of Directors

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

DATE: July 22, 2021

SUBJECT: Financial Update

On Monday, July 12<sup>th</sup> the Authority held a work session for financial representatives from each member jurisdiction. Each jurisdiction was well represented and the following discussion took place:

### ➤ Representatives Present

- |                    |                          |
|--------------------|--------------------------|
| ○ Deborah Cosgrove | Chesterfield County      |
| ○ George Hayes     | Chesterfield County      |
| ○ Ann Howerton     | Dinwiddie County         |
| ○ Betsy Drewry     | Prince George County     |
| ○ Sheila Minor     | City of Colonial Heights |
| ○ Stuart Turille   | City of Petersburg       |
| ○ Tangela Innis    | City of Petersburg       |
| ○ Ted Cole         | Davenport                |
| ○ Arthur Anderson  | McGuire Woods            |
| ○ Melissa Wilkins  | ARWA                     |
| ○ James Gordon     | ARWA                     |
| ○ Robert Wilson    | ARWA                     |

- Mr. Cole gave the same presentation he made to the Board on May 20<sup>th</sup>. Mr. Cole advised that he used the same April 30<sup>th</sup> financial information and did not update through June 30<sup>th</sup> so the representatives would have the same perspective. ARWA staff noted that ARWA was now projecting a larger Surplus Fund than was shown in the May 20<sup>th</sup> presentation.

- As part of Mr. Cole's presentation, he outlined the recommendations for the excess funds in the Surplus Fund:
  - Board to authorize the establishment of Authority-held bank accounts for the Operating Reserve Fund and Surplus Fund. Mr. Wilson advised that the Board authorized the creation of both accounts at the May 20<sup>th</sup> meeting.
  - Pre-fund the Bond Fund Principal and Interest Accounts for July 1. Mr. Wilson advised this had automatically been completed through the Trust Agreement.
  - Increase the Replacement Fund (newly named ERRF) minimum balance from \$500,000 to \$2,500,000.
  - Maintain the Operating Reserve minimum policy balance equal to 6 months of Operating Expenses (excluding Operating Capital Outlay Expenses) and provide for the funding of up to an additional 6 months of Operating Expenses from available surplus funds.
  - Pre-fund/fund Board-designated projects from remaining surplus funds.
  - Make an annual True-up payment to Member Jurisdictions from remaining surplus funds.
- Mr. Wilson explained the \$1,200,000 request to pay expected expenses for the VWP (Virginia Water Protection) Permit renewal. This would be a separate line item under the Surplus Fund to provide tracking for expenses related to this permit renewal. This permit has an expiration date of October 2028 with the bathymetric survey being completed by October 2023. The group agreed that specific projects identified for funds out of the Surplus Fund are a good idea.
- The group discussed the merits of increasing the ERRF from \$500,000 to \$2,500,000. Mr. Wilson explained that the Authority has about \$50 million on the books for depreciation which we are not adequately offsetting. Improvements to the plant in the form of rehabilitation are accomplished through Operating Capital Outlay Expenses but they are being outpaced by depreciation. Furthermore, the Authority does not have a true emergency fund for catastrophic events. Hence the recommendation for the increase to \$2,500,000.

The group looked at the recommended wording for the revisions to the Trust Agreement and suggested the ERRF be reworded to have a minimum balance of \$500,000 and maximum balance of \$2,500,000. Further review by counsel recommends maintaining a set balance of \$2,500,000. There was a question if there was an emergency and the ERRF was cleaned out, would it be completely restored in the next fiscal year through the budget process? Mr. Wilson explained that there was a similar occurrence at SCWWA which also has an ERRF, the shortfall was funded over five years. Mr. Wilson went on to state that if the ERRF was emptied, the Board would discuss and determine the terms for refilling the ERRF. Mr. Anderson advised there should be a set timeframe of, for example, five years.

The group agreed that \$500,000 would not go far for an emergency or catastrophic event and increasing the amount to \$2,500,000 is appropriate.



- The group discussed the recommendation to increase the Operating Reserve to twelve months of Operating Expenses excluding Operating Capital Outlay Expenses. Mr. Wilson explained that the purpose for this request is to provide a fund, normally not used, unless there are external influences such as a drought or other events, that would potentially reduce cash flow and additional funds would be necessary to support the other Trust Funds before the next quarterly payments. This reserve would be refilled through the budget process when the minimum balance falls below six months of operating only expenses. The group conceded that having excess funds is a nice position to be in. Therefore, increasing this amount to twelve months of Operating Reserve could be accomplished.
- The question was raised if there was going to be excess funds in the Surplus Fund after funds would be transferred to the Replacement Fund to increase the balance to \$2,500,000 and increase the Operating Reserve to twelve months of operating expenses. Mr. Wilson replied yes. We are estimating around \$2.1 million mainly from additional revenue and a couple maintenance projects that were not completed. That promoted the question of how those funds should be distributed. Mr. Wilson stated that the Board has the authority to distribute those funds. Two of the recommendations would be either to pre-fund Board designated projects or perform a true-up based on each jurisdiction's five year running average. A further question was raised if unanimous consent was necessary to pre-fund Board designated projects. The current Service Agreement does not require unanimous consent. However, if the Board wants to have unanimous consent for distribution of these surplus funds, then unanimous consent could be written into the Financial Policy. This would require additional Board discussion.
- The final discussion was who should hold the Operating Reserve Fund and Surplus Fund, the Trustee or the Authority. Mr. Wilson suggested that both the Operating Reserve and Surplus Fund be held by the Authority. The Surplus Fund is the placeholder for excess funds when the Revenue Fund is swept on a monthly basis per the Trust Agreement. The Surplus Fund would also be the first fund where funds are drawn to support monthly expenses. The Operating Reserve Fund would be used next if the Surplus Fund did not have a balance. Annually the Surplus Fund would be emptied after each annual audit per Board direction.
- Staff Recommendations for the distribution of the Surplus Fund in September 2021 (if the Board approves):
  - \$1,200,000 be set in a separate account for transparency to fund the renewal of the VWP Permit. This will be a multiyear project.
  - Increase the ERRF balance from \$500,000 to \$2,500,000.
  - Increase the Operating Reserve from six months of Operating Expenses excluding Operating Capital Outlay Expenses to twelve months. This would require approximately \$3,700,000.
  - Retain the remaining excess funds in the Surplus Fund in an account for the future filter rebuilds.

