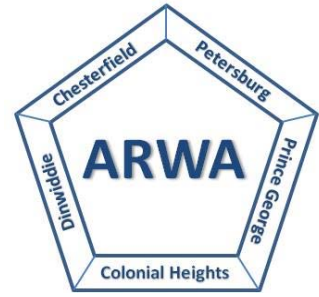


Appomattox
River
Water
Authority



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

Appomattox River Water Authority
Board of Directors Meeting

DATE: May 16, 2019

TIME: 2:00 PM

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

AGENDA

1. Call to Order/Roll Call
2. Approval of Minutes: Minutes of the Regular Board Meeting on March 21, 2019
3. Public Comment
4. Executive Director's Report:
 - Reservoir Status Update for April/May 2019
 - Seasonal Chesdin Water Wise Conservation Measures
 - Award of Virginia Department of Health 2018 Excellence in Waterworks Operations Performance
 - Status Report: Ongoing Projects / Operational / Financials
5. Presentation by Chesterfield County Internal Audit Department: ARWA Billing Special Project
6. 2012 Bond and 2017 Bond Debt Service Budget Adjustments
7. Approval of Proposed Fiscal Year 2020 Budget
8. Items from Counsel
9. Closed Session
10. Other Items from Board Members/Staff Not on Agenda
11. Adjourn

Cc: W. Dupler/George Hayes, Chesterfield
L. Lyons, Petersburg
W. Henley, Colonial Heights
F. Haltom, Prince George
R. Wilson, Dinwiddie Water Authority
A. Anderson, McGuire Woods

1. Call to Order/Roll Call

2. Approval of Minutes: Minutes of the Regular Board Meeting on March 21, 2019

Following are minutes of the Regular Scheduled Board Meeting held on March 21, 2019

Absent any corrections or revisions, we recommend approval of the minutes as submitted.

BOARD OF DIRECTORS MEETING
Appomattox River Water Authority
March 21, 2019 at 2:00 p.m.
Location: South Central Wastewater Authority
900 Magazine Road, Petersburg, VA 23803

MEMBERS PRESENT:

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

ALTERNATES PRESENT:

George Hayes, Secretary/Treasurer (Alternate, Chesterfield)
Robert B. Wilson, (Alternate, Dinwiddie)
Lionel Lyons, (Alternate, Petersburg)
Frank Haltom, (Alternate, Prince George)

ABSENT:

Aretha Ferrell-Benavides, (Petersburg)
William Henley, (Alternate, Colonial Heights)
William Dupler, (Alternate, Chesterfield)

STAFF:

Robert C. Wichser, Executive Director, (ARWA & SCWWA)
James C. Gordon, Asst. Executive Director (ARWA & SCWWA)
Arthur Anderson, (McGuire Woods)
Melissa Wilkins, Accounting/Office Manager (ARWA & SCWWA)
Kathy Summerson, Administrative Assistant (SCWWA)

OTHERS:

Denny Morris, (Crater Region Planning Commission)
Mike Wooden, (Arcadis)
Andrew Barnes, (Petersburg)
Keith Boswell, (Gateway Region)

Mr. Smith, Chairman, called the meeting to order at 2:02 p.m.

1. Call to Order/Roll Call

The roll was called.

2. Approval of Minutes: Minutes of the Regular Meeting of the Board held on January 16, 2019

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

RESOLVED, that the Minutes of the Regular Meeting of the Board held on January 16, 2019 are hereby approved:

For: 4 Against: 0 Abstain: 0

3. Public Comment and Public Hearing on Proposed FY 2019/2020 Budget

There were no public comments.

Mr. Smith opened the Public Hearing on Proposed FY 2019/2020 Budget and there were no comments.

Dr. Casey arrived at 2:04 p.m.

4. Executive Director's Report

- **Reservoir Status Update for February 2019**

Dr. Wichser reported on the Reservoir Status for February 2019.

- **Status Report: Ongoing Projects/Financials**

Mr. Gordon reported on Ongoing Projects/Financials.

5. **Items from Counsel**

There were no items from Counsel.

6. **Closed Session**

There was no Closed Session.

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

There were no other items from Board Members/Staff Not on Agenda.

8. **Adjourn**

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

Upon a motion made by Mr. Massengill and seconded by Mr. Ashcraft the meeting was adjourned at 2:10 p.m.

MINUTES APPROVED BY:

George Hayes
Secretary/Treasurer

3. Public Comment

The Guidelines for Public Comment are:

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:

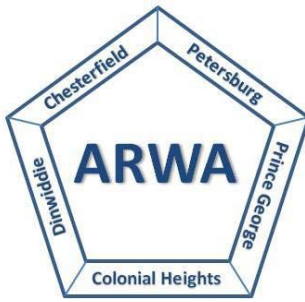
- Wait at your seat until recognized by the Chairman;
- Come forward and state your full name and address. If speaking for a group, state your organizational affiliation;
- Address your comments to the Board as a whole;
- State your position clearly and succinctly and give facts and data to support your 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.

4. Executive Director's Report:

- **Reservoir Status Update for April/May 2019**

- **Seasonal Chesdin Water Wise Conservation Measures**

Following for your review is the Appomattox River Water Authority's Seasonal Chesdin Water Wise Conservation Release.



FOR IMMEDIATE RELEASE

May 28, 2019

For more information contact:
Bob Wichser, Executive Director
(804) 590-1145

ARWA Encourages Seasonal Chesdin Water Wise Conservation Measures Starting May 29

The Appomattox River Water Authority (ARWA) issued a reminder today that the *Seasonal Chesdin Water Wise Conservation Measures* will be in effect throughout the summer - from Memorial Day through Labor Day. ARWA encourages its customers to embrace *voluntary* water conservation measures to promote sustainability of Chesdin Reservoir and its aquatic attributes.

“The preservation of this essential natural resource is an effort that requires support from all ARWA customers,” said City Manager and ARWA Board Chairman Doug Smith. “It is important that we all remain mindful that our water supply is not unlimited; and we ask all citizens to do what they can to limit nonessential water use.”

Under the *Seasonal Chesdin Water Wise Conservation Measures*, customers are encouraged to reduce and conserve water by following these Water Wise measures:

- Limit filling of decorative fountains and swimming pools only when necessary
- Limit washing of paved areas to two days per week unless for health or safety concerns
- Limit lawn and plant irrigation to three (3) days per week
- Irrigation with hand-held bucket, hand-held hose, soaker hose and drip irrigation systems is acceptable on any day and at any time
- Irrigation of vegetable gardens is acceptable on any day and at any time
- Watering of new landscaping is acceptable for the first ten days after planting
- Vehicle washing and charity car washes are acceptable on any day and at any time, but should be done using a hand-held bucket or a hand-held hose equipped with a positive shutoff device

All businesses are encouraged to limit their water consumption wherever possible under the *Seasonal Chesdin Water Wise Conservation Measures*. Water conservation by any other means is highly encouraged and should be practiced daily.

The Appomattox River Water Authority (ARWA) is the owner and manager of the Lake Chesdin Reservoir (a 3,100 acre public water supply reservoir located on the Appomattox River on the Chesterfield County and Dinwiddie County line) that provides drinking water on a wholesale basis to five member jurisdictions: the cities of Colonial Heights and Petersburg, and the Counties of Chesterfield, Dinwiddie and Prince George.

ARWA is committed to the effective management of the Chesdin Reservoir through the preservation and enhancement of a reliable source of high-quality treated water to meet the needs of its members; and the protection of the environmental health of the Chesdin Reservoir. The *Seasonal Chesdin Water Wise Conservation Measures* clearly support these objectives.

“Promoting water conservation is an important component of ARWA’s commitment to ensure reliable drinking water for future generations”, said ARWA Executive Director Bob Wichser. “The *Seasonal Chesdin Water Wise Conservation Measures* aim to provide our customers education and information resulting in more efficient use of our water resource.”

ARWA is mindful that a successful water conservation campaign is the best way to avoid or delay the implementation of mandatory water use restrictions in the future. Meeting long-term human and environmental water needs can be accomplished most effectively by all ARWA water users working together, particularly during the warmer months of the year when rainfall may be scarce.

ARWA customers who would like more information or have any questions about the *Seasonal Chesdin Water Wise Conservation Measures* are encouraged to visit the ARWA website at www.arwava.org or contact their local water service provider directly.

* * *

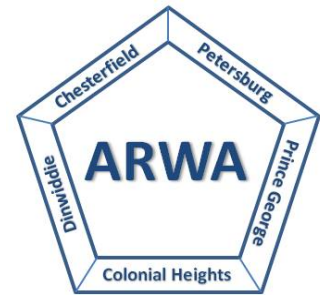
About ARWA

The Appomattox River Water Authority (ARWA) provides safe, clean water to customers in Chesterfield, Dinwiddie and Prince George Counties, and the Cities of Colonial Heights and Petersburg, from facilities located next to the Brasfield Dam, at Chesdin Reservoir, in south-central Virginia. For more information about ARWA, please visit <http://arwava.org/>

- **Award of Virginia Department of Health 2018 Excellence in Waterworks Operations Performance**

- **Status Report: Ongoing Projects / Operations / Financials**

Following are status reports concerning the Ongoing Projects, Operations, and Financials for the ARWA.



MEMORANDUM

TO: APPOMATTOX RIVER WATER AUTHORITY: BOARD OF DIRECTORS

**FROM: ROBERT C. WICHSER, EXECUTIVE DIRECTOR
JAMES C. GORDON, ASSISTANT EXECUTIVE DIRECTOR**

SUBJECT: STATUS REPORT – ON-GOING PROJECTS

DATE: MAY 16, 2019

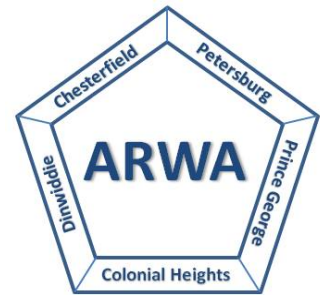
The following projects are underway. This report includes sections on Capital projects and large replacement projects.

In-Plant Capital Projects:

- The construction of the project relative to electrical components are tracking on schedule. The new generator is installed; however, startup will be deferred until fall because the plant is now in the high production season.
- The delivery of the pre-purchased raw and finished water pumps was contractually scheduled for April 18, 2019. These pumps have not been delivered as of this writing.
 - We note the following key dates:

▪ Purchase order issued	May 9, 2018
▪ First submission of Shop Drawings	July 2, 2018
▪ Final Approval of Shop Drawings	August 21, 2018
▪ Contract Delivery Date	April 18, 2019
▪ Sent Notice to Pentair of Contract Breach	April 1, 2019
▪ MEB Notice of Delay	April 15, 2019
▪ Latest Pentair Schedule	June/July 2019
- We are in constant contact with the supplier (Sydnor) and have advised them there are potential time and cost impacts associated with this matter. We also met with them at the construction meeting on May 1, 2019 and discussed the time and cost impacts.
- On May 7, 2019 we met with Pentair and Sydnor representatives to discuss potential time and cost impacts. Pentair indicated that they would accept liability for any fair costs associated with this issue. ARWA requested a letter to this fact.
- We are awaiting for the contractor (MEB) to provide an updated schedule and any financial claims related to this delay.
- ARWA has retained Troutman Sanders for any legal assistance with this matter.

