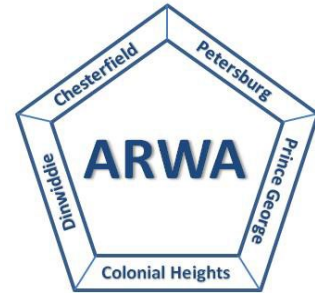


Appomattox  
River  
Water  
Authority



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

## APPOMATTOX RIVER WATER AUTHORITY

### Board of Directors Meeting

DATE: May 21, 2026

TIME: 2:00 pm

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

### AGENDA

1. Call to Order/Roll Call
2. Approval of Minutes: Minutes of the Board Meeting held on March 19, 2026 (Exhibit A, pages 2 to 4)
3. Public Comment (Exhibit B, page 5)
4. Executive Director's Report:
  - 30" water line damage by a contractor on Attucks Street (Exhibit C, pages 6 to 10)
  - Budget Changes (Exhibit D, pages 11 to 12)
  - Drought Management Plan (Exhibit E, pages 13 to 59)
  - Status Report (Exhibit F, pages 60 to 65)
  - Financials (Exhibit G, pages 66 to 70)
5. Items from Counsel
6. Closed Meeting
  - Discussion and consideration of the performance and salaries of specific public officers of the Authority, specifically regarding the Executive Director's annual review, as permitted by Section 2.2-3711A.1. of the Virginia Freedom of Information Act.
7. Other items from Board Members/Staff Not on Agenda
8. Adjourn

**Exhibit A**

**BOARD OF DIRECTORS MEETING**

**Appomattox River Water Authority**

**March 19, 2026, at 2:00 p.m.**

**Location: Appomattox River Water Authority  
21300 Chesdin Rd. South Chesterfield, VA 23803**

**MEMBERS PRESENT:**

Doug Smith, Chairman (Colonial Heights)  
Kevin Massengill, Vice Chairman (Dinwiddie)  
March Altman, (Petersburg)  
Joseph Casey, (Chesterfield)  
Kristin Pudlow (Prince George)

**STAFF PRESENT:**

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

**ALTERNATES PRESENT:**

Eddie Pearson, (Alternate, Dinwiddie)  
Matt Rembold, (Alternate, Chesterfield)  
Andrew Barnes, (Alternate, Colonial Heights)  
Rachael Lumpkin (Alternate, Prince George)  
Frank Haltom (Alternate, Dinwiddie)

**OTHERS PRESENT:**

The ARWA meeting was called to order by Mr. Smith, Chairman, at 2:08 p.m.

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

**The roll was called:**

**Participating members at the table were:**

<b>Doug Smith</b>	<b>Present</b>
<b>Kevin Massengill</b>	<b>Present</b>
<b>Joseph Casey</b>	<b>Present</b>
<b>Rachael Lumpkin</b>	<b>Present</b>
<b>March Altman</b>	<b>Present</b>

Mr. Smith welcomed Ms. Lumpkin Interim County Engineer for Prince George County to the Board. Mr. Smith stated, we appreciate you joining us, and it is great having you here working with us. Mr. Smith also recognized and welcomed Ms. Pudlow, Interim County Administrator for Prince George County and thanked her for being here as well.

**2. Approval of Minutes: Minutes of the Regular Meeting of the Board on January 22, 2026**

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

**RESOLVED, that the Minutes of the Regular Meeting of the Board on January 22, 2026, are hereby approved:**

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

**3. Public Comment**

There were no public comments.

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

- **FY2026/2027 Budget Public Hearing**

Mr. Smith opened the public hearing for the FY2026/2027 Operating Budget at 2:11 p.m. There were no public comments, and Mr. Smith closed the public hearing at 2:12 p.m. Mr. Smith thanked Staff for all the

work on preparing the budget and the diligence in working with the Directors. Mr. Smith asked if there were any other Board comments or questions. There were no other comments or questions.

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

**RESOLVED, that the Board approves the resolution of the Appomattox River Water Authority approving the FY2026/2027 Operating Budget as presented in attachment C-1 and the related wholesale water rates as presented in attachment C-2:**

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

**Roll Call Vote:**

**Participating members at the table were:**

<b>Doug Smith</b>	<b>Aye</b>
<b>Kevin Massengill</b>	<b>Aye</b>
<b>Joseph Casey</b>	<b>Aye</b>
<b>Rachael Lumpkin</b>	<b>Aye</b>
<b>March Altman</b>	<b>Aye</b>

- **Elect a new Secretary/Treasurer**

Mr. Wilson stated that Mr. Frank Haltom served as an alternate Board member for Prince George County and in that capacity held the position of Secretary/Treasurer. Mr. Haltom left Prince George County on January 31, 2026. Currently the Chairman is fulfilling the Secretary/Treasurer responsibilities. We are requesting that the Board hold an election to fill the open position of Secretary/Treasurer on the Board of Directors. Mr. Wilson further stated that currently the terms run 2 years, and we are in the middle of the second term. On even numbered years at the November meeting the Board elects the officers for the following year. Mr. Smith responded in stating that he has a proposal under very unique circumstances, Mr. Haltom has now been re-appointed as an alternate for Dinwiddie County to this Board and he proposed, if the Board would agree, that we re-appoint Mr. Haltom for the remainder of the term. Mr. Haltom already understands the processes, and that would carry us through the remainder of this current term. The Board agreed with Mr. Smith on his proposal.

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

**RESOLVED, that the Board appoints Mr. Frank Haltom as the Secretary/Treasurer on the Board of Directors for the Appomattox River Water Authority for the remainder of this term ending December 31, 2026:**

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

**Roll Call Vote:**

**Participating members at the table were:**

<b>Doug Smith</b>	<b>Aye</b>
<b>Kevin Massengill</b>	<b>Aye</b>
<b>Joseph Casey</b>	<b>Aye</b>
<b>Rachael Lumpkin</b>	<b>Aye</b>
<b>March Altman</b>	<b>Aye</b>

- **Status Report**

Mr. Wilson reviewed the status report included in the Board Package.

- **Financials**

Ms. Wilkins reported on the financials.

**5. Items from Counsel**

There were no items from Counsel.

**6. Closed Session**

There were no closed sessions.

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

Mr. Massengill asked Mr. Wilson with the warmer weather approaching, when does lake enforcement begin monitoring the Lake? Mr. Wilson responded Memorial Day. Mr. Wilson further stated that construction of the boat house will start next week, and if that is finished before Memorial Day, they may want to move into it sooner. The boat is currently stored next to the warehouse. Dr. Casey suggested that it may be good to put out an updated public notice annually this time of year of what the rules are of the Lake. Mr. Wilson stated that staff go around this time of year and make sure the speed limit signs and QR codes are posted at the public access points which are frequently stolen. Mr. Smith asked Mr. Wilson to please coordinate with Chesterfield and Dinwiddie on this public information so both localities can have common information to distribute.

**8. Adjourn**

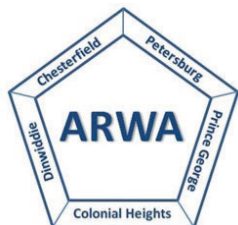
Mr. Smith stated that if there is no other business, he would entertain a motion to adjourn.

Upon a motion by Mr. Massengill and seconded by Mr. Altman, the meeting was adjourned at 2:30 p.m.