The last recommendation for using remaining excess funds in the Surplus Fund for the future filter rebuilds will require additional Board consideration. A couple of the members prefer that the remaining funds be given back as a true-up per their five year running average.

To facilitate these proposed changes, the Trust Agreement will require revisions. A copy of the proposed (marked up) revisions to the Trust Agreement is included as Attachment 1. The more significant changes include:

- A formal definition for “Operating Capital Outlay Expenses” was added.
- In the Rate Covenant (Section 602), the Operating Expenses do not include Operating Capital Outlay Expenses. The thought was Operating Capital Outlay Expenses could either be delayed or canceled during a financial crisis.
- In Section 609 (d) a timeframe of a maximum of five years has been added for the duration to refill the ERRF if the ERRF funds are used for any reason. The ERRF can be replenished faster if the Board determines that is appropriate.
- From Board comments from the May 20<sup>th</sup> meeting, additional information on investments was added to Article VII.

Attachment 2 are the proposed “Financial Policies and Procedures”. Based on discussions from this meeting and the September meeting, we may need to make additional revisions.

Board Action Requested:

Staff requests the Board discuss the potential uses for the Surplus Fund and be in a position at the September 20<sup>th</sup> meeting to take action to distribute. Counsel requests the Board’s authorization to begin discussions of the proposed changes to the Trust Agreement with the Authority’s three bondholders to be in a position to obtain the Board’s approval of the changes at the September 20<sup>th</sup> meeting.

**PROPOSED CHANGES TO 1986 AGREEMENT OF TRUST**

McGuireWoods LLP Draft of 07/15/2021

Changes to Pertinent Provisions of the 1986 Agreement of Trust (as previously amended by the First, Second and Fourth Supplemental Trust Agreements) shown via Workshare Compare

**ARTICLE I**

**DEFINITIONS AND RULES OF CONSTRUCTION**

Section 101. Definitions. The following words as used in this agreement shall have the following meanings unless a different meaning clearly appears from the context:

"Act" means the Virginia Water and ~~Sewer~~Waste Authorities Act (Chapter ~~28~~51, Title ~~15.1~~15.2, Code of Virginia of 1950, as amended.)

"ERRF" means the Equipment Repair and Replacement Fund established in Section 604. [The amended 1986 Agreement of Trust will provide that the term "Replacement Fund" will be changed to "ERRF" in each place the term is used.]

"Operating Capital Outlay Expenses" means reasonable and necessary expenses with respect to major repairs to or replacements or maintenance of the System, including expenses of a type not recurring annually or at shorter intervals, which have been designated as "Operating Capital Outlay Expenses" in the Annual Budget, regardless of whether such expenses may be capitalized under generally accepted accounting principles.

"Operating Expenses" means all current expenses directly or indirectly attributable to the ownership or operation of the System, including, without intending to limit or restrict any proper definition of such expenses under any applicable laws or generally accepted accounting principles, reasonable and necessary usual expenses of administration, operation, maintenance and repair, costs for billing and collecting the rates, fees and charges for the use of or the services furnished by the System, insurance and surety bond premiums and other charges and fees necessary for the maintenance of adequate insurance coverage for the Authority and the System, legal, engineering and auditing expenses, expenses and compensation of the Trustee, ~~and~~ other current expenses of the Authority required to be paid by law or under this Agreement and Operating Capital Outlay Expenses, but shall not include any allowance for depreciation, deposits or transfers to the Bond Fund, the Debt Service Reserve Fund, or the ~~Replacement Fund~~ERRF, or ~~expenditures for capital costs of "improvements and extensions" or "expansions"~~ of the System within the meaning of the Service Agreements.

~~"Replacement Fund" means the~~ Replacement Fund established in Section 604.

"Revenues" means all revenues, receipts and other income derived by the Authority from the ownership or operation of the System, including without limitation, all amounts received by the Authority from the Participating Jurisdictions pursuant to the Service Agreements, except for amounts received pursuant to a Participating Jurisdiction's election to provide its available funds to pay its share of any Future Expansion Costs pursuant to paragraph 2(a) ~~at~~of the Third Amendment to the ~~1964~~ Service Agreements.