Appomattox River Water Authority



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

MEMORANDUM

TO: APPOMATTOX RIVER WATER AUTHORITY BOARD OF DIRECTORS

**FROM: ROBERT C. WICHSER, EXECUTIVE DIRECTOR
JAMES C. GORDON, ASST. EXECUTIVE DIRECTOR**

SUBJECT: OPERATING AND FINANCIAL STATUS REPORT

DATE: MAY 16, 2019

Operating Status Report

General:

- The next scheduled normal Board of Directors Meeting is **Thursday July 18, 2019** at the Appomattox River Water Authority at 2:00 pm.
- The ARWA heard back from the DEQ on the new Groundwater guidance. The ARWA's current Groundwater Monitoring Plan is currently being reviewed and updated to meet the new guidance.
- The annual flushing of the ARWA transmission lines is complete.
- Billing meters have been calibrated by a 3rd party.

Operations:

- Finished water met all permit requirements for March and April 2019. Copies of the VDH monitoring reports are available if anyone would like to see them.
- Staff is currently cleaning the flocculation and sedimentation basins in preparation for summer demands.

Maintenance:

- Staff has completed repairs to the Raw Sample tap at the dam.
- Work continues on the transmission line to repair/replace Air Release Valves and improve on accessibility
- Irrigation inspections are being scheduled as applications are received. As of 5/6/2019 the ARWA had performed 29 inspections.

Instrumentation/IT:

- New fiber is being run as part of a network upgrade and the in-plant upgrade.
- Filter Operating Table upgrades are nearing completion. The contractor is working on the next to the last panel now.

Laboratory:

- Staff has performed the first lake study of the year. Currently reservoir algae numbers are very low.
- Annual Proficiency Testing for certified parameters is ongoing.

- Staff will be sampling for the permit required Whole Effluent Toxicity test the week of 5/6/2019.

Financial Status Report:

Following is the Executive Summary of the Monthly Financial Statement that includes the YTD Budget Performance and the Financial Statement for April 2019.

Appomattox River Water Authority-Balance Sheet
For Month Ending April 30, 2019

Assets

Current Assets

Petty Cash	\$	400
SunTrust Operating Fund	\$	2,386,860
SunTrust Replacement Fund	\$	239,318
<i>Total Unrestricted Cash</i>	<u>\$</u>	<u>2,626,578</u>
Water Revenue	\$	4,437,960
Reserve Account	\$	3,002,223
Replacement Account	\$	848,895
Debt Service Reserve	\$	1,067,822
Bond Principal/Interest	\$	2,325,700
Bond Construction	\$	6,659,210
<i>Total Restricted Cash</i>	<u>\$</u>	<u>18,341,810</u>
Total Checking/Savings	\$	20,968,387
Accounts Receivable	\$	9,426
Other Current Assets	\$	12,599
Inventory	\$	160,010

Total Current Assets **\$ 21,150,423**

Fixed Assets

Land and Land Rights	\$	1,090,685
Water System	\$	85,625,821
Equipment	\$	1,176,668
Hydro	\$	34,873
Construction in Progress	\$	803,082
Accumulated Amortization	\$	(34,175)
Accumulated Depreciation	\$	(47,059,529)
Total Fixed Assets	<u>\$</u>	<u>41,637,425</u>

Other Assets

Def Out Res-Post ER Pension Costs	\$	74,997
Deferred Outflow-OPEB GLI	\$	7,729
Def Out Res-Net Dif Pension Inv	\$	36,171
Total Other Assets	\$	118,897

Total Assets **\$ 62,906,745**

Liabilities & Equity

Current Liabilities

Accounts Payable	\$	340,597
Retainage Payable	\$	-
Accrued Interest Payable	\$	198,754
Total Current Liabilities	\$	539,352

Long Term Liabilities

Def Inf Res-Pen Chg Assumptions	\$	132,365
Def Inf Res-Pens Dif Proj/Act E	\$	82,326
Net Pension Liability	\$	(118,326)
Def Infl-OPEB Chg of Assumptions	\$	3,106
Deferred Inflow-OPEB GLI	\$	16,000
Bonds Payable-2010	\$	7,415,016
Bonds Payable-2012	\$	2,372,000
Bonds Payable-2017	\$	12,750,000
Accrued Leave Payable	\$	193,901
Post Employment Benefit	\$	107,038
OPEB Liability-GLI	\$	119,000
Total Long-Term Liabilities	<u>\$</u>	<u>23,072,426</u>

Total Liabilities **\$ 23,611,778**

Equity

Retained Earnings	\$	(3,281,219)
Reserve for Operations	\$	3,341,142
Reserve for Water Revenue	\$	5,991,639
Reserve for Replacements	\$	500,000
Reserve for Bond Interest	\$	198,754
Reserve for Debt Service	\$	2,142,022
Reserve for Bond Principal	\$	1,370,000
Reserve for Reserve	\$	2,602,136
Fixed Assets, Net of Debt	\$	30,696,880

Total Equity **\$ (4,266,387)**
\$ 39,294,967

Total Liabilities & Equity **\$ 62,906,745**

\$ -

Appomattox River Water Authority
YTD Income Statement for the period ending April 30, 2019

Water Rate Center

Revenues and Expenses Summary

<i>Budget</i>	<i>Budget</i>	<i>Actual</i>	<i>YTD Budget</i>	<i>Variance</i>
<i>FY 18/19</i>	<i>Year-to-Date</i>	<i>Year-to-Date</i>	<i>vs. Actual</i>	<i>Percentage</i>

Operating Budget vs. Actual

Revenues

Water Sales	\$ 10,163,119	\$ 7,622,339	\$ 8,002,246	\$ 379,907	4.98%
Misc. Revenue	\$ 30,000	\$ 25,000	\$ 47,100	\$ 22,100	88.40%
Total Operating Revenues	\$ 10,193,119	\$ 7,647,339	\$ 8,049,346	\$ 402,007	5.26%

Expenses

Personnel Cost	\$ 2,378,100	\$ 1,981,750	\$ 1,946,093	\$ (35,657)	-1.80%
Contractual/Professional Services	\$ 952,500	\$ 795,583	\$ 719,119	\$ (76,464)	-9.61%
Utilities	\$ 824,000	\$ 686,667	\$ 689,064	\$ 2,397	0.35%
Communication/Postal/Freight	\$ 39,200	\$ 32,667	\$ 32,939	\$ 272	0.83%
Office/Lab/Purification Supplies	\$ 101,000	\$ 84,167	\$ 91,686	\$ 7,520	8.93%
Insurance	\$ 90,000	\$ 90,000	\$ 85,804	\$ (4,196)	-4.66%
Lease/Rental Equipment	\$ 20,000	\$ 16,667	\$ 14,892	\$ (1,775)	-10.65%
Travel/Training/Dues	\$ 51,400	\$ 42,833	\$ 29,315	\$ (13,519)	-31.56%
Safety/Uniforms	\$ 26,000	\$ 21,667	\$ 21,712	\$ 45	0.21%
Chemicals	\$ 2,300,000	\$ 1,916,667	\$ 1,661,313	\$ (255,353)	-13.32%
Repair/Maintenance Parts & Supplies	\$ 330,000	\$ 275,000	\$ 245,412	\$ (29,588)	-10.76%
Total Operating Expenses	\$ 7,112,200	\$ 5,943,667	\$ 5,537,350	\$ (406,317)	-6.84%
Operating Suplus/(Deficit)	\$ 3,080,919	\$ 1,703,672	\$ 2,511,997	\$ 808,324	47.45%

Replacement Outlay Budget vs. Actual

Machinery & Motors	\$ 160,000	\$ 133,333	\$ 161,487	\$ 28,153	21.11%
Instrumentation	\$ -	\$ -	\$ -	\$ -	#DIV/0!
SCADA	\$ 50,000	\$ 41,667	\$ 107,024	\$ 65,357	156.86%
Computer Equipment	\$ 10,000	\$ 8,333	\$ -	\$ (8,333)	-100.00%
Furniture/Fixtures	\$ 6,000	\$ 5,000	\$ -	\$ (5,000)	-100.00%
Motor Vehicles	\$ 28,000	\$ 23,333	\$ 35,540	\$ 12,207	52.31%
Special Studies	\$ 400,000	\$ 333,333	\$ 40,705	\$ (292,628)	-87.79%
Valve Replacement	\$ 50,000	\$ 41,667	\$ 19,034	\$ (22,633)	-54.32%
Concrete	\$ 25,000	\$ 20,833	\$ 3,100	\$ (17,733)	-85.12%
In-Plant Capital Upgrade	\$ -	\$ -	\$ 5,921,201	\$ 5,921,201	#DIV/0!
Flow Meters	\$ 40,000	\$ 33,333	\$ 13,454	\$ (19,879)	-59.64%
Replacement-Other	\$ -	\$ -	\$ 64,000	\$ 64,000	#DIV/0!
Total Capital Outlay	\$ 769,000	\$ 640,833	\$ 6,365,545	\$ 5,724,711	893.32%

Debt Service Budget vs. Actual

Interest Income	\$ -	\$ -	\$ 359,183	\$ 359,183	#DIV/0!
Interest Jurisdictions (Income)	\$ -	\$ -	\$ -	\$ -	#DIV/0!
Interest Expense	\$ -	\$ -	\$ 772,022	\$ 772,022	#DIV/0!
Principal Payments	\$ 2,142,225	\$ 2,142,225	\$ 1,370,000	\$ (772,225)	-36.05%

5. Presentation by Chesterfield County Internal Audit Department: ARWA Billing Special Project

Following is the final report on the ARWA Billing Special Project provided by the Chesterfield County Internal Audit Department.



Chesterfield County, Virginia Internal Audit

9901 Lori Road, Room 142 – P.O. Box 40 – Chesterfield, VA 23832
Phone: (804) 748-1240 – Fax: (804) 768-9346 – Internet: chesterfield.gov

DATE: April 23, 2019

TO: Appomattox River Water Authority Board of Directors
Dr. Robert C. Wichser, Executive Director

FROM: Greg L. Akers
Director of Internal Audit

SUBJECT: Appomattox River Water Authority (ARWA) Billing Special Project

The Office of Internal Audit has completed the audit and the final report is attached.