MINUTES APPROVED BY:

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## EXHIBIT B



APPOMATTOX RIVER WATER AUTHORITY  
21300 Chesdin Road  
Petersburg, VA 23803



SOUTH CENTRAL WASTEWATER AUTHORITY  
900 Magazine Road  
Petersburg, VA 23803

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

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

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

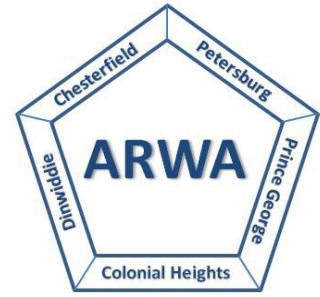
When two or more individuals are present from the same group, it is recommended that the group designate a spokesperson to present its comments to the Board and the designated speaker can ask other members of the group to be recognized by raising their hand or standing. Each spokesperson for a group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

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

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

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

# Appomattox River Water Authority



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

## Exhibit C

TO: Appomattox River Water Authority Board of Directors

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

DATE: May 21, 2026

SUBJECT: 30” water line damage on Attucks Street

On April 1<sup>st</sup> operations staff received notification that a contractor working for Chesterfield County hit the Authority’s 30” water line on Attucks Street. This 30” water line feeds the City of Colonial Heights, Prince George County and a portion of eastern Chesterfield County. Minutes after that notification the executive director received a call from the city engineer for City of Colonial Heights that the City of Colonial Heights was experiencing low water pressure. After hanging up with the city engineer, the assistant executive director received a call from the county engineer for Prince George County that the Puddledock Area was experiencing low water pressure.

Maintenance and operations staff were dispatched to Attucks Street where the contractor damaged the 30” water line. Staff determined that the amount of water flowing out of the 30” water line was not enough to drop pressure on the Authority’s transmission system. Staff then proceeded to the Temple Avenue meter vault for the City of Colonial Heights and found the valve all the way open and excessive flow going through the meter which meant the problem was in the City of Colonial Heights. Before staff could convey their findings back to the City of Colonial Heights, the city manager called the executive director and advised city utility staff found a 16” water line blowout in an easement behind a strip mall on Temple Avenue. This leak was in close proximity to the Prince George Meter and was the cause of low pressure in Prince George County. That information was communicated to the Prince George County engineer.

The result of the 16” water line break in the City of Colonial Heights resulted in a boil water advisory for both the city and Prince George County.

For the 30” water line damage, the contractor installed a ductile iron repair clamp supplied by Chesterfield County. Staff from the Authority and Chesterfield County stayed with the contractor all night into the next day until the repair was completed. The repair was completed without disruption of service.

For the Authority, the line was marked properly per the Miss Utility system. The problem was the contractor dug down on the wrong water line to make the water service repair. The contractor took a jack hammer to break through the reinforced concrete encasement on the Authority's water line. Neither the Authority's record drawings for the 30" water line nor the drawings from Chesterfield County utility plans for the River Road Terraces subdivision showed the reinforced concrete encasement. The 30" water line was installed in 1968 and the subdivision was developed in 1973.

The executive director did research the archived Board meeting minutes and found that at the January 25, 1974 meeting this conflict with the road for the subdivision was discussed and the Authority participated in the cost, up to \$500, to have the 30" water line encased in reinforced concrete:

6. The manager reported that a portion of the 30" pipeline has been exposed on Easement #67 where River Road Terraces are being constructed. The pipeline was exposed by construction of a road known as Attuck Street in the development. The engineers representing the Glen Hastings Company contend that the pipeline is not in the location shown on drawings supplied to them by the Authority. As there could be some merit in this contention, the Authority has agreed to participate in the cost of encasing the pipeline in reinforced concrete not to exceed \$500.00. This obligation was made to expedite the safeguarding of the pipeline. A resurvey of this pipeline location will be made by our consulting engineers to determine if the "as is" drawings are correct.

The Authority is having the easement surveyed and working on a Technical Memorandum to identify a parallel solution and the associated cost. At first glance, it appears there are some structures built in the Authority's easement. Furthermore, a parallel line would require two 30" line stops, two 30" tapping sleeves and valves, probably the acquisition of additional easement for the parallel line, construction easement, etc. The reason for the line stops is that this line cannot shutdown during the final repair. After the Technical Memorandum is completed, there will need to be a risk, exposure, and cost benefit analysis to determine if the repair is sufficient or the line needs to be paralleled.

Pictures of the damage and repair are included as Attachment C-1.

Board Action Requested:

No Board Action is requested at this time.

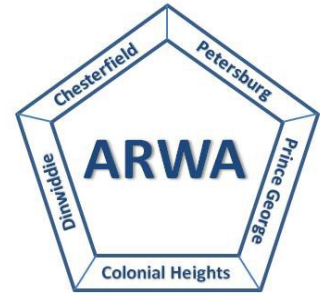
Attachment C-1







# Appomattox River Water Authority



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

## Exhibit D

TO: Appomattox River Water Authority Board of Directors

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

DATE: May 21, 2026

SUBJECT: Budget Changes

With the replacement of the roof on Clearwell #2, we are no longer able to put the sample pumps back on the Clearwell roof without damaging the new roofing system. Therefore, we are purchasing a fiberglass building to house the pumps adjacent to Clearwell #2 at ground level. At the same time, we will reroute the power feed for the sample pumps from Finished Pump Station #2 that is adjacent to Clearwell #2. Currently the pumps are feed by an electrical feed from Finished Pump Station #1 that is further away. To fund this purchase, we are using funds from the Operating Capital Outlay – 58065 Maintenance Equipment – \$25,000. These funds were originally slated for a trailer for moving the bushhog around to maintain our water line transmission easements. This maintenance task is now performed by our ground's maintenance vendor.

The cost of the fiberglass building that will be installed by the maintenance staff is \$20,960.00.

During the ice events in January the roof for Raw Water Pump Station #2 began to leak over the switchgear. This meant water was leaking directly onto active high voltage electrical equipment. As a reminder condensation (water) from the air conditioning system leaked unto MCC9 in the same room on July 4, 2013, which resulted in a fire.

The roof was temporarily repaired by a roofing contractor. After the temporary repair was completed, the roof warranty was reviewed, which had expired, so a roof vendor was brought in to inspect and assess the roof. The determination was made that the roof system has reached the end of its useful life and requires replacement. With the past history of failure of this switchgear we have moved forward with the roof replacement. This replacement is being funded from the Operating Capital Outlay – 58090 Construction - \$50,000 to rebuild the cone valve. In discussions with the plant manager, the hydraulic system for the cone valve was rebuilt three years ago. The cone valve rebuild can be pushed out a couple of years and readded to the Operating Capital Outlay budget in the future.

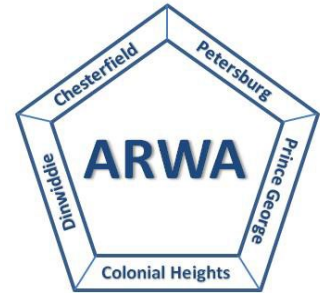
The cost of the roof replacement is \$45,600.00.

There is \$135,000 in the 58090 – Construction line item for the addition of right-angle actuators on the basin valves for sedimentation basins 10-12. We are having difficulty acquiring this equipment in this fiscal year. We will request that this appropriation be carried over into FY27 as part of the FY26 true-up. With the higher than anticipated quotes, we are looking at other options. These valves will not be ordered or received until FY27.

Board Action Requested:

Staff requests the Board approve the reallocation of operating capital outlay funds as illustrated and allow the carry over of \$135,000 as part of the FY26 true-up.

# Appomattox River Water Authority



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

## Exhibit E

TO: Appomattox River Water Authority Board of Directors

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

DATE: May 21, 2026

SUBJECT: Drought Management Plan

This past April was one of the warmest and driest on record. There is also the prediction that this summer will be influenced by a strong El Nino weather pattern. Historically for this area, an El Nino weather pattern means there will be higher summer temperatures resulting in higher water demands and reduced rainfall events. It also suggests that an El Nino weather pattern reduces hurricane activity on the east coast. The rain events associated with hurricanes help replenish the groundwater supply as well as keep the lake full.

With this forecast, we thought it would be prudent to remind members of the approved Drought Management Plan and the trigger levels for the three stages of restrictions outlined in the VWP withdrawal permit.