"Service Agreements" means the Service Agreements between the Participating Jurisdictions and the Authority, entered into with respect to the City of Colonial Heights on September 15, 1964, the City of Petersburg on August 28, 1964, the County of Chesterfield on September 9, 1964, the County of Dinwiddie on September 9, 1964, and the County of Prince George on September 8, 1964, all as amended by a First Amendment thereto dated December 16, 1982, by a Modification Agreement dated as of September 1, 1983, ~~and~~ by the Second Amendment to Service Agreements and by the Third Amendment to Service Agreements, and as any of the foregoing may be further amended or supplemented from time to time.

"Third Amendment to Service Agreements" means the Third Amendment to 1964 Service Agreements between the Participating Jurisdictions and the Authority, dated as of September 4, 2001.

[To be deleted: Definitions of "Series 1986 Bonds" and "Underwriter"]

## ARTICLE VI

### REVENUES AND FUNDS

Section 601. Annual Budget. (a) Prior to the beginning of each Fiscal Year, the Authority shall adopt a budget for the ensuing Fiscal Year which shall be called the Annual Budget.

(b) Prior to preparing the Annual Budget, the Authority shall obtain a report from the Consulting Engineer giving advice and making recommendations as to the proper maintenance, repair and operation of the System during the ensuing Fiscal Year and estimating the amount necessary for such purposes.

(c) The Annual Budget shall be prepared in such manner as to show in reasonable detail all ~~rates, fees and other charges~~ Revenues projected to be derived by the Authority ~~to pay and the amounts of~~ (A) the Operating Expenses estimated to be incurred in connection with the ownership or operation of the System, (B) any amount required to be paid into the Replacement Fund (including the estimated Operating Capital Outlay Expenses, which shall be separately stated), (C) the amount of principal of and premium, if any, and interest on the Bonds, that shall become due, including (iii) any amount necessary to be paid into the Debt Service Reserve Fund to restore the balance therein to the amount of the Debt Service Reserve, (iv) the amount required to be paid into the ERF as provided in Section 609(d), and (D) any other lawful costs and expenses the Authority deems necessary or desirable. Copies of the

Annual Budget shall be filed with the Trustee ~~and the Underwriter~~ not later than the first day of the Fiscal Year for which it is prepared.

(d) If for any reason an Annual Budget has not been adopted within the time required by subsection (a) of this section, the last previously adopted Annual Budget shall be deemed to provide for and regulate and control expenditures during such Fiscal Year until an Annual Budget for such Fiscal Year shall have been adopted.

(e) The Authority may amend the Annual Budget at any time during the Fiscal Year. The Authority shall follow the same procedure regarding any such amendment as provided in subsection (c) of this section for the adoption of the Annual Budget. Copies of all such amendments shall be filed promptly with the Trustee ~~and the Underwriter~~.

Section 602. Revenue Covenant. The Authority shall fix, charge and collect such rates, fees and other charges for the use of and for the services furnished by the System, and will, from time to time and as often as shall appear necessary, revise such rates, fees and other charges, so as to produce ~~revenues~~ Revenues in each Fiscal Year sufficient to pay (a) the budgeted ~~cost of operation and maintenance~~ Operating Expenses of the System, less the budgeted Operating Capital Outlay Expenses, (b) ~~the amount, if any, required to be paid into the Replacement Fund,~~ (e) principal of and premium, if any, and interest on the Bonds and all other indebtedness of the Authority, as the same become due, and (d) (iii) any amount necessary to be paid into the Debt Service Reserve Fund to restore the balance therein to the amount of the Debt Service Reserve, and (iv) the amount required to be paid into the ERRF as provided in Section 609(d),.

Section 603. Billing and Enforcement of Charges. The Authority shall bill the parties to the Service Agreements for all charges under the Service Agreements and any other user of the services of the System no less frequently than quarterly. The Authority shall take all appropriate steps to enforce collection of any overdue charges by any remedy available at law or in equity.

Section 604. Establishment of Funds. The following funds are hereby established:

- (a) Appomattox River Water Authority Revenue Fund, to be held by the Trustee;
- (b) Appomattox River Water Authority Operating Fund, to be held by the Authority;
- (c) Appomattox River Water Authority Bond Fund, in which there are established an Interest Account and a Principal Account, both to be held by the Trustee;
- (d) Appomattox River Water Authority Debt Service Reserve Fund, to be held by the Trustee; and
- (e) Appomattox River Water Authority Equipment Repair and Replacement Fund or the "ERRF", to be held by the Trustee.

Section 605. Revenue Fund. (a) The Authority shall collect and deposit in the Revenue Fund as received all ~~rates, fees, charges and other Revenues derived from the ownership or operation of the System~~. Moneys on deposit in the Revenue Fund shall be used only in the

manner and priority set forth below. As of the twenty-fifth day of any month during which there is on deposit in the Revenue Fund at least \$100,000, but not later than the last day thereof, the Trustee shall make the following deposits in the following order of priority:

(a1) To the Authority for deposit in the Operating Fund such amount needed to increase the balance in the Operating Fund to the sum of (1i) the estimated amount of the Operating Expenses for the next succeeding four months as provided in the Annual Budget and (2ii) the aggregate amount, as certified by an Authorized Representative of the Authority, of all checks outstanding and unpaid drawn upon the Operating Fund.