We would like to thank the ARWA Board of Directors Internal Audit subcommittee and ARWA staff for their cooperation and assistance during this audit.

Attachment



Providing a FIRST CHOICE
Community through
Excellence in Public Service

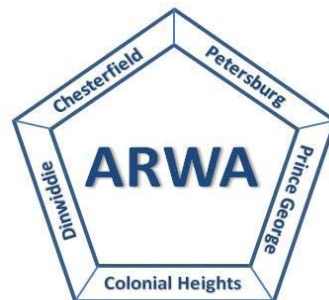
Chesterfield County
Internal Audit
Department

Greg L. Akers, Director
Steve Sanderson, Audit Manager
Khara Lounsbury, Technology Audit Manager
Lora Holland, Senior Auditor
Christopher Meade, Senior Auditor
Terry Parker, Senior Auditor
Jim Boudreau, Staff Auditor
Sandra Fuentes, Staff Auditor
Christian Wingfield, Staff Auditor
Annette Stinson, Administrative Analyst

Appomattox River Water Authority Billing Special Project

April 23, 2019

Appomattox River Water Authority



HIGHLIGHTS	1
INTRODUCTION	2
FINDINGS/RECOMMENDATIONS	
Financial Policies & Procedures and Billing	5
Financial Report and Budget Disclosures	9
Cost Allocation True-up Options	12

Appomattox River Water Authority (ARWA)

Billing Special Project



Highlights

Financial Policies & Procedures and Billing

ARWA produces an annual budget approved by the Board establishing rate amounts charged to each jurisdiction. Generally, operations and maintenance (Base Rate), and expansion costs (Expansion Rate) budget amounts were consistent with the Service Agreement definitions. However, budgets since FY16 have also included an Allocation Rate component which is not authorized or defined in the Service Agreement.

Recommendation: Establish formal financial policies and procedures for budget development and billing that comply with rates authorized in the Service Agreement.

Financial Report and Budget Disclosures

ARWA's annual budgets and audited financial statements comply with their bylaw requirements. However, ARWA's financial statements do not describe significant service agreement and operational details useful for assessing the entity's financial results.

Recommendation: Define Service Agreement authorized rates for jurisdiction charges in future financial statements and budgets. Expand financial statement operational disclosures for plant capacity, allocation, flow, and revenue by rate type. Consider further strengthening financial reporting and budget disclosures by participating in GFOA award programs.

Cost Allocation True-up Options

ARWA and Chesterfield Utilities provided us their calculations including all categories where the Allocation Rate was used. We evaluated the financial impact calculations and compared them to the budgets, the service agreement rate definitions, and the billings. We noted ARWA's updated calculations used budget amounts, but Chesterfield's estimates used actual amounts billed.

Recommendation: Present a revised true-up to the ARWA Board of Directors using actual amounts billed. The Board should consider acting on the revised true-up to correct jurisdiction billing impacts from using Allocation Rate

Management concurred with 7 of 11 recommendations detailed in the report. We recommend staff periodically update ARWA's Board on their progress for recommendation responses with future implementation dates.

INTRODUCTION

BACKGROUND

Chesterfield County Internal Audit agreed to conduct this audit based on a request from the Chesterfield County Administrator, and an invitation from ARWA's Board of Directors (Board). Audit scope was determined in consultation with the Board's Internal Audit Subcommittee.

ARWA was established in 1960 to provide a water reservoir and distribution system to supply the participating jurisdictions (Cities of Petersburg and Colonial Heights, and the Counties of Prince George, Chesterfield, and Dinwiddie). ARWA was incorporated under the Virginia Water and Sewer Authorities Act (Title 15.2, Chapter 51 of the Code of Virginia) by the Governing Bodies of the five participating jurisdictions. ARWA's Bylaws establish a five-member Board, with each Governing Body appointing one Member to four-year terms that may be reappointed. The Executive Director, appointed by the Board, is responsible for all day to day operations.

When the Authority was established, the Board adopted a Service Agreement outlining the service area, facilities, estimated project cost, and rates charged to the participating jurisdictions. Amendments or modifications to the Service Agreement requires consent of the governing bodies of the Authority and all participating jurisdictions. Service Agreement Amendments and Modifications establish funding mechanisms to increase plant capacity and adjust each jurisdiction's allocation. Jurisdictions may fund their expansion cost share directly or through ARWA's debt service.

ARWA bills jurisdictions quarterly using two rate types set in the annual budget:

- **Base Rate** provides for the full system operations and maintenance costs using a uniform per 1,000-gallon rate applied equally to all jurisdictions.
- **Expansion Rate** funds ARWA's expansion debt service using a per 1,000-gallon rate proportionate to each jurisdiction's expansion share.

In Fall 2018, Chesterfield County noted that the jurisdictions were being billed for their share of non-expansion debt service and other items based on a different rate than the Base Rate. At the October 2018 Board Meeting, the Authority acknowledged the use of an alternate rate and proposed a "true-up" to match the jurisdiction's past billings to the proper rates. The Board discussion led to the request for an independent evaluation of the Authority's compliance with the established rate structures prior to the Board voting on the proposed "true-up." The Board established an Internal Audit subcommittee to develop the audit scope. The Subcommittee shared the proposed audit plan at the November Board meeting, and the Board allowed the Subcommittee to finalize objectives and scope.

OBJECTIVES

Objectives of the audit were to evaluate:

- Service agreement requirements with billing policy and procedures.
- Jurisdiction billing calculation and support.
- Support from any participant jurisdictions questioning billing accuracy.
- Disclosure of ARWA's governance structure and service agreements in the audited annual financial report and the annual proposed budget.
- Billing allocation method of the 2012 and 2017 debt service, in-plant engineering, reserve, and capital program plan costs in comparison with bond requirements and/or ARWA Board policy.
- Calculations for cost allocation true-up options.

SCOPE

Our audit work covered July 1, 2015 through December 31, 2018 and the current operating environment. We considered the following code, policies, and procedures during our audit:

<i>Virginia Water and Waste Authorities Act, Title 15.2 Chapter 51, Code of Virginia</i>	<i>ARWA Articles of Incorporation</i>
<i>ARWA Bylaws</i>	<i>ARWA Bond Transcript Documents, for outstanding Series 2017, 2012, and 2010</i>
<i>ARWA Service Agreement with Jurisdictions (1964); First Amendment (1982); Modification Agreement (1983); Second Amendment (1986); and Third Amendment (2001)</i>	

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. Chris Meade, Senior Auditor, performed the audit work. Chesterfield County Internal Audit is a department within the organization of Chesterfield County/Schools.

Since ARWA is a separate legal entity from Chesterfield County and Schools, we made certain adjustments to our routine audit reporting process. To be independent in fact and appearance, auditors must be free from conflicts of interest and free from interference in how the work is conducted and reported. Government Auditing Standards require we identify, safeguard against, or report threats to independence. Chesterfield County is one of the five ARWA member jurisdictions. Each jurisdiction has one representative on ARWA's Board of Directors. To safeguard against threats to independence, we established our audit scope and provided a draft report for management responses to audit recommendations to ARWA's Internal Audit subcommittee (Colonial Heights and Dinwiddie Board members) and the Executive Director. Our final report, including management responses to recommendations, is addressed to the ARWA Board of Directors. Our audit information requests were made through the Executive Director, with copy to the Internal Audit subcommittee.

METHODOLOGY

Detailed information regarding the methodology can be found in the individual findings listed in the report. Our methodology included the following:

- Analyzing governing documents for rate establishment authority and billing requirements, to evaluate compliance with billing policies and procedures.
- Evaluate governance and billing structure disclosures in the annual financial statements and budget.
- Review billing accuracy questions from participant jurisdictions and evaluate cost allocation true-up options from ARWA staff.

INTERNAL CONTROL CONCLUSION

According to Government Auditing Standards, internal controls, in the broadest sense, encompass the agency's plan, policies, procedures, methods, and processes adopted by management to meet its mission, goals, and objectives. Internal controls include the processes for planning, organizing, directing, and controlling program operations. It also includes systems for measuring, reporting, and monitoring program performance. An effective control structure is one that provides reasonable assurance regarding:

- efficiency and effectiveness of operations;
- accurate financial reporting; and
- compliance with laws and regulations.

Based on the results and findings of the audit test work, auditors concluded that there are several opportunities for improvement to internal control procedures to better provide reasonable assurance to assist management in meeting its missions, goals, and objectives. Recommendations specific to improving these controls can be found in detail further in the audit report.

CLOSING

We would like to thank ARWA staff and management for their cooperation and assistance during this audit.

FINDINGS, RECOMMENDATIONS, RESPONSES
Financial Policies & Procedures and Billings
(Point Sheet 1)

CRITERIA:

The Virginia Water and Waste Authorities Act authorizes the governing bodies of Virginia localities to create a water authority with powers outlined in Section 15.2 Chapter 51 of the Code of Virginia.

The Appomattox River Water Authority (ARWA), created pursuant to this Act, adopted Bylaws outlining the role of the Executive Director of the Authority. The Executive Director shall be responsible for payment of bills, receipt of monies, and records or revenues and expenses. He or she shall prepare an annual budget for Board consideration and shall be responsible for the administration of the approved budget. The budget sets the rates charged to the participating jurisdictions.

The Service Agreement and subsequent Amendments to the Service Agreement (“Service Agreement”) provides the Authority with two billing rates:

- **Base Rate** (per 1,000 gallons) - Applied equally to each participating jurisdiction’s water purchases and provides fully for operations and maintenance.
- **Expansion Rate** (per 1,000 gallons) - Applied to each participating jurisdiction proportionally in accordance with debt funded expansion percentages.

The Government Finance Officers Association (GFOA) best practices recommend formally adopting financial policies and procedures. This includes budget development, charges, fees, and billing.

CONDITION(S):

The Authority produces an annual budget approved by the Board establishing rate amounts charged to each jurisdiction. Generally, operations and maintenance (Base Rate), and expansion costs (Expansion Rate) budget amounts were consistent with the Service Agreement definitions. However, budgets since FY16 have also included an **Allocation Rate** component which is not authorized or defined in the Service Agreement.

- **Allocation Rate** (per 1,000 gallons) – Applied to each participating jurisdiction based on their share of total capacity (Chesterfield 69.31%, Colonial Heights 4.39%, Dinwiddie 6.75%, Petersburg 16.69% and Prince George 2.86%).

Instead of using the Base Rate as required by the Service Agreement, this Allocation Rate has been applied to the 2012 and 2017 debt service (non-expansion), general reserve, and capital plan contributions in the budget since FY16.

Quarterly billings are based on water usage by jurisdiction. We selected bills for testing water use to monthly flow reports (i.e. jurisdiction meter readings) and that rates agreed with the approved budget. No exceptions were noted. However, the quarterly bills since FY16 have incorporated the Allocation Rate noted above that was not defined in the Service Agreement.