The three stages of restrictions are:

- Stage 1 – Drought Watch which is equivalent to Voluntary Restrictions
- Stage 2 – Drought Warning which is equivalent to Mandatory Restrictions
- Stage 3 – Drought Emergency which is equivalent to Emergency Restrictions

For May, June, July and August the restrictions would be as follows:

Inches below overflow for Stage Implementation

	<u>Stage 1</u>	<u>Stage 2</u>	<u>Stage 3</u>
May	-20.4"	-48.0"	-104.4"
June	-24.0"	-54.0"	-104.4"
July	-28.8"	-58.8"	-111.6"
August	-38.4"	-68.4"	-118.8"

Month	Stage 1 – Drought Watch			Stage 2 – Drought Warning			Stage 3 – Drought Emergency		
	Percent Usable Storage (%)	NAVD88 Elevation (ft msl)	NGVD29 Elevation (ft msl)	Percent Usable Storage (%)	NAVD88 Elevation (ft msl)	NGVD29 Elevation (ft msl)	Percent Usable Storage (%)	NAVD88 Elevation (ft msl)	NGVD29 Elevation (ft msl)
<i>Full Pool</i>	100	157.2	158	100	157.2	158	100	157.2	158
<b>Jan</b>	75	154	154.8	60	151.5	152.3	40	147.3	148.1
<b>Feb</b>	80	154.8	155.6	65	152.3	153.1	42.5	147.9	148.7
<b>Mar</b>	82.5	155.2	156	70	153.2	154	45	148.5	149.3
<b>Apr</b>	85	155.5	156.3	70	153.2	154	45	148.5	149.3
<b>May</b>	85	155.5	156.3	70	153.2	154	45	148.5	149.3
<b>Jun</b>	82.5	155.2	156	67.5	152.7	153.5	45	148.5	149.3
<b>Jul</b>	80	154.8	155.6	65	152.3	153.1	42.5	147.9	148.7
<b>Aug</b>	75	154	154.8	60	151.5	152.3	40	147.3	148.1
<b>Sep</b>	70	153.2	154	55	150.7	151.5	40	147.3	148.1
<b>Oct</b>	65	152.3	153.1	50	149.7	150.5	35	146	146.8
<b>Nov</b>	70	153.2	154	52.5	150.2	151	35	146	146.8
<b>Dec</b>	75	154	154.8	55	150.7	151.5	37.5	146.6	147.4

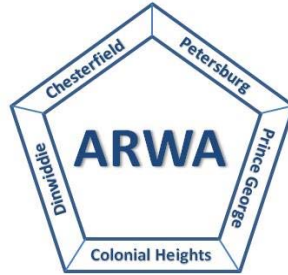
The NGVD29 datum is used for determining the lake levels with the top of the dam being at elevation 158'. Hopefully, the weather changes and we do not approach any of these triggers.

A copy of the approved Drought Response Plan that includes the recommended uniform water restrictions and each member's ordinance is included as Attachment E -1.

The Authority's website, [www.arwava.org](http://www.arwava.org), does include a section on conservation, the annual Seasonal Water Wise Conservation notification, numerous water conservation suggestions and the approved Drought Response Plan.

Board Action Requested:

No Board Action is requested at this time. We just wanted to advise the Board of the forecast for this summer and the potential impact on the lake.



# Drought Management Plan for the Chesdin Reservoir

Developed by the  
Appomattox River Water Authority

In Association with  
Chesterfield County  
City of Petersburg  
City of Colonial Heights  
Dinwiddie County  
Prince George County

April 2014

## Purpose and Background

The Appomattox River Water Authority (ARWA) is the owner and manager of the Chesdin Reservoir, a 3,100 acre public water supply reservoir located on the Appomattox River on the Chesterfield County and Dinwiddie County line. The Authority withdraws raw water from the Chesdin Reservoir and provides treated 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 pursuant to Service Agreements between the Authority and each of these member jurisdictions. The member jurisdictions then distribute the treated water on a retail basis to residential, commercial and industrial establishments.

On October 13, 2010, the Authority Board of Directors passed a Resolution stating that prudent management of the Chesdin Reservoir required a balancing between and among three priorities: 1) the preservation and enhancement of a reliable source of high-quality treated water to meet the current and future needs of the residents and businesses of the member jurisdictions; 2) the protection of the environmental health of the Chesdin Reservoir; and, 3) the protection of the environmental health of the six-mile non-tidal stream reach of the Appomattox River below the Brasfield Dam.

On November 1, 2013 the ARWA received an approved Virginia Water Protection (VWP) Individual Permit No. 01-1719 from the Virginia Department of Environmental Quality

(DEQ). This permit requires that ARWA develop a Drought Management Plan and submit it to DEQ for review and approval within one-hundred and eighty days of the permit issuance.

This Plan would include, at a minimum, the following:

- a.) Development of drought stages consistent with the safe yield modeling evaluation. The water elevations of the Chesdin Reservoir at which each drought stage shall be initiated are presented in the VWP permit.
- b.) Description of the conservation measures to be implemented during each drought stage.
- c.) Procedure to assess vulnerability to drought conditions and adjust water usage to prolong available supply.
- d.) Method to project water needs and available water supply for a ninety day period from the declaration of a Drought Emergency stage.

Additionally, the Commonwealth of Virginia, in its Local and Regional Water Supply Planning regulation (9VAC 25-780), has established a planning process and criteria for local governments to use in the development of local or regional water supply plans. These regulations include a component regarding drought response and contingency plans. Communities that withdraw greater than 300,000 gallons per month of surface water and/or

ground water must develop a drought contingency and response plan. This Plan is designed to fulfill these regulatory requirements on behalf of the five ARWA members.

The Commonwealth of Virginia provides guidance to local governments on appropriate drought responses in the Virginia Drought Assessment and Response Plan. This Plan identifies the Virginia Drought Monitoring Task Force as having the responsibility for monitoring drought conditions for the Commonwealth and issuing status reports on drought conditions. These reports provide insight to local governments on statewide and local drought conditions. It is clearly stated in the Plan that, "While actions on the State level are important for the purpose of alerting localities and citizens of the advance of drought impacts, actions by local governments, individual water users, and individual citizens are much more important and effective in actually addressing the impacts of drought." It is the intent of this Drought Management Plan to provide the Authority and its member jurisdictions an alert and response plan to provide for maximum effectiveness related to Chesdin Reservoir drought conditions.

This Plan presents water conservation elements to be achieved during different drought stages, through voluntary efforts of the ARWA member's communities and, if needed mandatory restrictions on water use. While it is desirable that water conservation habits be practiced under all conditions, this Plan recognizes that until such time as all citizens are consistently maximizing opportunities to conserve water, higher levels of conservation can be achieved during times of "crisis". It is extremely important to communicate both the conditions and the desired conservation outcomes when the short-term sustainability of the water supply is threatened. As a result, this Plan makes a distinction between long-term water conservation programs that permanently reduce overall demand, and short-term drought management programs that temporarily reduce water use during drought conditions. Long-term conservation programs include measures implemented continually, regardless of the status of the water supply. Examples of long-term conservation measures may include public education, conservation oriented rate structures, low-flow plumbing rebate programs, and leak detection and repair. The long-term conservation programs are expected to result in sustained reduction in future water demands per capita over time.

Short term drought management programs include voluntary and mandatory water use restrictions and/or rationing which are implemented in response to the threatened status of the water supply and can result in significant water use reductions during a drought period. Drought management measures include curtailing demand by limiting non-essential uses of water, such as irrigation, and can be as restrictive as water rationing. Drought management programs are reserved for periods when indications are present that the area is entering into a drought, and as a result, the water supply may become threatened in the near future. Nearly every region of the United States has experienced drought and related adverse impacts to its public water supply systems. Changing water demand patterns and the possibility of climate change introduce greater uncertainty into the prediction of future drought frequency and duration. Responsible management of public water supplies in times of drought and potential water shortages requires early action to make the best use of existing water supplies and

reduce unnecessary water use to ensure that sufficient water is available to protect public health, sanitation and safety.