(b2) To the Bond Fund such amount as shall be necessary to make the following deposits:

(1A) first, in the Interest Account, such amount, if any, as may be required to make the total amount on deposit therein equal to the amount of interest which will become due on the ~~Series 1986 Bonds and any Additional~~ Bonds within the next succeeding six months; and

(2B) then, in the Principal Account, such amount, if any, as may be required to make the total amount on deposit therein equal to the amount of principal of the ~~Series 1986 Bonds and any Additional~~ Bonds maturing or required to be redeemed pursuant to any sinking fund requirement with respect to Term Bonds within the next succeeding 12 months.

(e3) To the Debt Service Reserve Fund, such amount as may be necessary to increase the amount on deposit therein to the amount of the Debt Service Reserve.

~~(d)~~  
(4) To the ~~Replacement Fund the~~ERRF, such amount ~~necessary to increase as~~ may be required to be deposited therein under Section 609(d) until the ~~amount~~balance in such ~~fund~~the ERRF is equal to \$~~500,000~~2,500,000.

(eb) ~~To~~At least once each Fiscal Year, on the twenty-fifth day of any month following the deposits described in subsection (a) above, and provided that all of the deposits required under subsection (a) above have been made, the balance in the Revenue Fund shall be transferred to the Authority as directed by an Authorized Authority Representative, for use by the Authority for any of the following purposes:

(1) to pay costs of completion of the System;

(2) to pay the cost of replacements of major components of the System and the cost of acquisition or construction of improvements, extensions, additions or replacements required to be charged to capital account by generally accepted accounting principles and which constitute or will constitute a part of the System;

(3) to purchase, for cancellation, Bonds at or below their current redemption price;

(4) to redeem Bonds at the earliest practicable date; and

(5) for any lawful purpose permitted by the Act and this agreement.

Section 606. Operating Fund. The Authority shall pay Operating Expenses from the Operating Fund as the same become due and in accordance with the purposes and amounts provided in the Annual Budget. ~~In the event~~ If the balance in the Operating Fund is insufficient for the purposes thereof, the Trustee shall transfer to such fund such amounts as may be necessary therefor from the ~~Replacement Fund~~ ERRF pursuant to Section 609.

Section 607. Bond Fund. The Trustee shall pay the principal of, whether upon redemption or maturity, and interest on the Bonds from the Principal Account and the Interest Account, respectively, as the same become due. The Trustee shall provide for redemption ~~of the Series 1986 Bonds maturing on October 1, 2006, and October 1, 2013, in accordance with the schedule set forth in Section 303 and the redemption~~ of any ~~Additional~~ Bonds which may be issued as Term Bonds in accordance with the schedule in a supplement to this agreement authorizing their issuance; provided, however, that on or before the 70th day next preceding any such sinking fund payment date, the Authority may:

(a) pay to the Trustee for deposit in the Principal Account such amount as the Authority may determine, accompanied by a certificate signed by an Authorized Representative of the Authority directing the Trustee to apply such amount to the purchase of Bonds required to be redeemed on such sinking fund payment date, and the Trustee shall thereupon use all reasonable efforts to expend such funds as nearly as may be practicable in the purchase of such Bonds at a price not exceeding the principal amount thereof plus accrued interest to such sinking fund redemption date; or

(b) deliver to the Trustee for cancellation Term Bonds required to be redeemed on such sinking fund payment date in any aggregate principal amount desired; or

(c) instruct the Trustee to apply a credit against the Authority's sinking fund redemption obligation for any such Term Bonds that previously have been redeemed (other than through the operation of the sinking fund) and canceled by the Trustee but not theretofore applied as a credit against any sinking fund redemption obligation.

Each Bond so purchased, delivered or previously redeemed shall be credited by the Trustee at 100% of the principal amount thereof against amounts required to be transferred from the Revenue Fund to the Principal Account on account of such Term Bonds. Upon the occurrence of any of the events described in subsections (a), (b) or (c) of this ~~paragraph~~ Section, the Trustee shall credit against the Authority's sinking fund redemption obligation on the next sinking fund payment date the amount of such Bonds so purchased, delivered or previously redeemed. Any principal amount of such Term Bonds in excess of the principal amount required to be redeemed on such sinking fund payment date shall be similarly credited in chronological order against future transfers from the Revenue Fund to the Principal Account and shall similarly reduce the principal amount of the Term Bonds to be redeemed on the next sinking fund payment date.

Within seven days of receipt of such amount, Term Bonds or instructions to apply a credit, any amounts remaining in the Principal Account in excess of the amount required to fulfill the sinking fund redemption obligation on the next sinking fund payment date shall be paid to the Authority for use by the Authority for any of the purposes described in Section 605(~~eb~~).

Any funds received by the Trustee pursuant to subsection (a) of ~~the preceding paragraph~~this Section but not expended as provided therein for the purchase of Bonds within seven days after such 70th day shall be paid to the Authority for use by the Authority for any of the purposes described in Section 605(~~eb~~).

~~In the event~~If the balances on deposit in the Principal Account or the Interest Account are insufficient for the purposes thereof on the day immediately preceding any principal or interest payment date, the Trustee shall transfer to such accounts such amounts as may be necessary therefor first from the ~~Replacement Fund~~ERRF pursuant to Section 609 and then from the Debt Service Reserve Fund pursuant to Section 608. ~~In the event~~If the balance on deposit in the Interest Account on any April 1 or October 1 or the balance in the Principal Account on any October 1 shall exceed the amount payable on account of interest or principal on the Bonds on such date, the excess ~~shall~~may be paid to the Authority for use by the Authority for any of the purposes described in Section 605(~~eb~~).