FINDINGS, RECOMMENDATIONS, RESPONSES

Financial Policies & Procedures and Billings

(Point Sheet 1)

The Expansion Rate is used to bill jurisdictions for their share of additional capacity. The Service Agreement applies this rate to water usage, which requires a billing “true-up” at fiscal year-end to equal budgeted debt service payments. A more efficient policy would charge jurisdictions for their expansion debt service share independent of water usage.

CAUSE(S):

- The Authority has not formally adopted financial policies and procedures, including budgeting and billing.
- In late 2013, the Authority and the participating jurisdictions considered a new Service Agreement that introduced the Allocation Rate. During FY16 budget development, the 2012 Bond debt service billings were changed from the Base to the Allocation Rate. Authority staff and counsel have not been able to confirm exactly when or how the staff was directed to prepare the FY16 budget using the allocation rate, but at the time it appeared reasonably likely that the proposed Service Agreement would be approved.
- The service agreement requires a per 1000-gallon rate for expansion debt service charges to jurisdictions.

EFFECT(S):

- Certain charges to the participating jurisdictions since FY16 use a rate basis (i.e. Allocation Rate) not approved in the Service Agreement.
- The use of a per 1000-gallon rate for expansion debt service billing requires a “true-up” to equal expansion debt service cost.

RECOMMENDATION(S):

We recommend ARWA:

1. Establish formal financial policies and procedures for budget development and billing, that comply with rates authorized in the Service Agreement.
2. Develop budgets and jurisdiction billings using authorized rates.
3. Consider obtaining an independent certification of billing rates in the annual budget.
4. Consider updating the Service Agreement to allow billing expansion debt service costs independent of water usage.

FINDINGS, RECOMMENDATIONS, RESPONSES
Financial Policies & Procedures and Billings
(Point Sheet 1)

***Auditor comment:** ARWA's Internal Audit Subcommittee meet on April 15, 2019 with Authority staff to consider Management responses to our DRAFT report. Management's responses were provided by ARWA's Executive Director and are included after each recommendation throughout the report. Auditor comment was added with clarification after certain Management responses. We recommend staff periodically update ARWA's Board on their progress for recommendation responses with planned future implementation dates.*

MANAGEMENT'S RESPONSE(S):

1. *Concur. The Authority's financial policy and procedure including method and means for budgeting is presented in the Authority's Service Agreement and Section 601 of ARWA's Agreement of Trust, and in the operating budget and capital improvement budget provision of ARWA's Financial Policies adopted May 21, 2015. The Authority has strictly followed these financial requirements except as noted with respect to the Allocation Rate. ARWA's financial advisor, Davenport, prepared financial policies (including policies for developing the operating and capital improvement budgets), and the ARWA Board adopted the policies on May 21, 2015.*

We concur that financial policies and procedures for budget development and billing need to be recorded by written documentation (Standard Operating Procedures). This action will provide guidance to current and future management staff and can be developed in-house in a timely manner.

2. *Concur. This recommendation has been followed by the Authority except as noted with respect to the Allocation Rate and will continue to be followed.*
3. *Do not concur. We discussed this recommendation with our outside financial Accountant and Auditor. Both of these firms service a multitude of Virginia Cities, Counties, and Towns along with water & wastewater Authorities. Neither were familiar with this recommendation nor knew of any clients that were bringing in an outside individual to provide for independent certification of billing rates in an annual budget. Based on our outside financial experts, we do not choose to move forward with this recommendation.*
4. *Do not concur. ARWA has facilitated this effort to the maximum extent possible. The recommendation cannot be implemented without amending the Service Agreement, which requires the approval of the governing bodies of ARWA and each of the participating jurisdictions.*

In late 2013 the ARWA Board directed staff and legal counsel to update and consolidate the 1964 service agreements. As understood by ARWA counsel, the primary purpose of the effort was to establish for each member jurisdiction a fixed property right in the capacity of the ARWA system that could be sold to other member jurisdictions. Currently, allocations of capacity are made to the member jurisdictions only as the basis for apportioning the obligation

FINDINGS, RECOMMENDATIONS, RESPONSES
Financial Policies & Procedures and Billings
(Point Sheet 1)

to pay certain capital costs and are subject to change based on water demand. Additional goals for the updated service agreement were stated by various stakeholders or became apparent over time including adding more stringent water quality standards, more clarity regarding capital cost sharing and annual rate setting, and a more formalized water supply planning process.

Status of Updated Service Agreement: The first draft of the updated Service Agreement was sent to the member jurisdictions in late October 2013. Over the next three years, eighteen drafts of the Agreement were produced, commented upon, and discussed and negotiated in meetings. However, the document never reached the point at which the parties thought it was ready to present to the ARWA Board for approval. ARWA counsel believes that the main obstacle was (and is) the fact that the ARWA-owned transmission system is incapable of providing to each of the member jurisdictions the capacity in the water treatment plant that they have paid for and would "own" under the updated Service Agreement. The focus was the Branders Bridge project and the dispute over which member jurisdictions would pay for it and how much each would pay. ARWA engaged Judge Gamble as mediator to break the Branders Bridge impasse and held a formal mediation session in November 2016. For the reasons outlined in Judge Gamble's summary, the mediation effort failed. By the winter of 2016-2017, any serious effort to pursue a full-scale update of the 1964 service agreements had ceased.

Status of Fourth Amendment: However, the primary purpose for the updated Service Agreement, the creation of fixed, saleable allocations of the ARWA system, remains as vital as ever. In response, ARWA's Executive Director and counsel developed the Fourth Amendment to the 1964 Service Agreements (the "Fourth Amendment") as a way to achieve this purpose without a complete rewrite. The Fourth Amendment freezes the "Allocations of Total Capacity" where they stand today and provides that the allocations can no longer be changed through increases or decreases in water demand. It further provides that the member jurisdictions can sell portions of their allocations to each other on a permanent or a temporary basis. Finally, it imposes a limit on how much capacity can be purchased in each five-year time period. On May 18, 2017, the ARWA Board approved the Fourth Amendment by a 3-2 vote. ARWA then forwarded the Fourth Amendment to the member jurisdictions' governing bodies for consideration. On June 6, the Petersburg City Council approved the Fourth Amendment. On June 13 and July 11, respectively, the governing bodies of Prince George County and Colonial Heights followed suit. To date, Chesterfield and Dinwiddie have taken no action on the Fourth Amendment. This item falls under the purview of the Board of Directors.

***Auditor comment:** We can appreciate that the effort to modify the Service Agreement for expansion debt service billing could outweigh the benefit. An alternative approach could be for ARWA to apply known adjustments for expansion debt service billing, currently done annually, to the quarterly billings throughout the year.*

FINDINGS, RECOMMENDATIONS, RESPONSES
Financial Report and Budget Disclosures
(Point Sheet 2)

CRITERIA:

Virginia Code § 30-140 requires government authorities, such as ARWA, to have a fiscal year audit performed according to the specifications of the Auditor of Public Accounts. ARWA's Bylaws also require an annual audit by an independent Certified Public Accountant with results reported to the Board.

ARWA's Bylaws require the Authority's budget comply with publication, notice, and public hearing procedures set forth in Virginia Code § 15.2-2506, as if the Authority were a county, city, or town.

Audit reports in financial statements provide assurance that management is reporting results in accordance with generally accepted accounting principles. Financial statements typically present a basic fiscal overview of a governmental unit. A Comprehensive Annual Financial Report (CAFR), by contrast, presents a wider variety of important information intended to help the reader properly understand the basic statements. In addition to the basic financial statements, a CAFR includes a transmittal letter with additional background and future plans, and a statistical section to illustrate trends over the past ten years.

GFOA's Best practices include:

- Certificate of Achievement for Excellence in Financial Reporting Program - recognizes individual governments' CAFRs that go beyond the minimum requirements of generally accepted accounting principles. The program's goal is to ensure that financial statement users have the information needed to assess the financial health of participating governments.
- Distinguished Budget Presentation Award Program - recognizes governments meeting program criteria for communicating policies, operations, and financial plans in their budget documents.

CONDITION(S):

ARWA's annual budgets and audited financial statements comply with their bylaw requirements. However, ARWA's financial statements do not describe significant service agreement and operational details useful for assessing the entity's financial results such as:

- overall plant capacity;
- participating jurisdiction plant allocation;
- annual flow by jurisdiction;
- service agreement authorized rates and definitions;
- annual budgeted amounts for Base Rate and Expansion Rate;
- revenue by jurisdiction and rate type; and
- historical trend information.

FINDINGS, RECOMMENDATIONS, RESPONSES
Financial Report and Budget Disclosures
(Point Sheet 2)

ARWA's budget details revenue by jurisdiction; however, the rate types used (O&M, Reserve Policy, and Debt Service) are not defined and do not match the rate types used in the Service Agreement (Base and Expansion). Project descriptions and additional details are not provided for capital projects listed for the Construction Fund.

CAUSE(S):

- ARWA has not pursued GFOA best practices in developing their annual report or budget document.

EFFECT(S):

- It is difficult for financial statement and budget users to evaluate compliance with service agreement requirements.
- Financial statement and budget users have limited operational, policy, and trend information to help interpret activity, results, and future plans.

RECOMMENDATION(S):

We recommend ARWA:

5. Define Service Agreement authorized rates for jurisdiction charges in future financial statements and budgets.
6. Expand financial statement operational disclosures by jurisdiction for plant capacity, allocation, flow, and revenue by rate type.
7. Consider adding necessary information to transition the current annual financial report to a CAFR and participating in GFOA's Certificate of Achievement for Excellence in Financial Reporting Program.
8. Consider expanding budget information to participate in the GFOA's Distinguished Budget Presentation Award Program.