The annual cycle of reservoir inflow generally peaks in the spring, and then slowly declines through the summer with minimum flows observed in the fall. Winter and spring typically represent the refill seasons. The annual pattern for water demand grows to a peak during the summer with more modest demands in the spring and fall, and the lowest demands (with minimal outdoor water use) in the winter. The problems associated with drought conditions in a watershed that contains a water supply for an urban area are much the same everywhere. However, the individual characteristics of each watershed, water demand patterns, geography, and other factors make each watershed unique. As a result, although the basic framework of any water supply drought management plan contains many of the same options and components, an appropriate response strategy will be unique for each application. In addition, a successful response strategy depends on the involvement and participation of the public, which is a central component of any successful drought management plan.

The ARWA Board of Directors recognizes that from time to time it may become necessary to restrict the water use of the member jurisdictions and their customers because of drought conditions or emergency situations. It is the desire of the Board of Directors to prepare for those conditions prior to their occurrence. This Drought Management Plan will aid in this preparation. While the actual implementation of drastic water conservation measures that could become necessary during an extreme and extended drought will be difficult, the time and efforts expended to plan and prepare for these types of conditions are expected to ameliorate the hardship.

The ARWA Executive Director will contact and/or meet as necessary with Member Jurisdiction retail utility Directors and Engineers to coordinate and share information related to this Drought Management Plan. When conditions are emerging that may develop into drought stages, or during a drought stage, the ARWA Executive Director and Member Jurisdiction retail utility Directors and Engineers will meet as frequently as needed, and will include in their activities a review of each drought stage versus the response of the member communities to these stages. These personal interactions will serve as important input regarding the efficiency of the existing Drought Management Plan and what, if any improvements may be made in the future. This Plan will be reviewed and modified as needed based on the changes in water resource demands on the Chesdin Reservoir, regional growth impacts, climatic events, or additional information which is received which would help to more efficiently operate the regional water system in the event of a new drought of record.

The Appomattox River Water Authority and its member jurisdictions view their role in preparing the community for drought as part of our charter to responsibly manage the public water resource. The purpose of this Drought Management Plan is to present preparatory drought guidelines, provide the responses needed to comply with the VWP Section D. 7. requirement by providing 1) a method for predicting and identifying pending drought

occurrences on our watershed, 2) drought stages and responses to conserve the water supply, and 3) the ARWA members' jurisdictions drought stage conservation measures.

**I.) ARWA Water Supply Drought Stages**

The water elevations of the Chesdin Reservoir at which each drought stage shall be initiated are presented in Table 1 below.

Month	Stage 1 – Drought Watch (Voluntary)		Stage 2 – Drought Warning (Mandatory)		Stage 3 – Drought Emergency	
	Percent Usable Storage (%) Remanding	Water Elevation (ft. msl.)	Percent Usable Storage (%) Remanding	Water Elevation (ft. msl.)	Percent Usable Storage (%) Remanding	Water Elevation (ft. msl.)
<i>Full Pool</i>	<i>100</i>	<i>158</i>	<i>100</i>	<i>158</i>	<i>100</i>	<i>158</i>
<b>Jan</b>	75	154.8	60	152.3	40	148.1
<b>Feb</b>	80	155.6	65	153.1	42.5	148.7
<b>Mar</b>	82.5	156	70	154	45	149.3
<b>Apr</b>	85	156.3	70	154	45	149.3
<b>May</b>	85	156.3	70	154	45	149.3
<b>Jun</b>	82.5	156	67.5	153.5	45	149.3
<b>Jul</b>	80	155.6	65	153.1	42.5	148.7
<b>Aug</b>	75	154.8	60	152.3	40	148.1
<b>Sep</b>	70	154	55	151.5	40	148.1
<b>Oct</b>	65	153.1	50	150.5	35	146.8
<b>Nov</b>	70	154	52.5	151	35	146.8
<b>Dec</b>	75	154.8	55	151.5	37.5	147.4

**TABLE 1**

The water elevations as shown in Table 1 above are considered to be the triggers to enter the specific drought stages. ARWA contracted with a water resources management consulting firm to assess the vulnerability of the Chesdin Reservoir system to drought conditions. The consultant developed a model application of the system and used it to simulate the reservoir system performance over the past 85 years under varying levels of demand and release protocols for the development of Table 1 above. Whenever a drought appears likely or the reservoir level falls to within one foot of the Stage 1-Drought Watch trigger, the ARWA Executive Director will begin to monitor the following:

- Reports from the Commonwealth of Virginia’s Drought Monitoring Task Force that a Drought Watch, Drought Warning, or Emergency condition exists for the Middle James Drought Evaluation Region of Amelia or Chesterfield Counties, or in the Chowan Drought Evaluation Region of Dinwiddie County;
- Information and data available from the National Oceanic and Atmospheric Administration (NOAA), the National Weather Service (NWS), and the Virginia State Climatology Office;
- Inflow into the Chesdin Reservoir as reflected in the data for the following U.S. Geological Survey gages: Route 602 near Mannboro Gaging Station (No. 02040892) and Deep Creek near Mannboro Gaging Station (No. 02041000), and
- Inflow forecasts generated by Hydrologics’ OASIS software.

The three stages of drought correspond to the Commonwealth of Virginia Local and Regional Water Supply Planning Regulations. A drought Watch (Voluntary Water Conservation Reductions) is issued as a means to increase public awareness that climatic conditions and stream flows are such that there is concern of an impending drought. A drought Warning (Mandatory Public Water Use Restrictions) is issued when all indications show that the onset of a drought is imminent. A drought Emergency (Emergency Public Water Use Restrictions) is issued during a drought as a means of curtailing demand and extending raw water supply through the duration of the drought.

The purpose of identifying multiple drought stages is to minimize the impact to consumers consistent with the need to preserve adequate supplies of water. Droughts develop slowly, but the severity of any particular drought event is not known with certainty during its early stages. By identifying various drought stages, increasingly severe restrictions can be implemented as the drought progresses and only if needed. The demand reduction measures should follow a logical progression from voluntary water use restrictions to nonessential water use restrictions and finally, under severe water shortage conditions, to a complete ban on non-essential water use. The water conservation demand reduction measures will correspond to the drought stages identified in Table 1 above. Measures have been selected to reduce water usage within residential dwellings, commercial and industrial establishments and institutions in addition to the continued reduction of nonessential water use. During drought emergencies, large customers can be encouraged to use alternative supplies, if at all possible.

Ongoing efforts to educate water customers about water conservation practices will be increased during early drought conditions. Member retail customers will be alerted to drought conditions and informed of pending actions required to respond to water shortages. This may be accomplished through local newspaper articles and news broadcasts.

This Drought Management Plan is implementing Seasonal Voluntary Conservation Reductions effective annually from Memorial Day to Labor Day. The Stage 1-Drought Watch (Voluntary Water Conservation Reductions) is requested to be observed by all Citizens.

The ARWA Executive Director will notify the ARWA Board of Directors that entry into Drought Stage 1(Drought Watch), Drought Stage 2 (Drought Warning) or Drought Stage 3 (Drought Emergency) is required upon reaching the above Table 1 Water Elevation levels. Drought Stages can also be declared due to unusual events that threaten the available supply of water from the Chesdin Reservoir, such as acute contamination of the reservoir water or a failure causing significant loss of stored reservoir water from the dam or related types of circumstances.

The drought stage restrictions will remain in effect until such time that the Chesdin Reservoir storage capacity reaches the Drought Stage water elevation levels shown in Table 1 and maintains this level or a higher elevation for a minimum of fourteen (14) consecutive days and the ARWA Board of Directors approves either a return to an earlier drought stage or the total release from water restriction.