Section 608. Debt Service Reserve Fund. The Debt Service Reserve Fund shall be used to make transfers to the Bond Fund to the extent necessary to pay the principal of (whether at maturity or by mandatory sinking fund redemption) and interest on the Bonds as the same become due if the amounts on deposit therein are insufficient therefor. ~~In the event~~If the amount on deposit in the Debt Service Reserve Fund is less than the Debt Service Reserve, the Trustee shall transfer funds to the Debt Service Reserve Fund to restore the Debt Service Reserve, to the extent and in the manner provided in Section 605(~~ea~~)(3), from the Revenue Fund. ~~In the event~~If the amount on deposit in the Debt Service Reserve Fund is less than the Debt Service Reserve after such transfers from the Revenue Fund, the Trustee shall transfer from the ~~Replacement Fund~~ERRF pursuant to Section 609 funds sufficient to restore the Debt Service Reserve Fund to the amount of the Debt Service Reserve, or such lesser amount as may be available. ~~In the event~~If the amount on deposit in the Debt Service Reserve Fund shall exceed the Debt Service Reserve, the Trustee shall transfer such excess not less frequently than ~~monthly~~annually to the Bond Fund to be deposited, as directed by an Authorized Representative of the Authority, in the Interest Account or the Principal Account to the extent amounts in such accounts are less than the amounts required to be paid on the next interest payment date and principal payment date respectively, and then any excess remaining shall be deposited in the Revenue Fund.

Section 609. Equipment Repair and Replacement Fund. (a) The Trustee shall use amounts in the ~~Replacement Fund~~ERRF as needed in the following order of priority:

(1) to pay to the Authority for payment of Operating Expenses for which the balance, as certified by an Authorized Representative of Authority, in the Operating Fund may be insufficient;



(2) to make transfers to the Bond Fund to the extent and in the manner provided in Section 607; and

(3) to make transfers to the Debt Service Reserve Fund to make up a deficiency in the Debt Service Reserve.

(b) The Trustee shall use amounts in the ~~Replacement Fund~~ERRF not needed for the uses described in subsection (a) of this ~~section~~Section as and when directed by the Authority for any of the following purposes:

(1) reasonable and necessary expenses with respect to the System for major repairs, replacements or maintenance items of a type not recurring annually or at shorter intervals;

(2) reconstruction of parts of the System; or

(3) construction of additions to, or extensions of, the System.

(c) When the balances in the Bond Fund, the Debt Service Reserve Fund and the ~~Replacement Fund~~ERRF are sufficient to redeem all the Bonds then outstanding, the balances in the Bond Fund, the ~~Replacement Fund~~ERRF and the Debt Reserve Service Fund shall be transferred to a special account in the Bond Fund to be held by the Trustee for redemption of the Bonds at the earliest practicable date and for no other purpose.

(d) If at any time the Trustee determines that the balance in the ERRF is less than \$2,500,000, the Authority agrees to include in each of its Annual Budgets following such determination at least such amount as may be necessary to restore the balance in the ERRF to \$2,500,000 in substantially equal monthly installments starting with the first complete Fiscal Year following such determination and ending by not later than the end of the fifth complete Fiscal Year following such determination.

Section 610. Pledge of Revenues and Funds. All Revenues derived from the ownership or operation of the System and all moneys in the Construction Fund, the Revenue Fund, the Operating Fund, the Bond Fund, the Debt Service Reserve Fund and the ~~Replacement Fund~~ERRF shall be trust funds and are hereby pledged to the payment of the principal of and interest on the Bonds, subject only to the right of the Authority to make application thereof to other purposes as provided herein. The lien and trust hereby created are for the benefit of the bondholders and for their additional security until all the Bonds have been paid.

Section 611. Disposition of Balances in Funds after Payment of Bonds. After the principal of and premium, if any, and interest on all of the Bonds and all expenses and charges herein required have been paid or provision therefor has been made, the Trustee shall pay to the Authority any balance remaining in any fund then held by it.

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 6.13. 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 agreement. The Trustee shall deposit into any of the funds and accounts established under this 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 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 ~~Replacement Fund shall~~ 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 authorized at the time legal investments for investment of public funds by section 2.1-328 or 2.1-328.1 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, ~~or any subsequent provision of law applicable to such investments:~~

(~~a~~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;

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

(~~e~~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;

(d4) commercial paper with a maturity of 270 days or less ~~rated by Standard & Poor's Corporation within its ratings of A-1 or A-2, and which~~that complies with the requirements of Section ~~2.1-328.1~~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;

~~(e) — savings accounts, time deposits, certificates of deposit or other interest bearing accounts of any commercial bank, within the Commonwealth of Virginia, including the Trustee, provided that (1) such funds are secured in the manner required by the Virginia Security for Public Deposits Act or any successor provision of law, (2) such funds are fully insured by the Federal Deposit Insurance Corporation or any successor Federal agency, the Federal Savings and Loan Insurance Corporation or any successor Federal agency or fully collateralized in investments described in subsections (a) and (b) of this section, and (3) that no deposits made under this subsection shall be made for a period in excess of five years;~~