MANAGEMENT'S RESPONSE(S):

5. *Concur. This recommendation has been and continues to be followed by the Authority. The cited Bylaws provision may be overridden by applicable law, and in 2013 the Virginia General Assembly amended the notice and public hearing provision of 15.2-5136 to cover the setting of water rates which ARWA has been following as required.*

Presently ARWA's practices conform to the original 1964 Water Service Agreements and the First Amendment to the 1964 Water Service Agreements (1982) as follows:

- *Uses fiscal basis for setting rates;*
- *Rates have two components - Base Rate and Expansion Rate;*
- *Base Rate is to provide enough money to pay the original bonds, System O&M, the First Improvement Cost and all Future Improvement Costs;*

FINDINGS, RECOMMENDATIONS, RESPONSES
Financial Report and Budget Disclosures
(Point Sheet 2)

- *Base Rate is to be a uniform rate per 1,000 gallons and is developed based on usage projections and adjustment as necessary throughout the year;*
 - *The Expansion Rate is a non-uniform per 1,000 gallon rate necessary to provide for the First Expansion Cost and all Future Expansion Costs;*
 - *The Expansion Rate is determined every July 1 based on projected actual water usage (not from capacity allocation) so that each Participating Jurisdiction covers its share of the Expansion Costs (an Expansion Share);*
 - *Participating Jurisdictions to pay quarterly for the water consumed;*
 - *Late payments bear interest at 5%;*
 - *Participating Jurisdictions agree to set their retail rates at levels sufficient to pay ARWA's charges.*
6. *Concur. The recommended information can be added into the Authority's annual financial report beginning in 2019.*
7. *Do not concur. After discussing this recommendation with both our outside Accountant and Auditor, we understand that water and wastewater utilities that have a large in-house accounting and financial staff generally participate in this item. Based on this discussion, we understand that much of the additional information would need to be handled in house. The financial information would remain the same but additional work would be required from the Authority Auditor to meet the GFOA requirements. The additional cost we would incur if we were to pursue this item, and also considering the fact that we have very limited inside staff handling the annual financial report were taken into consideration. We could expect that one to two years would be needed to adopt this recommendation. The benefit from following this recommendation appears to be limited to an annual award plaque from the GFOA and possibly some recognition if and when the Authority would seek to borrow from a bank or other lender, or to sell bonds on the open market.*
- Auditor Comment:** In addition to use by certain third parties, the extra policy and financial trend disclosures required by GFOA's financial reporting certificate program improves reference material available to Management and jurisdiction customers.*
8. *Do not concur. We discussed this recommendation with both our outside Accountant and Auditor, and also visited the GFOA's website. We understand that this item is generally adopted by Virginia Cities, Towns and Counties, not smaller water and wastewater Authorities like ARWA. We could expect to comply with the GFOA's standards that our present six to eight-page budgets would need to be expanded to sixty to seventy-five pages, which then becomes more of a luminous presentation rather than the presentation of hard numbers. Overall, our budget numbers would not change, just the budget format, line item information provided and overall budget.*

***Auditor Comment:** In addition to use by certain third parties, the extra policy and financial trend disclosures required by GFOA's budget award program improves reference material available to Management and jurisdiction customers.*

FINDINGS, RECOMMENDATIONS, RESPONSES
Cost Allocation True-up Options
(Point Sheet 3)

CRITERIA:

We evaluated ARWA's calculations for cost allocation true-up options and support from participant jurisdiction(s) questioning billing accuracy.

CONDITION(S):

In the October 2018 ARWA Board Meeting, Dr. Wichser and ARWA Counsel A. Anderson presented their review of charge rates used for certain FY16, FY17, and FY18 budget items. Their presentation responded to Chesterfield County Utilities' questions about using the Allocation Rate (not identified in the service agreement) instead of the Base Rate in the budget and billing process for 2012 Debt Service. However, Chesterfield later questioned the allocation rate impact on 2017 Debt Service, Reserve, and Capital Plan billings.

ARWA and Chesterfield Utilities provided us their calculations including all categories where the Allocation Rate was used. We inquired and there were no other jurisdictions questioning billing accuracy. We evaluated the financial impact calculations and compared them to the budgets, the service agreement rate definitions, and the billings. We did not identify errors and noted ARWA's updated calculations generally agreed with Chesterfield's financial impact estimates. The small differences are from ARWA using budget amounts and Chesterfield using actual amounts billed. The financial impact to jurisdictions is best illustrated using actual amounts billed.

Billing true-up estimates						
	Chesterfield	Colonial Heights	Dinwiddie	Petersburg	Prince George	Total
ARWA Calculation ¹	\$7,726	\$13,890	(\$24,473)	\$4,252	(\$2,940)	(\$1,545)
ARWA Updated Calculation ²	44,197	50,972	(89,361)	14,358	(10,563)	9,603
Chesterfield Calculation ³	48,696	52,855	(79,078)	6,888	(15,316)	14,045
Difference	(\$4,499)	(\$1,883)	(\$10,283)	\$7,470	\$4,753	(\$4,442)

1 – 2012 Debt Service component only – shared at October 2018 Board meeting

2 – 2012 Debt Service, 2017 Debt Service, Reserve Funding, and Capital Plan Funding – **Budget** Amounts

3 – 2012 Debt Service, 2017 Debt Service, Reserve Funding, and Capital Plan Funding – **Actual Billed** Amounts

FINDINGS, RECOMMENDATIONS, RESPONSES
Cost Allocation True-up Options
(Point Sheet 3)

RECOMMENDATION(S):

We recommend ARWA:

9. Propose a cutoff date to begin billing 2012 Debt Service, 2017 Debt Service, Reserve Funding, Capital Plan Funding according to the Base Rate.
10. Present a revised true-up to the ARWA Board of Directors using actual amounts billed through the cutoff date.
11. Consider Board action on the revised true-up to correct jurisdiction billing impacts from using Allocation Rate.

MANAGEMENT'S RESPONSE(S):

9. *Concur. The ARWA agrees with this recommendation. In fact, at the October 18, 2018 ARWA Board Meeting the Executive Director and outside counsel presented a memorandum stating that "Authority staff recommends that Authority Board authorize the publication of notice of public hearing to amend the FY 2019 budget to effect (a) the "true-up" related to the 2012 Bond debt service in FY 2016-2018 and (b) the change in the Base Rate for FY 2019. If approved at the November Board meeting, both the "true-up" and the Base Rate change would be reflected in the second quarter invoices to be issued to the participating jurisdictions in January 2019."*

Additionally, we recommend making adjustments related to the inclusion of the debt service on both the 2012 Bond and the 2017 Bond in the Base Rate for fiscal year 2019. The Authority had not entered into the formal In-Plant bond agreement until December 21, 2017. April 2018 was the first time that a 2017 Bond debt service payment was initiated.

Please note that both the Reserve Funding and Capital Plan Funding mechanisms to provide for annual budget funding are not covered by any existing bond covenants. However, since the 1982 Amendment to the existing Water Service Agreement states that the Base Rate "provides fully for the operation and maintenance of the Authority's water system, as improved and expended from time to time," we believe that adjusting these two funding accounts to the Base Rate is appropriate. The Authority did collect funds in Fiscal Years 2017 and 2018 based on Plant Allocation that were planned to be used for engineering services related to the In-Plant project. The ARWA Board clearly wanted to move forward in 2017 and 2018 by collecting and reserving funds to cover the upcoming In-Plant project engineering service fees in order to reduce the upcoming bond borrowing costs. The 2017 Bond excess remaining from the In-Plant project costs paid the ARWA back for the engineering service fees, and those funds were placed into the Reserve Fund. The In-Plant engineering service fees will also be included in the Reserve Fund conversion since these fees are already in the Reserve Fund.

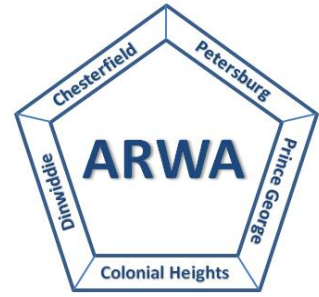
FINDINGS, RECOMMENDATIONS, RESPONSES
Cost Allocation True-up Options
(Point Sheet 3)

- 10. Concur. The "True-up" numbers were presented to the ARWA Board of Directors at the October 18, 2018 ARWA Board Meeting by the Executive Director and the Authority's outside Counsel. ARWA's updated "true-up" calculations agree with Chesterfield Utilities calculations and will be presented to the ARWA Board at the May 16, 2019 Board Meeting.*
- 11. Concur. This recommendation is fully at the discretion of the ARWA Board of Directors. However, ARWA recommends and supports this recommendation. ARWA will be presenting a memorandum to the Board at the May 16, 2019 Board Meeting to enable the Board to move forward on this item. The ARWA will also include the suggested FY2019 budget "True-up" related to the 2012 & 2017 bond debt service so that beginning in July 2019 with the new fiscal year budget, this specific item will also have been addressed.*

6. 2012 Bond and 2017 Bond Debt Service Budget Adjustments

Following is the memorandum, resolution, and newspaper advertisement for the 2012 and 2017 Debt Service Budget Adjustments (including reserve and capital funds).

Appomattox River Water Authority



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

TO: APPOMATTOX RIVER WATER AUTHORITY BOARD OF DIRECTORS

FROM: ROBERT C. WICHSER, EXECUTIVE DIRECTOR
JAMES C. GORDON, ASSISTANT EXECUTIVE DIRECTOR

DATE: MAY 16, 2019

RE: 2012 BOND AND 2017 BOND DEBT SERVICE BUDGET ADJUSTMENTS

In the authorizing resolutions for both the 2012 Bond and the 2017 Bond, the Authority's Board determined that the financed In-Plant project were for "improvement costs" within the meaning of the existing Water Service Agreements between the Authority and each of the participating jurisdictions. Issued under the existing Water Service Agreements the debt service on both the 2012 Bond and the 2017 Bond is to be covered by the Authority's annual budgeted "Base Rate." The Base Rate is a uniform per 1,000 gallon rate applied equally to all water purchases by each participating jurisdiction based annually upon the total projected water usage for all participating jurisdictions for a given fiscal year such that funds generated from charging the Base Rate will be sufficient to pay for all of the costs associated with (a) the operation and maintenance of the Authority's water system, and (b) all improvement costs incurred by the Authority (including the debt service on the 2012 Bond and the 2017 Bond).

In the adopted FY 2019 budget, the debt service for both the 2012 Bond and the 2017 Bond appear as separate line items apportioned to each participating jurisdiction by "plant allocation". Debt service on the 2012 Bond was apportioned by plant allocation in the FY 2016, 2017 and 2018 budgets. FY 2019 was the first year in which any charges were assessed to pay debt service on the 2017 Bond, and it was apportioned by plant allocation.

The Authority presented the proposed FY 2016 budget to the Authority Board in January 2015 and in March 2015 the Authority advertised three FY 2016 budget options all three of which showed the 2012 Bond debt service as being covered by plant allocation. Ever since January of 2015 all of the Authority's budgets and the presentations and planning for the 2017 Bond have apportioned the debt service on the 2012 Bond and the 2017 Bond by plant allocation.

The Chesterfield County Department of Internal Audit and Authority counsel have advised that (a) the debt service payments for the 2012 Bond for FY 2016, 2017 and 2018 be "true-up" to reflect what each participating jurisdiction would have paid had the payments been included in the Base Rate and (b) the debt service for the 2012 Bond and the 2017 Bond be included in the Base Rate in the FY 2019 budget and future budgets as required by the existing Water Service Agreements.

The financial impact of the "true-up" is relatively small.