The ARWA Executive Director would make this recommendation to the ARWA Board, and upon Board approval, drought stages may be adjusted. Drought stages with restrictions will remain in force until such time that the Chesdin Reservoir storage capacity reaches the Drought Stage water elevation levels shown in Table 1 and maintains this level or a higher elevation for a minimum of fourteen (14) consecutive days. For example, if in the month of June and member jurisdictions are presently in Stage 2 –Drought Warning, then to reduce down to Stage 1- Drought Watch, the Chesdin

Reservoir water elevation level would need to reach a water elevation of 156 ft. msl., and maintain this level or a higher level for fourteen (14) consecutive days. A Stage 1-Drought Watch can remain in effect should the review of the bulleted criteria listed on page twelve of this Drought Management Plan indicate the need.

## **II.) Description of the Conservation Measures to be Implemented During Each Drought Stage – ARWA Uniform Water Restrictions**

### **Recommended Appomattox River Water Authority Uniform Water Restrictions**

When the reservoir levels are reached as shown in Table 1 on page 5, the Executive Director of the ARWA will notify the County Administrators and City Managers of the member localities that we have entered into a specific Drought Stage requiring the corresponding drought stage water restrictions below to be implemented immediately. The County Administrators and City Managers will promptly take steps necessary to notify the public that the restrictions are in effect and publish a notice of such restrictions in a newspaper having general circulation within their water service area and by other means as needed. The restrictions will remain in effect until such time that the Chesdin Reservoir storage capacity reaches the Drought Stage

water elevation levels shown in Table 1 and maintains this level or a higher elevation for a minimum of fourteen (14) consecutive days and the ARWA Board of Directors approves either a return to an earlier drought stage or the total release from water restriction.

Because ARWA is a wholesaler of water and has no retail customers of its own, the specific water conservation restrictions that will be implemented to meet the demand reductions are the responsibility of the five member jurisdiction's retail service providers. The stage-specific restrictions listed in this section apply to all member jurisdictions. For enforcement purposes, however, each jurisdiction must have its own Water Conservation Restriction Ordinance. These jurisdiction-specific ordinances are presented in Appendix A. The member jurisdiction will implement and enforce their water restriction use ordinances during periods of time in which drought stages are declared to be in effect.

### **Seasonal Chesdin Water Wise Conservation Measures (Effective Memorial Day through Labor Day)**

#### **Same as Stage 1-Drought Watch Voluntary Water Conservation Reductions**

Member localities will encourage and educate customers within their respective service areas to reduce and conserve water through the following measures:

- Limiting filling of decorative fountains
- Limiting washing of paved areas to two days per week unless for health or safety concerns
- Limiting washing of impervious surfaces unless required for health and safety use
- Fill or replenish swimming pools only when necessary unless for health or safety concerns

#### **Irrigation or outdoor watering:**

- Limit landscape (includes lawn) watering to three days per week by address (See local Water Utility guidelines for specifics)
- Irrigation with hose-end sprinklers and automatic sprinkler systems is prohibited between the hours of 11:00 a.m. and 6:00 p.m.
- Date and time restrictions for irrigation do not apply during repair or testing of a new or existing irrigation system
- Irrigation with hand-held bucket, hand-held hose, soaker hose and drip irrigation systems is allowed on any day and at any time

- Irrigation of vegetable gardens is allowed on any day and at any time
- New Landscaping: All watering is permitted for the first ten days after planting (See local Water Utility guidelines for specifics)
- Irrigation of golf courses, athletic fields and commercial nurseries with sprinklers is prohibited between the hours of 11:00 a.m. and 6:00 p.m. Greens and tees exempted from this restriction

**Vehicle Washing:**

- Charity car washes are allowed, but must be done using a hand-held bucket or a hand-held hose equipped with a positive shutoff device.
- Non-commercial vehicle washing is allowed on any day and at any time, but must be done using a hand-held bucket or a hand-held hose equipped with a positive shutoff device
- Commercial vehicle washing is allowed on any day and at any time

Additional Uses:

- Businesses: Limit to essential use only; Restaurants: No restrictions
- All other consumption: Conservation by any other means highly encouraged.
- Waste of water is to be discouraged at all times

**Stage 1-Drought Watch: (Voluntary Water Conservation Reductions)**

Request Citizens in member's service areas to reduce and conserve water by:

- Limiting filling of decorative fountains
- Limiting washing of paved areas to two days per week unless for health or safety concerns
- Limiting washing of impervious surfaces unless required for health and safety use
- Fill or replenish swimming pools only when necessary unless for health or safety concerns

**Irrigation:**

- Limit landscape (includes lawn) watering to three days per week by address (See local Water Utility guidelines for specifics)
- Irrigation with hose-end sprinklers and automatic sprinkler systems is prohibited between the hours of 11:00 a.m. and 6:00 p.m.
- Date and time restrictions for irrigation do not apply during repair or testing of a new or existing irrigation system
- Irrigation with hand-held bucket, hand-held hose, soaker hose and drip irrigation systems is allowed on any day and at any time
- Irrigation of vegetable gardens is allowed on any day and at any time
- New Landscaping: All watering is permitted for the first ten days after planting (See local Water Utility guidelines for specifics)
- Irrigation of golf courses, athletic fields and commercial nurseries with sprinklers is prohibited between the hours of 11:00 a.m. and 6:00 p.m. Greens and tees exempted from this restriction

**Vehicle Washing:**

- Charity car washes are allowed, but must be done using a hand-held bucket or a hand-held hose equipped with a positive shutoff device.
- Non-commercial vehicle washing is allowed on any day and at any time, but must be done using a hand-held bucket or a hand-held hose equipped with a positive shutoff device
- Commercial vehicle washing is allowed on any day and at any time

Additional Uses:

- Businesses: Limit to essential use only; Restaurants: No restrictions
- All other consumption: Conservation by any other means highly encouraged.
- Waste of water is to be discouraged at all times

**Stage 2- Drought Warning: (Mandatory Public Water Use Restrictions)**

Water Restrictions:

- Prohibit filling of decorative fountains
- Prohibit washing of paved areas unless for health and safety requirements
- Prohibit swimming pool filling and replenishing except to maintain health and safety. Health care facilities are exempt.
- Noncommercial vehicle washing is limited to one day per week using only hoses with an automatic shut-off nozzle. Commercial vehicles washing businesses are permitted to operate under normal conditions and are highly encouraged to utilize washing processes that recycle water.

**Irrigation:**

- Limit landscape (includes lawn) watering to three days per week by address (See local Water Utility guidelines for specifics)
- Irrigation with hose-end sprinklers and automatic sprinkler systems is prohibited between the hours of 11:00 a.m. and 6:00 p.m.
- Irrigation with hand-held bucket, hand-held hose, soaker hose and drip irrigation systems is allowed on any day and at any time
- New Landscaping: All watering is permitted for the first ten days after planting (See local Water Utility guidelines for specifics)
- Irrigation of golf courses, athletic fields and commercial nurseries with sprinklers is prohibited between the hours of 11:00 a.m. and 6:00 p.m. Greens and tees exempted from restriction.

Additional uses:

- Businesses: Limit to essential use only; Restaurants: No restrictions
- All other consumption: Conservation by any other means highly encouraged.

**Stage 3- Drought Emergency: (Emergency Public Water Use Restrictions)**

All Citizens are requested to stop all non-essential water use.

- Filling of decorative fountains is prohibited
- Washing of paved areas is prohibited
- No filling or replenishing of swimming pools. Health care facilities are exempt.

- No washing of vehicles including commercial vehicles
- Established landscaping-All water use is prohibited
- New landscaping- All water use is prohibited
- Golf courses- All water use is prohibited
- Businesses - Limit water usage to those essential for business and human hygiene
- Restaurants – Water use only for cooking, hygiene and meal beverage
- All other consumption – Limit water to essential use only.