~~(f) — savings accounts and certificates of deposit of (1) savings and loan associations which are under supervision of the Commonwealth of Virginia and provided that such funds are fully insured by the Federal Deposit Insurance Corporation or any successor Federal agency, the Federal Savings and Loan Insurance Corporation or any successor Federal agency or fully collateralized in investments described in subsections (a) and (b) of this section, and (2) Federal associations organized under the laws of the United States of America and under Federal supervision, but only to the extent that such accounts and certificates are fully insured by the Federal Savings and Loan Insurance Corporation or any successor Federal agency, provided that no deposits made under this subsection shall be made for a period in excess of five years.~~

(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 ~~moneys~~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 ~~subsections~~subsection (a), ~~(e1)~~, ~~(e3)~~, ~~(5)~~, ~~(6)~~ and ~~(f7)~~ of this section so long as such investments are authorized for investment of public sinking funds by ~~§ 2.1-327~~ Section 2.2-4500 of the Code of Virginia of 1950, as amended, or any ~~subsequent~~other provision of ~~law applicable to such investments~~ Virginia law.

(c) Any investments described in ~~subsections~~subsection (a) ~~(1)~~, ~~(b2)~~ and ~~(e3)~~ 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 (A*i*) the repurchase obligation of the bank is collateralized by the securities themselves, (B*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, (C*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 (D*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 ~~subsections~~subsection (a)(1), (b2) and (e3) of this section, shall be considered investments in obligations described in ~~subsections~~subsection (a)(1), (b2) and (e3) 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 ~~funds~~fund, and any loss resulting from such investments shall be charged to such ~~funds~~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.

~~Moneys~~(e) Investments held in the following funds shall ~~be invested in obligations described in Section 701 of~~have the following ~~maturities~~maximum terms to maturity:

(A1) Construction Fund - not later than the dates on which such moneys will be needed to pay the Costs of the ~~system~~System;

(B2) Revenue Fund - not later than the ~~last~~25th day of the month in which such moneys shall be transferred pursuant to Section 605;

(C3) Operating Fund - not later than the date on which such moneys will be needed to pay Operating Expenses;

(D4) Bond Fund - not later than the date on which such moneys will be needed to pay principal of or interest on the Bonds;

(E5) Debt Service Reserve Fund - not to exceed ~~the earlier of fifty-six months~~ten years from the date of ~~acquisitions or October 1, 2013~~acquisition of the investment; and

(F6) ~~Replacement Fund~~ERRF - not to exceed ~~the earlier of seven~~ten years from the date of acquisition of the investment ~~or October 1, 2013.~~

(f) For purposes of this ~~section~~subsection (f) 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.

~~Notwithstanding anything herein to the contrary, the Trustee shall not invest moneys held in the Construction Fund that represent transferred proceeds from the Prior Bonds.~~

~~Notwithstanding anything in this Agreement to the contrary, moneys held in the Debt Service Reserve Fund shall only be invested in investments described in clauses (a) and (b) of the first paragraph of this Section 701.~~

~~Section 702~~

Section 703. Valuation of Investments. In computing the amount ~~of~~in any fund created by this ~~Agreement, obligations purchased as an investment of money will be valued~~agreement, the Trustee shall value investments on deposit in the fund at their costs~~cost~~ or the market value thereof, whichever is lower, exclusive of unpaid accrued interest, except ~~that investments in the Debt Service Reserve Fund will be valued at their cost plus any accreted value less any amortized premium unless money has been transferred from the Debt Service Reserve Fund to the Bond Fund to pay debt service on the Bonds, in which event~~for investments in the Debt Service Reserve Fund ~~will be valued at their market value until the balance~~and the ERRF. The Trustee shall value investments in the Debt Service Reserve Fund has been restored to and the amount of the Debt Service Reserve.

~~Section 703. Security for Deposits. All moneys held in the funds created by this agreement which are on deposit with any bank shall be continuously secured in the manner required by the Virginia Security for Public Deposits Act or any successor provision of law~~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 the 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 through~~Made By Trustee's Bond Department.~~ The Trustee may make investments permitted by ~~section 701~~Section 702 through its own bond department.

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*Draft*

Financial Policies and Procedures  
Appomattox River Water Authority  
Effective Date: \_\_\_\_\_

**A. 1986 Agreement of Trust**

The Appomattox River Water Authority (ARWA) is governed by the 1986 Agreement of Trust as amended (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 costs (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 25<sup>th</sup> 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 one year of debt service on all 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. After the Trustee makes the required transfers 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. 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.

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.

- **Surplus Fund.** The Surplus Fund is a placeholder for all surplus funds collected and swept from the Revenue Fund after the audited financials have been presented to and accepted by the ARWA Board. 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 25<sup>th</sup> 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 have one year of debt service 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