The table below illustrates the financial impacts related to the three years (FY 2016, 2017, and 2018) that the **2012 Bond debt service** has been covered by plant allocation rather than included in the Base Rate.

2012 Debt: Base vs. Allocation Comparison for FY 2016, 2017, 2018 Summary

		Chesterfield	Colonial Heights	Dinwiddie	Petersburg	Prince George
FY 15/16	Difference in Base rate budget and allocation budget	-\$7,207	\$4,832	-\$8,750	\$2,421	-\$1,154
FY 16/17	Difference in Base rate budget and allocation budget	\$1,295	\$4,465	-\$8,377	-\$462	-\$1,080
FY 17/18	Difference in Base rate budget and allocation budget	\$13,639	\$4,593	-\$7,345	\$2,294	-\$706
Total Difference for member (- indicates refund due)		\$7,726	\$13,890	-\$24,473	\$4,252	-\$2,940

The next table shows the effects on the FY 2019 budget related to the **2012 Bond and 2017 Bond debt service** being met by plant allocation rather than the Base Rate and the expected financial impact of the proposed adjustment.

Appomattox River Water Authority FY19 Budget

2012 and 2017 Debt - Base vs. Allocation Comparison Summary

RATE COMPARISON

	<u>Chesterfield</u>	<u>Colonial Heights</u>	<u>Dinwiddie</u>	<u>Petersburg</u>	<u>Prince George</u>
Revised with 2012 and 2017 Debt in Base	\$0.9637	\$0.9878	\$1.4349	\$0.9601	\$1.3733
As Presently Billed	\$0.9614	\$0.9503	\$1.5169	\$0.9591	\$1.4004
Rate Difference (Revised – As Presently Billed)	\$0.0023	\$0.0375	-\$0.0820	\$0.0010	-\$0.0271

CASH COMPARISON

	<u>Chesterfield</u>	<u>Colonial Heights</u>	<u>Dinwiddie</u>	<u>Petersburg</u>	<u>Prince George</u>
Revised with 2012 and 2017 Debt in Base	\$6,948,376	\$613,330	\$616,392	\$1,650,365	\$334,454
As Presently Billed	\$6,931,692	\$590,065	\$651,624	\$1,648,676	\$341,063
Rate Difference (Revised – As Presently Billed)	\$16,684	\$23,265	-\$35,232	\$1,689	-\$6,609

Authority staff recommends the Authority Board authorize the publication of a notice of public hearing to amend the FY 2019 budget to implement (a) the "true-up" related to the 2012 Bond debt service in FY 2016-2018 and (b) the change in the Base Rate for FY 2019 to reflect placing the 2017 bond debt into the Base Rate. If approved both the "true-up" and the Base Rate change would be reflected in billing invoices to be issued to the participating jurisdictions for the fourth quarter of fiscal year 2019.

Chesterfield County Department of Internal Audit and the Authority counsel recommends that Reserve Funding and Capital Plan Funding for fiscal years 2016, 2017, 2018 (2019 would also be included if these years are Board approved to be included along with the 2012 and 2017 Bond adjustment) has been recommended to be included in the adjustment from Allocation Rate to Base Rate. These two funding accounts are not tied to official bond compliance however, since the 1982 Amendment to the existing Water Service Agreement states that the Base Rate “provides fully for the operation and maintenance of the Authority’s water system, as improved and expended from time to time”, Authority staff believes that adjusting these two funding accounts to the Base Rate is appropriate. If the ARWA Board agrees to include these two funds with the 2012 and 2017 Bond adjustments, staff will add narrative to the public notice adding these two funds for the 2019 budget adjustment.

Additionally, the ARWA Board clearly wanted to move forward in 2017 and 2018 by collecting and reserving funds to cover the upcoming In-Plant project engineering service fees in order to reduce the upcoming bond borrowing costs. In-Plant funds for the engineering service fees were collected in FY17 and FY18 using the Allocation Rate, not the Base Rate. These funds were initially used to fund the In-Plant Engineering Services fees. The 2017 Bond excess remaining from the In-Plant project costs paid the ARWA back for the engineering services fees and these funds were placed into the Reserve Fund. The In-Plant engineering service fees will also be included in the Reserve Fund conversion since these fees are already in the Reserve Fund.

The next table shows jurisdiction dollar impacts related to adjustment of the 2016, 2017, 2018 and 2019 *Reserve Fund and Capital Program Fund from Allocation Rate to Base Rate*.

	Chesterfield	Colonial Heights	Dinwiddie	Petersburg	Prince George
FY16 Capital Program Plan Adjustment (only FY16 affected; actual flows reflected)	\$1,075	\$2,179	-\$2,058	-\$86	-\$853
FY 16-FY18 Reserves Adjustment (actual flows reflected)	\$14,685	\$21,555	-\$26,121	-\$379	-\$8,522
FY16-FY18 In-Plant (Engineering Service Fees) Adjustment ⁽¹⁾ (actual flows reflected)	\$25,208	\$15,231	-\$26,427	\$3,101	-\$3,000
FY19 Reserve Adjustment - estimate ⁽²⁾ (final adjustment to reflect actual flows required)	\$2,065	\$2,857	-\$4,324	\$212	-\$811
Total	\$43,034	\$41,822	-\$58,930	\$2,847	-\$13,186

Notes

- 1) In-Plant funds were collected in FY17 and FY18. These funds were initially used to fund the In-Plant Engineering Services fees. The 2017 Bond excess remaining from the In-Plant project costs paid the ARWA back for the engineering services fees and the funds were placed into the reserve fund.
- 2) The FY19 reserve adjustment in the table above is based on the estimated annual consumption from the FY 2019 budget.

The final table below shows jurisdiction dollar impacts if the Board decides to move forward and approve implementing all 2012 Bond adjustments, the 2017 Bond adjustments, the Reserve Fund adjustments along with the Capital Program Fund adjustments from the Allocation Rate to the Base Rate.

ARWA FY2016-FY2019 Total True-Up Calculation

	Chesterfield	Colonial Heights	Dinwiddie	Petersburg	Prince George
Total True-Up for FY16-FY18 ⁽¹⁾	\$48,696	\$52,855	-\$79,078	\$6,888	-\$15,316
Total True-Up for FY19 ⁽²⁾	\$18,749	\$26,123	-\$39,556	\$1,900	-\$7,419
Total for all adjusts	\$67,445	\$78,978	-\$118,634	\$8,788	-\$22,735

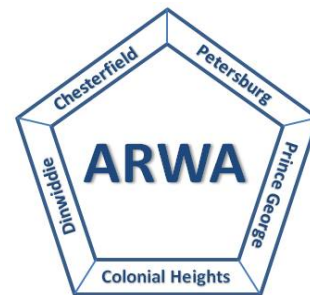
Note:

(1) Total True-Up includes 2012 Debt Service, Capital Program Plan, Reserves, and In-Plant (Engineering Services) Adjustments

(2) Total True-Up includes 2012 Debt Service, 2017 Debt Service, and Reserves estimates. FY19 numbers are estimates based on budget flow estimates and final true-up numbers will be dependent on final consumption numbers

BOARD ACTION REQUESTED:

The Authority staff recommends that the Board of the Appomattox River Water Authority (a) provide preliminary approval of the above-stated one-time charges and credits to revise the water rates for Fiscal Year 2019 to be reflected on the invoices for the fourth quarter of Fiscal Year 2019, (b) call a special meeting for 2 PM on June 13, 2019, to be held in the Authority's Board Room, at which will be held a public hearing on the one-time charges or credits, and (c) direct Authority staff to provide for the publication of the notices of such public hearing in accordance with Virginia Code Section 15.2-5136(G). The revisions will reflect the inclusion of (a) the debt service payments on the Authority's 2012 Bond for Fiscal Years 2016-2018 in the Authority's Base Rate for such years, (b) the debt service on both the 2012 Bond and the 2017 Bond for Fiscal Year 2019 in the Base Rate for Fiscal Year 2019, and (c) the funding of the Reserve Fund and the Capital Fund for Fiscal Years 2016-2019 in the Base Rate for such years. Authority counsel has prepared a resolution to evidence the foregoing.



RESOLUTION

OF THE APPOMATTOX RIVER WATER AUTHORITY PROVIDING PRELIMINARY APPROVAL OF CERTAIN REVISIONS TO THE WATER RATES TO BE CHARGED FOR FISCAL YEAR 2019

WHEREAS, as described in the memorandum dated May 16, 2019, submitted to the Board of the Appomattox River Water Authority (the "Authority") the Chesterfield County Office of Internal Audit, Authority staff and Authority counsel have recommended that the Board consider revisions to the Authority's Fiscal Year 2019 Budget and the rates to be charged to each participating jurisdiction to reflect the inclusion of (a) the debt service payments on the Authority's 2012 Bond for Fiscal Years 2016-2018 in the Authority's Base Rate for such years, (b) the debt service on both the 2012 Bond and the 2017 Bond for Fiscal Year 2019 in the Base Rate for Fiscal Year 2019, and (c) the funding of the Reserve Fund and the Capital Fund for Fiscal Years 2016-2019 in the Base Rate for such years;

WHEREAS, Authority staff has recommended effecting the revisions by adding a one-time charge or credit to the invoices to be sent to each participating jurisdiction for the fourth quarter of Fiscal Year 2019; and

WHEREAS, Virginia Code Section 15.2-5136(G) requires the adoption of the preliminary revised rate schedule for notification of a public hearing prior to final approval of any revision to the existing rate schedule.

NOW, THEREFORE, BE IT RESOLVED that the Board of the Appomattox River Water Authority hereby (a) provides preliminary approval of the following one-time charges and credits to revise the water rates for Fiscal Year 2019 and to be reflected on the invoices for the fourth quarter of Fiscal Year 2019, (b) calls a special meeting for 2 PM on June __, 2019, to be held in the Authority's Board Room, at which will be held a public hearing on the one-time charges or credits, and (c) directs Authority staff to provide for the publication of the notices of such public hearing in accordance with Virginia Code Section 15.2-5136(G):

	Chesterfield	Colonial Heights	Dinwiddie	Petersburg	Prince George
Total True-Up for FY16-FY18 ⁽¹⁾	\$48,696	\$52,855	-\$79,078	\$6,888	-\$15,316
Total True-Up for FY19 ⁽²⁾	\$18,749	\$26,123	-\$39,556	\$1,900	-\$7,419
Total for all adjusts	\$67,445	\$78,978	-\$118,634	\$8,788	-\$22,735

Note:

(1) Total True-Up includes 2012 Debt Service, Capital Program Plan, Reserves, and In-Plant (Engineering Services) Adjustments

(2) Total True-Up includes 2012 Debt Service, 2017 Debt Service, and Reserves estimates. FY19 numbers are estimates based on budget flow estimates and final true-up numbers will be dependent on final consumption numbers

**APPOMATTOX RIVER WATER AUTHORITY
NOTICE OF PUBLIC HEARING REGARDING**

CERTAIN REVISIONS TO THE WATER RATES TO BE CHARGED FOR FISCAL YEAR 2019
The Appomattox River Water Authority (the "Authority") is a public body politic and corporate created in 1960 upon agreement of the governing bodies of the County of Chesterfield, Virginia ("Chesterfield"), the City of Colonial Heights, Virginia ("Colonial Heights"), the County of Dinwiddie, Virginia ("Dinwiddie"), the City of Petersburg, Virginia ("Petersburg"), and the County of Prince George, Virginia ("Prince George," and together with Chesterfield, Colonial Heights, Dinwiddie and Petersburg, the "Participating Jurisdictions"), and in accordance with the Virginia Water and Waste Authorities Act, Virginia Code § 15.2-5100, et seq. (the "Act"), for the purpose of serving the water supply needs of the Participating Jurisdictions.