Note 1: Stage 3 Drought Emergency restrictions may be called for by Declaration by the Governor of Virginia or the Virginia Drought Coordinator. If this occurred, ARWA Member Jurisdictions would only be impacted if the Member Jurisdictions water use restrictions were not as restrictive as the ones called for by the Commonwealth. ARWA Member Jurisdictions water use restrictions are as restrictive as called for by the Commonwealth. Water use prohibitions would apply to all uses from all sources of water and would only be effective when the Governor of Virginia or the Virginia Drought Coordinator declares a Drought Emergency.

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**III.) *Procedure to assess vulnerability to drought conditions (see narrative below) and adjust water usage (see water use restrictions presented above) to prolong available supply.***

During the development of the Joint Permit Application that resulted in VWP Individual Permit No. 01-1719, ARWA contracted with HydroLogics, Inc., a water resources management consulting firm, to assess the vulnerability of the Chesdin Reservoir system to drought conditions. HydroLogics developed an OASIS model application of the system and used it to simulate system performance over the past 85 years under varying levels of demand and release protocols. The results of this analysis are reflected in the drought stage Table 1 on page five as representing an appropriate balance between maintaining acceptable water supply reserves overall and the hardship imposed on water customers, recreational users of Chesdin Reservoir, and the downstream aquatic environment. A critical component of this protocol is that it preserves at least 55 days of supply remaining in all historic droughts. This

means that there will be nearly two months of supply available during a future drought event that may be more severe than any in the past 85 years.

ARWA will continue to contract for periodic updates to the OASIS model and to re-do the vulnerability assessment as needed. We envision that the model will be updated at least every five years or following a major drought event.

#### ***IV.) Method to project water needs and available water supply for a ninety day period from the declaration of a Drought Emergency stage.***

To project water needs and available supplies for a 90-day period from the declaration of a Drought Emergency, ARWA will rely on the professional expertise of the managers of the member jurisdiction retail systems and the OASIS model developed by HydroLogics. Projected water needs will be developed in consultation with the managers of the retail systems. Because conditions during a Drought Emergency are not seen often, historical data and trends are likely to be of limited value. The projections will account for the effectiveness of the restrictions imposed to date, the time of year, and the likely effectiveness of additional restrictions that might be proposed.

The Appomattox River Water Authority has discussed with Hydrologics, Inc. to provide real-time probability-based analysis of drought potential specific to the Chesdin Reservoir. Hydrologics developed and will utilize the OASIS software to analyze statistical probabilities as to the rate at which the Chesdin Reservoir water supply levels would diminish, using the historical period of record for reservoir inflow, current demand projections, and the permit required environmental release impact. By evaluating the historical period of record for reservoir inflow against the current demand for drinking water and the impact from the permit required environmental water release, the OASIS model can simulate the positive effects of water conservation on preserving water supply during droughts, and through an iterative process, determine at what time intervals it is most appropriate to call on the public for increasing restrictive water conservation measures. By running the OASIS model during a Stage 3 Drought Emergency, the ARWA will be able to review the statistical probability as to the rate at which the Chesdin Reservoir water supply would diminish based on existing and near-future demands coupled with the impact from the permit-required environmental water release.

Based on the Water Protection Permit requirement in Part 1 Section E.3.k., the semi-annual monitoring report will include the following if a drought emergency is declared during the semi-annual reporting period:

1. The OASIS model forecast of future stream-flows

2. The OASIS model forecast on the expected rate at which the Chesdin Reservoir water supply levels would diminish using a.) historical period of record for the reservoir inflow; 2.) current demand projections; and 3.) permit required environmental release impact.

One of the components of the OASIS model is that it can provide probabilistic assessments of future streamflows. These “forecasts” are based on antecedent streamflows (a surrogate for soil moisture) for the same date for each year in the record. These flows are adjusted to account for current soil moisture conditions, and one forecast is obtained for each year in the record. Because current conditions may be worse than those preceding severe historical droughts, the forecast can indicate the possibility of conditions worse than have occurred historically or not as severe. This is important management information in assessing water availability over the next ninety days. Using this technique and simulating each forecast of reservoir inflow, one can obtain probabilistic estimates of inflow to the reservoir over the next 90 days. These estimates are of the form that, for example, there is a 90 percent chance that inflows will equal or exceed 100 cubic feet per second. Conversely, there would be a 10 percent chance that inflows over the period would average less than 100 cubic feet per second. Using this information and the demand projections discussed above, the ARWA Executive Director in concert with the Directors of the member retail systems will recommend a course of action to the ARWA Board of Directors.

The drought indicators that will be considered from outputs from the OASIS model results are defined in three components: reservoir elevation; risk factor; and the forecast horizon. When one or more of these components is reached during an actual drought, a formal declaration to the public is needed in order to activate both the public education measures and the water use restrictions that are necessary to achieve water conservation. The Drought Management Plan and the Water Protection Permit defines intervals as “Stages” (see above Table 1 on page 5) of the drought.

As part of the permit development process, the OASIS model was used to evaluate how well these Stages would have worked in past droughts, and this provided for a better understanding of how well the Stages will work in future droughts. The Stages provide for a margin of safety for the uncertainty of climatic change and the potential for more severe droughts in the future as compared to those in the historical record.

## **V.) *ARWA and Member Jurisdiction Implementation of Water Conservation Restrictions***

The specific water conservation restrictions that will be implemented to meet the demand reductions are the responsibility of the City and County utility retail service providers: Cities of Colonial Heights and Petersburg, and the Counties of Chesterfield, Dinwiddie and Prince George. Appendix A presents each respective member jurisdiction's Water Use Restrictions Ordinance.

Formal public declaration of a change in drought stage in this Drought Management Plan will be guided by the following:

- Drought Stages based on Chesdin Reservoir elevations required by Virginia Water Protection Individual Permit No. 01-1719, specifically presented in Part I. D. 7a.
- Determination by the Commonwealth of Virginia's Drought Monitoring Task Force that a Drought Watch, Drought Warning, or Emergency condition exists for the Middle James Drought Evaluation Region of Amelia or Chesterfield Counties, or in the Chowan Drought Evaluation Region of Dinwiddie County, or declared by either Amelia, Chesterfield or Dinwiddie Counties in accordance with the County's Drought Ordinance.
- Declaration by the Governor of the Commonwealth of Virginia.
- Review of information and data provided by the National Oceanic and Atmospheric Administration (NOAA), the National Weather Service (NWS), and the Virginia State Climatology Office.
- Review of inflow data monitoring by the U.S. Geological Survey for the Route 602 near Mannboro Gaging Station (No. 02040892) and Deep Creek near Mannboro Gaging Station (No. 02041000).
- Modeled hydrological conditions (using Hydrologics OASIS software)

When page 5, Table 1 water elevation level conditions are reached versus specific month indicating that a Stage 1 –Drought Watch is warranted, the Executive Director will immediately advise the ARWA Board of Directors that a Drought Watch will be officially declared for the Member Jurisdictions. At the time a drought continues to progress by impacting the Chesdin Reservoir water elevation levels negatively and reaches the Table 1 specific water elevation level versus month, the ARWA Board of Directors in consultation with the ARWA Executive Director, will declare a Stage 2-Drought Warning or a Stage 3-Drought Emergency should drought conditions continue to reach the reservoir water elevation levels as defined in VWP No. 01-1719, Part 1. D.7a. (same as page 5, Table 1).

ARWA's Executive Director will provide appropriate immediate notification to the five Member Jurisdictions and the news media at any time a new drought stage has been declared by ARWA. At that time, the City Managers for the Cities of Colonial Heights and Petersburg, and the County Administrators for the Counties of Chesterfield, Dinwiddie and Prince George (the retail utility providers) will activate their water use restrictions and other conservation measures as presented in Appendix I of this Drought Management Plan.