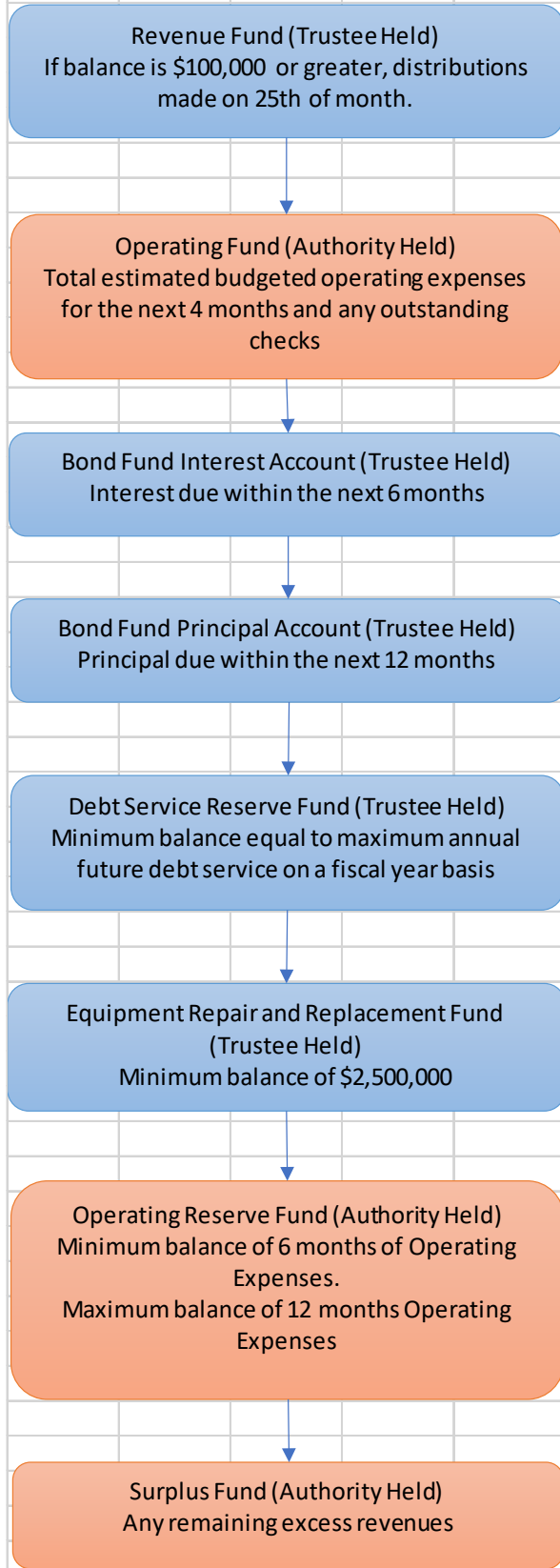
moves to the debt service portion of the budget. In addition, one year of the debt service for the new debt issuance will be added to the Debt Service Reserve Fund.

**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.

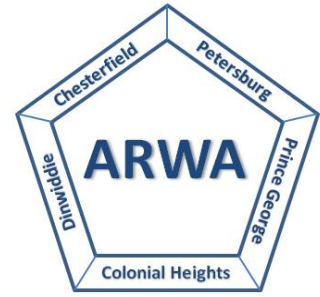
Contemporaneously with the closing of each ARWA bond issue, the Executive Director will work with counsel and ARWA's financial advisor to develop a list of the gross proceeds that are required to be yield-restricted, either from the closing date or starting at a later date. As part of the quarterly review 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.



## EXHIBIT E

TO: Appomattox River Water Authority Board of Directors

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

DATE: July 22, 2021

SUBJECT: 2020 Water Treatment Plant Performance Award for Excellence in  
Clarification, Filtration, and Backwash

The Authority was awarded the 2020 Gold Water Plant Performance Award for Excellence in Clarification, Filtration, and Backwash. To achieve this award, operations staff ensure the plant meets the following criteria:

- Clarification (monthly evaluation period)
  - Effluent turbidity  $\leq 1.0$  NTU 95% of time when average raw water turbidity for month  $\leq 10.0$  NTU
  - Effluent turbidity  $\leq 2.0$  NTU 95% of time when average raw water turbidity for month  $> 10.0$  NTU
- Filtration (monthly evaluation period)
  - Filtered water turbidity  $\leq 0.10$  NTU 95% of time
  - Filtered water turbidity  $\leq 0.30$  NTU 100% of time
- Filter Backwash (annual evaluation period)
  - Backwash recovery period  $\leq 15$  minutes (return to  $\leq 0.10$  NTU) in 95% of backwashes
  - Peak turbidity  $\leq 0.3$  NTU during backwash recovery period in 95% of backwashes
  - Filtered water turbidity  $\leq 0.10$  NTU 95% of time a filter is placed into service following a backwash

NTU = Nephelometric turbidity unit, i.e., the unit used to measure the turbidity of a fluid or the presence of suspended particles in water. The higher the concentration of suspended solids in water is, the dirtier it looks and the higher the turbidity is.



Each year, through the Virginia Optimization Program, the Virginia Department of Health (VDH) recognizes drinking water plants that perform above and beyond minimum standards, optimizing their treatment process, and running it efficiently and effectively. The mission of Virginia's Optimization Program is "to encourage waterworks to provide water with a quality that exceeds minimum regulatory standards (i.e. as perfect as possible) and to operate water systems in an exemplary manner (i.e. as effective and functional as possible)."

Over a period of time, through research and plant performance studies by the U.S. Environmental Protection Agency, American Waterworks Association and the waterworks industry, the VDH has developed performance goals for clarification and filtration processes in surface water treatment plants. For Virginia's Optimization Program, drinking water programs throughout the Commonwealth submit monthly operation reports containing operational data.

Board Action Requested:

No Board action is requested.