The Board of the Authority is considering revisions to the Authority's Fiscal Year 2019 Budget and the rates to be charged to each Participating Jurisdiction to reflect the inclusion of (a) the debt service payments on the Authority's 2012 Bond for Fiscal Years 2016-2018 in the Authority's Base Rate for such years as provided in the water service agreements between the Authority and the Participating Jurisdictions, (b) the debt service on both the 2012 Bond and the 2017 Bond for Fiscal Year 2019 in the Base Rate for Fiscal Year 2019, and (c) the funding of the Reserve Fund and the Capital Fund for Fiscal Years 2016-2019 in the Base Rate for such years. Authority staff has recommended effecting the revisions by adding a one-time charge or credit to the invoices to be sent to each Participating Jurisdiction for the fourth quarter of Fiscal Year 2019. On May 16, 2019, the Board of the Authority adopted a resolution to (a) provide preliminary approval of the following one-time charges and credits to revise the water rates for Fiscal Year 2019 and to be reflected on the invoices for the fourth quarter of Fiscal Year 2019, (b) call a special meeting for 2 PM on June 13, 2019, to be held in the Authority's Board Room, 21300 Chesdin Road, South Chesterfield, Virginia 23803, at which will be held a public hearing on the one-time charges or credits, and (c) direct Authority staff to provide for the publication of the notices of such public hearing in accordance with Virginia Code Section 15.2-5136(G). The one-time charges are reflected below as positive numbers and the credits are negative numbers.

	Chesterfield	Colonial Heights	Dinwiddie	Petersburg	Prince George
Total True-Up for FY16-FY18 ⁽¹⁾	\$48,696	\$52,855	-\$79,078	\$6,888	-\$15,316
Total True-Up for FY19 ⁽²⁾	\$18,749	\$26,123	-\$39,556	\$1,900	-\$7,419
Total for all adjusts	\$67,445	\$78,978	-\$118,634	\$8,788	-\$22,735

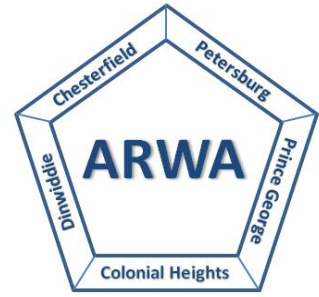
(1) Total True-Up includes 2012 Debt Service, Capital Program Plan, Reserves, and In-Plant (Engineering Services) Adjustments.

(2) Total True-Up includes 2012 Debt Service, 2017 Debt Service, and Reserves estimates. FY19 numbers are estimates based on budget flow estimates and final true-up numbers will be dependent on final consumption numbers

7. Approval of Proposed Fiscal Year 2020 Budget

Following is the proposed FY2020 Budget memorandum and budget presentation.

Appomattox River Water Authority



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

MEMORANDUM

**TO: APPOMATTOX RIVER WATER AUTHORITY
BOARD OF DIRECTORS**

**FROM: ROBERT C. WICHSER, EXECUTIVE DIRECTOR
JAMES C. GORDON, ASSISTANT EXECUTIVE DIRECTOR**

SUBJECT: ADOPTION OF FISCAL YEAR 2020 BUDGET AND RELATED WATER RATES

DATE: MAY 16, 2019

At the January 16, 2019 Board Meeting, the proposed \$ 10.6 million 2019/2020 Appomattox River Water Authority's (ARWA) Operations and Maintenance budget and related water rates were presented and discussed in detail. At the conclusion of the discussion the ARWA Board set a public hearing for March 21, 2019, and directed ARWA staff to publish the required notices of the public hearing.

The notice of public hearing was advertised twice in a local newspaper, and the public hearing was held at the March 21, 2019 ARWA Board Meeting. No comments were received from the public during the advertisement period or at the public meeting.

The proposed budget includes a 2.7 percent overall cost increase from the current budget to proposed budget to the members related to employee salaries. The twenty-eight Authority employees will share in \$45,000 available funds (If allocated to existing budgeted salaries on an equal basis this would result in a 2.77 % increase) and be provided an annual salary increase on July 1, 2019 based on their individual annual performance evaluation.

The proposed Fiscal Year 2020 budget and related water rates were developed in October, November and December 2018 and had been presented and vetted on November 16, 2018 with all five ARWA Member Utility Alternates/ Utility Directors.

Board Action Requested:

Staff respectfully recommends that the Board adopt the attached resolution, which approves ARWA's Fiscal Year 2020 budget as presented at the January 16, 2019 ARWA Board Meeting and adopts the related water rates.

APPOMATTOX RIVER WATER AUTHORITY

Proposed: January 16, 2019

Approved:

PROPOSED OPERATION & MAINTENANCE BUDGET 2019/2020

			Change	
	<u>2018/2019</u> Budget	<u>2019/2020</u> Budget	Increase/ (Decrease) FY18/19 to FY19/20	Reason for Changes
<u>O&M EXPENSES</u>				
41000 · Salary	\$1,655,000	\$1,700,000	\$45,000	Proposed budget increase of 2.7% from current budget to proposed budget for Performance Based merit increases.
42000 · Employee Benefits	\$723,100	\$747,600	\$24,500	Primarily the increase is due to Anthem Blue Cross Blue Shield Health Insurance Increase. The Health Insurance for FY18-19 was higher than budgeted so the FY19-20 budget factors that increase plus an additional 10%
42100 · Employer FICA	\$123,000	\$125,000		
42200 · Virginia Retirement System	\$96,000	\$97,500		
42210 · Deferred Comp 457	\$6,300	\$6,300		
42300 · Hospitalization Insurance	\$400,000	\$490,000		
42400 · VRS Group Life Insurance	\$21,300	\$21,300		
42500 · Group Term Life	\$2,000	\$2,000		
42600 · Unemployment Insurance	\$0	\$0		
42800 · Employee Promotions	\$3,500	\$3,500		
42900 · Other Fringe Benefits - EAP	\$2,000	\$2,000		
42950 · OPEB Health Insurance Adj	\$69,000	\$0		
42952 · Net Pension Adjustment				
43000 · Contractual Services	\$937,500	\$1,204,500	\$267,000	Increase due to transferring Reservoir Studies and Reservoir Management from Replacement to O&M.
43121 · Auditing Services	\$8,000	\$8,000		
43122 · Accounting Services	\$9,000	\$14,000		
43130 · Legal/Engineering and Reservoir Studies		\$100,000		
43140 · Consulting Engineers	\$75,000	\$75,000		
43150 · Legal Services	\$75,000	\$100,000		
43152 · Medical - Testing	\$2,500	\$7,500		
43155 · Other Consulting Services	\$50,000	\$25,000		
43156 · Admin and Maintenance Svc-SCWWA	\$5,000	-\$37,000		
43160 · Trustee Services	\$7,500	\$9,500		
43162 · Bank Service Charges	\$2,500	\$2,500		
43170 · Research	\$17,500	\$17,500		
43180 · Potable Water Contract	\$500,000	\$500,000		
43190 · Samples and Tests	\$25,000	\$48,500		
43200 · Lake Patrol	\$4,000	\$4,000		
43201 · Reservoir Management - Invasive Control Program		\$150,000		

APPOMATTOX RIVER WATER AUTHORITY

Proposed: January 16, 2019

Approved:

PROPOSED OPERATION & MAINTENANCE BUDGET 2019/2020

			Change	
			Increase/ (Decrease) FY18/19 to FY19/20	Reason for Changes
	<u>2018/2019</u> Budget	<u>2019/2020</u> Budget		
43210 · Software Support	\$20,000	\$20,000		
43220 · VPDES Permit Fee	\$500	\$10,000		
43310 · Repair Services	\$50,000	\$40,000		
43320 · Service Contracts	\$50,000	\$75,000		
43500 · Printing and Binding	\$1,000	\$0		
43600 · Grounds Maintenance	\$35,000	\$35,000		
45000 · Other Charges	\$1,017,600	\$1,051,600	\$34,000	
45110 · Electricity - Pumping	\$450,000	\$475,000		
45111 · Electricity - Purification	\$270,000	\$270,000		
45120 · Heating Fuel	\$100,000	\$100,000		
45130 · Trash Pickup	\$4,000	\$5,000		
45210 · Postal Services	\$2,200	\$2,200		
45220 · Freight	\$12,000	\$15,000		
45230 · Telecommunications	\$25,000	\$30,000		
45308 · General Liability Insurance	\$90,000	\$90,000		
45410 · Lease/Rent of Equipment	\$20,000	\$20,000		
45530 · Meals and Lodging	\$10,000	\$10,000		
45540 · Education and Training	\$16,400	\$16,400		
45550 · Safety Supplies	\$18,000	\$18,000		
46000 · Materials and Supplies	\$2,764,000	\$2,771,000	\$7,000	
46001 · Office Supplies	\$12,000	\$12,000		
46004 · Laboratory Supplies	\$74,000	\$74,000		
46005 · Purification Chemicals	\$2,300,000	\$2,300,000		
46006 · Purification Process and Janitorial Supplies	\$15,000	\$12,000		
46007 · Repair & Maint Supplies-Shop	\$150,000	\$175,000		
46008 · Vehicle and Equipment Fuels	\$20,000	\$20,000		
46009 · Vehicle and Equipment Supplies	\$10,000	\$13,000		
46010 · Equipment Parts and Small Equipment Purchases	\$65,000	\$60,000		
46011 · Uniforms	\$8,000	\$8,000		
46012 · Dues and Subscriptions	\$25,000	\$22,000		
46014 · Repair & Maint Supplies-IT	\$65,000	\$65,000		
46015 · Small Equipment Purchases	\$10,000	\$0		

APPOMATTOX RIVER WATER AUTHORITY

Proposed: January 16, 2019

Approved:

PROPOSED OPERATION & MAINTENANCE BUDGET 2019/2020

			Change	
			Increase/ (Decrease) FY18/19 to FY19/20	Reason for Changes
	<u>2018/2019</u> Budget	<u>2019/2020</u> Budget		
46016 - Operations Supplies and Maintenance	\$10,000	\$10,000		
Total Operating Expenses	\$7,097,200	\$7,474,700	\$377,500	\$250,000 is due to reallocation of studies from Replacement to O&M expenses (contractual services).
58000 - Equipment Replacement	\$784,000	\$768,000	(\$16,000)	
Debt - 2010 Issue	\$759,778	\$759,123	(\$655)	
Debt - 2012 Issue	\$302,020	\$301,936	(\$84)	
Debt - 2017 Issue	\$1,080,225	\$1,080,116	(\$109)	
Total Debt	\$2,142,023	\$2,141,175	(\$848)	
Reserve Fund	\$169,694	\$188,750	\$19,056	
Total Expenses	\$10,192,916	\$10,572,625	\$379,709	

APPOMATTOX RIVER WATER AUTHORITY
Replacement Fund Budget - 58000

		FY19/20						
		Budget 18/19	Proposed Budget 19/20	INFORMATIONAL & PLANNING				Totals
Acct#	Proposed FY ITEM			20/21	21/22	22/23	23/24	
58010 - Machinery and Motors	Emergency/ Miscellaneous Repairs	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,000	\$ 600,000
	Flocculation Spare Parts	\$ 45,000						\$ 45,000
	HVAC Replacement		\$ 15,000					\$ 15,000
	Dual Polymer Feed System		\$ 30,000					\$ 30,000
	Filter 1-16 flow meter upgrade		\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000		\$ 60,000
	Exterior Actuators	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 15,000	\$ 90,000
58020 - Instrumentation	Verizon RTU modem mandatory upgrade		\$ 30,000					\$ 30,000
	YSI ProDSS Meter and Sonde		\$ 10,000					\$ 10,000
	Chesdin East PLC Swap Out		\$ 12,000					\$ 12,000
	Replacement AA			\$ 24,000				\$ 24,000
58030 - SCADA	Replace and move existing LAN Panel	\$ 35,000						\$ 35,000
	SCADA Server Upgrade (3)	\$ 15,000						\$ 15,000
	SCADA/Network Master Plan Development	\$ 15,000						\$ 15,000
58040 - Computer Equipmment	Replacement Computers	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 60,000
58050 - Furniture and Fixtures	Upgrade Facility Lighting	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 6,000	\$ 36,000
58060 - Motor Vehicles	Reservoir Sampling work boat	\$ 28,000						\$ 28,000
	2003 Maintenance Supervisors 4x4		\$ 35,000					\$ 35,000
	2005 Lab Ford Explorer		\$ 35,000					\$ 35,000
	Fleet 4dr 4x4 (Replace 1998 GMC)		\$ 35,000					\$ 35,000
	Fork Lift - small telescopic		\$ 45,000					\$ 45,000
	4dr 4x4 Pick Up			\$ 40,000	\$ 40,000	\$ 40,000		\$ 120,000

	Telescopic forklift	\$	85,000						\$	85,000					
	Tractor 50 hp					\$	50,000		\$	50,000					
58070 - Special Studies	Groundwater Quality Montitoring Plan	\$	200,000						\$	200,000					
	Legal/Engineering analysis and studies	\$	200,000	\$	-				\$	200,000					
58090 - Construction	Valve Replacement	\$	50,000	\$	100,000	\$	100,000	\$	100,000	\$	100,000	\$	100,000	\$	550,000
	PG Meter Vault Upgrade (16")			\$	30,000									\$	30,000
	General Concrete Repairs	\$	25,000	\$	25,000	\$	25,000	\$	25,000	\$	25,000	\$	25,000	\$	150,000
	Chesdin East Flow Meter Upgrades (16" and 30")	\$	40,000											\$	40,000
	Install Bollards and Security Fences at Remote Sites			\$	10,000									\$	10,000
	Matoaca Meter and Meter Box			\$	125,000									\$	125,000
	Replacement of Single pane windows						\$	100,000	\$	100,000	\$	100,000		\$	300,000
TOTALS:		\$	784,000	\$	768,000	\$	295,000	\$	411,000	\$	461,000	\$	396,000	\$	3,115,000

NOTE: FY 19/20 TO BE APPROVED WITH BUDGET

Construction Fund (Capital Projects)

FY19/20

ITEM	Budget 18/19	Proposed Budget 19/20	INFORMATIONAL & PLANNING							Totals	>10 years
			20/21	21/22	22/23	23/24	24/25	25/26	26/27		
Finished Water Pump Stations No. 1 Upgrade - see note 2	\$ 3,886,983	\$ 3,886,983								\$ 7,773,965	
Raw Water Pump Station No. 1 Upgrade - see note 2	\$ 2,321,263	\$ 2,321,263								\$ 4,642,525	
Clearwell #4										\$ -	\$ 8,750,000
PAC Feed System						\$ 2,500,000				\$ 2,500,000	
Transmission Main - Chesdin Rd. to Pickett Rd							\$ 400,000	\$ 9,969,000		\$ 10,369,000	
Transmission Main - Pickett Ave. to Matoaca Tank							\$ 400,000	\$ 9,969,000		\$ 10,369,000	
Transmission Main - Matoaca Tank to Branders Bridge							\$ 500,000	\$ 11,446,000		\$ 11,946,000	
Transmission Main - Branders Bridge to Lakeview							\$ 200,000	\$ 3,326,000		\$ 3,526,000	
Totals	\$ 6,208,245	\$ 6,208,245	\$ -	\$ -	\$ -	\$ 2,500,000	\$ 1,500,000	\$ 34,710,000	\$ -	\$ 51,126,490	

NOTE:

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

2) Bond Funding will be required for these Proposed Capital Project.

Revenues

Appomattox River Water Authority

FY Budget Year

2019/2020

Proposed

Jan. 16, 2019

Adopted

Revised

		<u>Chesterfield</u>	<u>Colonial Heights</u>	<u>Dinwiddie</u>	<u>Petersburg</u>	<u>Prince George</u>	<u>Total</u>
1) Operations and Maintenance Base Rate							
O&M Rate							
	\$/1000 gallons	\$ 0.9760	\$ 0.9760	\$ 0.9760	\$ 0.9760	\$ 0.9760	\$ 0.9760
Estimated (\$/quarter)	\$	1,811,942	\$ 150,678.97	\$ 102,187	\$ 422,480	\$ 61,791	\$ 2,549,078.27
Total annual allocation	\$	7,247,767	\$ 602,716	\$ 408,747	\$ 1,689,919	\$ 247,164	\$ 10,196,313
% of flows		71.08%	5.91%	4.01%	16.57%	2.42%	100.00%
Estimated (mgd)		20.344	1.692	1.147	4.744	0.694	28.621
Calc. annual usage (bg)		7.426	0.618	0.419	1.731	0.253	10.447
O&M =	\$	7,474,700	Replacement \$ 768,000	54.38% 2010 Debt (maintenance)	\$	412,811	
Int./Misc. Income	\$	30,000	100% 2012 Debt \$ 301,936	100% 2017 Debt \$ 1,080,116	Reserve Funding		\$188,750
BASE RATE	\$/1000gals	\$ 0.9760	\$ 0.9760	\$ 0.9760	\$ 0.9760	\$ 0.9760	
2) Expansion Rate							
Bonds	% Financed						
Rate (cents/1000 gals)		\$ 0.0037	\$ 0.0323	\$ 0.4762	\$ -	\$ 0.3937	
2010 expansion (\$/year)	45.62%	\$ 27,255	\$ 19,948	\$ 199,406	\$ -	\$ 99,703	\$ 346,312
% allocation		7.87%	5.76%	57.58%	0.00%	28.79%	100.00%
FY19/20 Bond Payments	2010 =	\$ 759,123					
TOTAL DEBT SERVICE RATE	\$/1000 gals	\$ 0.0037	\$ 0.0323	\$ 0.4762	\$ -	\$ 0.3937	\$ 346,312
	\$/year	\$ 27,255	\$ 19,948	\$ 199,406	\$ -	\$ 99,703	\$ 346,312
3) Total Rate							
TOTAL RATE (BASE + EXPANSION)	\$/1000gals	\$ 0.9797	1.0083	1.4522	0.9760	1.3698	\$ 1.1572
Estimated annual charges	\$/year	\$ 7,275,021	\$ 622,663	\$ 608,154	\$ 1,689,919	\$ 346,867	\$ 10,542,625
4) Budget Comparison (see note 1)							
Proposed FY19/20 Total Rate	\$/1000 gals	\$ 0.9797	\$ 1.0083	\$ 1.4522	\$ 0.9760	\$ 1.3698	\$ 1.1572
Approved FY 18/19 Total Rate	\$/1000 gals	\$ 0.9637	\$ 0.9878	\$ 1.4349	\$ 0.9601	\$ 1.3733	\$ 1.1439
Total Rate Difference	\$/1000 gals	0.0160	0.0206	0.0173	0.0159	(0.0035)	0.0133
Total Rate Difference	%	1.66%	2.08%	1.21%	1.66%	-0.26%	1.16%
Proposed FY19/20 Revenues	\$/year	\$ 7,275,021	\$ 622,663	\$ 608,154	\$ 1,689,919	\$ 346,867	\$ 10,542,625
Total FY18/19 Approved Budget	\$/year	\$ 6,948,376	\$ 613,330	\$ 616,392	\$ 1,650,365	\$ 334,454	\$ 10,162,916
Annual Cash Difference	\$/year	\$ 326,646	\$ 9,334	\$ (8,238)	\$ 39,554	\$ 12,414	\$ 379,709
Annual Revenue Difference	%	4.70%	1.52%	-1.34%	2.40%	3.71%	3.74%
FY 19/20 Expenses	\$	10,572,625	FY 19/20 Income Revenue	\$	10,572,625		

NOTES:

1) FY18/19 comparison numbers are based on the true-up recommendations presented at the October 18, 2018 Board of Directors meeting. The recommendation was to true-up the current rates by moving the 2012 and 2017 debt service into the base rate. The reserves for FY18/19 would remain distributed as plant allocation.

Reserve Policy:

Appomattox River Water Authority FY19/20

Reserve Fund Calculation (year 4 of 5)

ARWA O&M Budget	Reserves as of 6/30/2018	Revenue for FY2017/2018	Total expected reserves on 6/30/2018	Recommended 50% O&M Reserves	Annual Charge to achieve 50% Reserves
\$7,474,700	\$2,438,906	\$169,694	\$3,548,600	\$3,737,350	\$188,750

8. Items from Counsel

9. Closed Session

10. Other Items from Board Members/Staff Not on Agenda:

11. Adjourn