Due to the fact that the five Member Jurisdictions make up the entire retail distribution of ARWA's produced water, specific actions must take place once a drought stage has been

declared by ARWA. The Member Jurisdictions will jointly exercise vigorous measures to encourage voluntary water conservation and encourage decreases in outdoor water use during a Stage 1-Drought Watch. The five Member Jurisdictions will execute actions as presented in this Drought Management Plan to activate Stage 2-Drought Warning mandatory water use restrictions, and as needed to authorize and implement additional water use restrictions during a Stage 3-Drought Emergency. Upon the determination by the Commonwealth of Virginia's Drought Monitoring Task Force that a Drought Watch, Drought Warning, or Emergency condition exists for the Middle James Drought Evaluation Region of Amelia or Chesterfield Counties, or in the Chowan Drought Evaluation Region of Dinwiddie County or a Declaration by the Governor of the Commonwealth of Virginia has been made, the ARWA Member Jurisdictions will immediately comply with the Commonwealth's recommendations or requirements under the issued drought stage. Under the above scenarios related to the Commonwealth of Virginia, the five retail ARWA Member Jurisdictions would need to comply with the Commonwealth of Virginia's mandated water restrictions if determined to be more restrictive as stated in ARWA's Virginia Water Protection Individual Permit No. 01-1719. All five ARWA Member Jurisdictions have legally mandated water use restriction ordinances in place to initiate various water use restriction stages as soon as ARWA declares a drought stage. Every effort will be made by each ARWA Member Jurisdiction City Manager or County Administrator to expedite the process and authorize the appropriate drought stage and associated restrictions as quickly as possible.

With respect to well users, the ARWA Member Jurisdictions cannot impose water use restrictions on well users until the Governor of Virginia declares a Drought Emergency. At that point the member jurisdictions must enforce the water use restrictions that the Governor has enacted. It is possible that the ARWA may have entered a local Stage 3-Drought Emergency prior to the Governor or the Commonwealth of Virginia's Drought Monitoring Task Force enacting a statewide or regional Stage 3-Drought Emergency. Under these conditions, the ARWA member jurisdictions are limited as to what measures they can implement for well users. The members can disseminate water conservation information, but have no enforcement authority.

In the event that the ARWA Executive Director determines there is an emergency need to enact a drought response stage, and a regularly scheduled ARWA Board meeting is not planned to enact the drought response stage, a special meeting of the ARWA Board of Directors may be called in order that all agencies take appropriate and coordinated action without unreasonable delay. Continue interaction and coordination between the ARWA and the ARWA five Member Jurisdictions is critical in ensuring that these processes are effective in meeting the elements presented in this Drought Management Plan.

The five ARWA Member Jurisdictions will implement and enforce their water restriction use ordinances shown in Appendix A of this Plan during periods of time in which drought stages are declared.

**APPENDIX A**

**MEMBER JURISDICTIONS**

**WATER USE RESTRICTION ORDINANCES**

# Chesterfield County

## County of Chesterfield

### **Sec. 18-151. Declaration of voluntary, mandatory or emergency water use restrictions.**

The director shall declare voluntary water use restrictions and recommend to the county administrator that he declare mandatory or emergency water use restrictions during periods of extended droughts or other emergency conditions in which available water resources are compromised. Mandatory or emergency water use restrictions will become effective the date the county administrator declares in writing the need for the restrictions. Water use restrictions shall be declared to assure maximum beneficial use of available water resources for the public welfare. The director shall use as a basis for declaring or recommending water use restrictions established criteria for reservoir levels and river flows as developed and provided by source-water suppliers. Emergency water use restrictions may also be imposed if the director recommends them based on a determination that an emergency condition of any nature exists that threatens the availability of the public drinking water supply. The director shall likewise nullify, or recommend the nullification of, the water use restrictions when recovered conditions based on established criteria for reservoir levels and river flows are met or when in the director's judgment, the emergency condition has been resolved.

*(Ord. of 9-26-07, § 1; Ord. of 11-18-09(4), § 1)*

### **Sec. 18-152. Voluntary water conservation measures.**

Upon the declaration of voluntary water conservation measures, users of the public water system are requested to voluntarily limit their use of public water as follows:

- (1) *Paved areas.* Limit washing to two days per week. Unrestricted for immediate health and safety concerns.
- (2) *Swimming pools.* Limit to filling and replenishing to maintain health and safety.
- (3) *Vehicle washing.* Noncommercial washing is limited to two days per week using only hand-held hoses with an automatic shut-off nozzle. Commercial vehicle washing businesses are permitted to operate under normal conditions.
- (4) *Established landscaping.* Watering is limited to three days per week by address. Addresses ending with an odd number may water only on Tuesdays, Thursdays and Saturdays. Addresses ending with an even number and locations with no street number may water only on Wednesdays, Fridays and Sundays. Watering is prohibited on Mondays. Watering with buckets of up to five gallons per day is permitted any time.

(5) *New landscaping*. All watering is permitted for the first ten days after planting. Thereafter, the restriction for established landscaping shall apply. Overseeding an existing lawn does not qualify as new landscaping—See definitions.

(6) *Golf courses*. Limit watering to 8:00 p.m. to 10:00 a.m. on any day. Greens are exempted from this restriction.

(7) *Businesses*. Limit to essential use only.

(8) *Restaurants*. No restrictions.

(9) *All other consumption*. Conservation by any means encouraged.

(Ord. of 9-26-07, § 1; Ord. of 11-18-09(4), § 1)

### **Sec. 18-153. Mandatory public water use restrictions.**

Upon the declaration of mandatory public water use restrictions, users of the public water system shall limit their use of public water as follows:

(1) *Paved areas*. Washing is prohibited except for immediate health and safety requirements.

(2) *Swimming pools*. Limit to filling and replenishing to maintain health and safety. All other uses are prohibited.

(3) *Vehicle washing*. Noncommercial washing is limited to one day per week using only hoses with an automatic shut-off nozzle. Commercial vehicle washing businesses are permitted to operate under normal conditions.

(4) *Established landscaping*. Watering is limited to three days per week by address. Addresses ending with an odd number may water only on Tuesdays, Thursdays and Saturdays. Addresses ending with an even number and locations with no street number may water only on Wednesdays, Fridays and Sundays. Watering is prohibited on Mondays. Watering with buckets of up to five gallons per day is permitted any time.

(5) *New landscaping*. All watering is permitted for the first ten days after planting. Thereafter, the restriction for established landscaping shall apply. Over seeding an existing lawn does not qualify as new landscaping—See definitions.

(6) *Golf courses*. Watering restricted to Tuesday through Sunday between 8:00 p.m. and 4:00 a.m. Greens are exempted from this restriction.

(7) *Businesses*. Limit to essential use only.

(8) *Restaurants*. No restrictions.

(9) *All other consumption*. Conservation by any means encouraged.

(Ord. of 9-26-07, § 1; Ord. of 11-18-09(4), § 1)

### **Sec. 18-154. Emergency public water use restrictions.**

Upon declaration of emergency public water use restrictions, users of the public water system shall limit their use of public water as follows:

(1) *Paved areas*. All water use is prohibited.

(2) *Swimming pools*. All water use is prohibited.

- (3) *Vehicle washing.* All water use is prohibited.
- (4) *Established landscaping.* All water use is prohibited.
- (5) *New landscaping.* All water use is prohibited.
- (6) *Golf courses.* All water use is prohibited.
- (7) *Businesses.* Limit water usage to those essential for business and human hygiene.
- (8) *Restaurants.* Water use only for cooking, hygiene and meal beverage.
- (9) *All other consumption.* Limit water to essential use only.