Office of Drinking Water  
For Achieving Virginia's Optimization Program Goals  
**Appomattox River Water Authority**

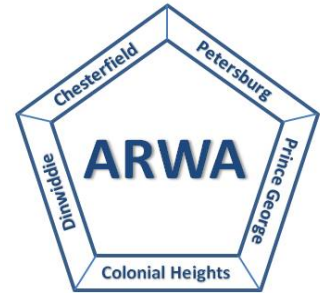
Is Awarded the  
**2020 Gold**  
Water Treatment Plant Performance Award for  
Excellence in Clarification, Filtration, and Backwash

*Robert D. Edelman*

Robert D. Edelman, PE  
Director, Division of Technical Services



# 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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## EXHIBIT F

TO: Appomattox River Authority Board of Directors

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

DATE: July 22, 2021

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 23, 2021 at the Appomattox River Water Authority at 2:00 pm.
- Issues with fishermen driving beyond warning buoys and fishing next to the dam. We are working with DWR to stop these occurrences. We are forwarding Officer Chester (game warden) videos of violations and he is addressing.
- There were no issues as a result of Tropical Storm Elsa.

#### ➤ Operations

- Obtained 2020 Gold Water Treatment Plant Performance Standard.
- Promoted one of the floaters to Assistant Operations Manager.
- Hired two operator trainees that started July 5<sup>th</sup>.
- Finished water met all permit requirements for May and June.
- Drained and washed basins and flocculators.
- The average daily finished water consumption for May was 38.18 mgd and the total delivered was 1.183 BG. The average daily finished water consumption for June was 40.25 mgd and the total delivered was 1.207 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 1<sup>st</sup> lake level was 0.50” and the June 30<sup>th</sup> lake level was 1.0”.
- Coping with delayed chemical deliveries.
- Addressing DEQ comments from inspection of waste lagoons.

➤ Maintenance

- Replacing fire alarm systems for plant.
- Place instrumentation technicians under maintenance
- Hired new instrumentation technician to replace tech that left. He starts July 26<sup>th</sup>.
- Ordered additional signage and buoys to keep boats away from dam.
- Divers inspecting underwater screens for raw water pump station 2. Divers found issues with flange connections and structural steel. Flange connections needed new nuts and bolts. Found bolts and nuts of dissimilar materials and failures in structural steel connections. Repaired with all stainless steel threaded rod and bolts and stainless steel plates.

➤ Instrumentation

- Working with SCADA vendor on pilot project for new SCADA host system.
- Addressing failures of UPS backups to PLC cabinets, i.e., changing out equipment.
- Working with City of Colonial Heights on calibration of tank level for Shepherd Stadium Tank.
- Replacing wet well level indication for Clear Well #2.

➤ Laboratory

- Met all the VPDES requirements for May and June for the outfalls.
- Met monthly requirements for VDH report submittals.
- Continuing to work with Golder to address a WET (Whole Effluent Toxicity) issue for the lagoons.
- Ongoing groundwater monitoring for lagoons.
- Completed 2021 semiannual river flow report and submitted to DEQ.

➤ Phase II In-plant Project

- 42” actuated valve has been delivered. 54” valve still outstanding.
- Installation contract awarded to MEB and is scheduled for this fall.

➤ 30” Transmission Fortification

- No change in status from the January meeting report.
- Purchase order has been issued to contractor. Waiting for a dryer time to minimize the pumping around operation.
- No issues with the crossing. It is checked on a set frequency.

➤ Prince George Meter Replacement

- The contractor is back on site working on the vault.
- There is an issue with delivery of the magmeter.

➤ Liquid Lime Study

- We received approval for the PER submitted to VDH.
- The construction for this conversion is currently shown in FY23/24 in line 58090 – Construction in the operating budget.

➤ Hydrilla

- There is a separate agenda item for a presentation by Peter Nash of Golder and Associates.

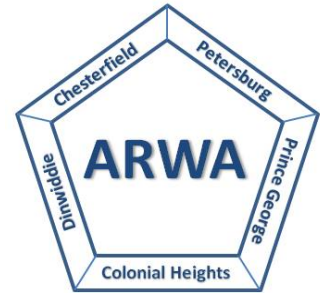
➤ Docks

Date	Address	Locality	Construction
5/17/2021	13531 Chesdin Landing Drive	Chesterfield	New
7/7/2021	20024 Chesdin Harbor Drive	Chesterfield	Breakwater
7/12/2021	13513 Chesdin Landing Drive	Chesterfield	New

➤ Miscellaneous

We are working with counsel on a issue on the Dinwiddie Side of the lake where a dock for one residence is located in front of another residence. We received notification of this issue on July 8<sup>th</sup>. An application was received in 1988 to build the dock in question. However, the actual dock installation was in front of an undeveloped lot that has since had a house constructed. I will provide updates when counsel has had a chance to review and provide an opinion.

# Appomattox River Water Authority



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## EXHIBIT G

TO: Appomattox River Water Authority Board Members

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

DATE: July 22, 2021

SUBJECT: Transformer Project Update

At the May 20<sup>th</sup> meeting the Board approved the purchase and installation of a new transformer (PMT-2) that is classified as a critical asset. The Authority is purchasing and furnishing the transformer. We ordered the transformer on May 24<sup>th</sup>. On July 1<sup>st</sup> we were informed that there was a price increase of \$15,618.00. We discussed the date we ordered the transformer, how long the quote was valid, etc. We were unsuccessful in getting the vendor to remove this additional cost. The original purchase order cost was \$114,297.00. With this increase the cost will now be \$129,915.00.

Funds are available from the In-plant project borrowing.

### Board Action Requested:

Staff requests the Board authorize the executive director to increase the purchase order for the transformer by \$15,618.00 to a new total of \$129,915.00.