*(Ord. of 9-26-07, § 1; Ord. of 11-18-09(4), § 1)*

### **Sec. 18-155. Public notification.**

Notice of the declaration of voluntary water conservation measures will be furnished to local media formats including but not limited to print media, radio, television and appropriate computer-based websites. Notice of the declaration of mandatory and emergency public water use restrictions shall be furnished to the same local media formats. Additionally, declaration for mandatory and emergency public water use restrictions shall be published in widely circulated print media for a minimum of one day per week for each week that the restrictions are in force.

*(Ord. of 9-26-07, § 1)*

### **Sec. 18-156. Violation.**

It shall be a violation for any person to use water or allow or cause the use of water in violation of the provisions for mandatory and emergency water use restrictions after the first publication required by [section 18-155](#) herein.

*(Ord. of 9-26-07, § 1)*

### **Sec. 18-157. Penalty.**

(a) Any person who violates any provisions of this article related to mandatory water use restrictions shall be subject to the following penalties:

- (1) For the first offense, violators shall be fined \$100.00. For the second offense, violators shall be fined \$200.00. For the third offense, violators shall be fined \$400.00. For the fourth offense, violators shall be fined \$800.00. For the fifth and each subsequent offense, violators shall be fine \$1,600.00. All fines shall be imposed on the violator's next water bill.
- (2) Each violation by a person shall be counted as a separate violation by that person, irrespective of the location at which the violation occurs.
- (3) Persons shall have the right to challenge the assessment of a penalty. Such challenge shall be filed within ten days of the assessment of the penalty by notifying the county attorney of such challenge, in writing. Upon receipt of such challenge, the county attorney shall file a civil warrant in General District Court seeking adjudication of the imposition of the fine.

(b) Any person who violates any provisions of this article related to emergency water use restrictions shall be subject to the following penalties:

(1) For the first offense, violators shall be fined \$200.00. For the second offense, violators shall be fined \$400.00. For the third offense, violators shall be fined \$800.00. For the fourth and each subsequent offense, violators shall be fine \$1,600.00. All fines shall be imposed on the violator's next water bill.

(2) Each violation by a person shall be counted as a separate violation by that person, irrespective of the location at which the violation occurs.

(3) Persons shall have the right to challenge the assessment of a penalty. Such challenge shall be filed within ten days of the assessment of the penalty by notifying the county attorney of such challenge, in writing. Upon receipt of such challenge, the county attorney shall file a civil warrant in General District Court seeking adjudication of the imposition of the fine.

*(Ord. of 9-26-07, § 1)*

### **Sec. 18-158. Definitions.**

The following words and phrases, when used in this article, shall have the meaning ascribed to them below, except in those instances where the context clearly indicates a different meaning:

*Established landscaping.* Landscaping plantings, including but not limited to lawns, vegetable gardens, flowers, trees and shrubs existing in an area after such period of time as to accomplish an establishment and maintenance of growth.

*New landscaping.* Any landscaping made up of plants or seeds in or transplanted to an area within such period of time as to accomplish a reasonable establishment and maintenance of growth. Over seeding an existing lawn does not qualify as new landscaping.

*Person.* Any individual corporation, partnership, association, company, business, trust, joint venture or other legal entity.

*Swimming pool.* Any structure, basin, chamber, or tank, containing an artificial body of water for swimming, diving or recreational bathing and having a depth of two feet or more at any point.

*Vegetable garden.* Any "non-commercial" vegetable garden planted primarily for household use; "non-commercial" includes incidental direct selling of produce from such a vegetable garden to the public.

*(Ord. of 9-26-07, § 1; Ord. of 11-18-09(4), § 1)*

# City of Petersburg

## City of Petersburg Code

### Sec. 114-49. - Definitions.

The following words, terms and phrases, when used in this subdivision, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

*Bucket* means a bucket or other container holding five gallons or less when used singly by one person.

*Established landscape* means landscape plants existing in an area after such period of time as to accomplish an establishment and maintenance of growth.

*Fountain* means a water display where water is sprayed strictly for ornamental purposes.

*Garden* means any non-commercial garden planted primarily for household use. The term "non-commercial" as used in this definition includes the incidental direct sale of items from such a garden to the public.

*Handheld hose* means a hose attended by one person and fitted with a manual or automatic shutoff nozzle.

*Landscape plant* means any member of the kingdom Plantae, including any tree, shrub, vine, herb, flower, succulent, ground cover or grass species that grows or has been planted outdoors.

*New landscape* means any landscape made up of plants or seeds planted in or transplanted to an area within such period of time as to accomplish a reasonable establishment and maintenance of growth.

*Paved areas* means streets, sidewalks, driveways, patios, parking lots, and other surface areas covered with brick, paving, tile or other material through which water cannot pass.

*Recycled water* means water originally potable but circulated for reuse after delivery from the public water system.

*Swimming pool* means any structure, basin, chamber or tank, including hot tubs, containing an artificial body of water for swimming, diving or recreational bathing and having a depth of two feet or more at any point.

(Ord. No. 07-98, 10-23-2007)

### **Sec. 114-50. - Purpose; enforcement; exemptions.**

(a) *Purpose.* The purpose of this subdivision is to establish water conservation reduction measures to be imposed when the Appomattox River Water Authority ("ARWA") requests or directs such restriction or when the governor of the Commonwealth or other state or federal authority, pursuant to applicable law, declares an emergency, imposes mandatory water conservation measures, and authorizes the city to enforce such measures.

(b) *State or federal measures.* Should the Governor or other state or federal authority, pursuant to applicable law, declare an emergency, impose mandatory water conservation measures, and authorize the city to enforce such measures, the city shall enforce those measures pursuant to this article to the extent that such measures impose greater restrictions on the use of water than those in this article. Otherwise, any water conservation measures imposed by this article shall remain in effect as provided in this article.

(c) *Exemptions.* This article shall not apply to any governmental activity, institution, business, residence, or industry when it has been determined by the city manager that an exemption is necessary for the following:

- (1) The public health, safety and welfare;
- (2) The prevention of severe economic hardship or the substantial loss of employment; or
- (3) The health of any person.

Recycled water and water supplied from public or private groundwater sources shall also be exempt from this article.

(Ord. No. 07-98, 10-23-2007)

### **Sec. 114-51. - Declaration of conservation measures.**

(a) *In general.* The city manager shall declare the imposition of voluntary, mandatory or emergency water conservation measures whenever the city is experiencing a water supply emergency or the need to avert a water supply emergency. Such emergency or need to avert an emergency shall be deemed to exist whenever declared by ARWA or when the Governor or other state or federal authority, pursuant to applicable law, declares an emergency, imposes mandatory water conservation measures, and authorizes the city to enforce such measures. Notices of the implementation and termination of the water conservation measures shall be publicly announced and published in a daily newspaper for at least one day. The implementation or termination of the measures shall become effective immediately upon publication of the respective notice.

(b) *Voluntary conservation measures.* When voluntary water conservation measures are in effect, the city manager shall request the general public, businesses and public agencies in the city to implement and comply with the following water use reduction measures:

(1) *Fountains.* Reduce operation to hours between 8:00 a.m. and 8:00 p.m., except that operation may be unrestricted on any two days during a week at the option of the operator or owner.

(2) *Paved areas.* Reduce washing to any hours during any two days in a week. Washing paved areas for immediate health and safety is exempted.

(3) *Swimming pools.* Reduce filling and replenishing to levels required to maintain health and safety.

(4) *Gardens and established landscape.* Reduce watering to hours between 8:00 p.m. and 8:00 a.m. any day. Watering by bucket is unrestricted.

(5) *Vehicle washing.* Reduce noncommercial washing of mobile equipment to any hours during any two days in a week using a handheld hose having a positive (i.e., automatic) shutoff nozzle. Commercial mobile equipment washing businesses are exempt.

(6) *Restaurants.* No restrictions.

(7) *Pubic utilities.* Reduce scheduled sewer and hydrant flushing by 50 percent. Flushing to meet immediate health and safety requirements is exempt.

(8) *New landscape.* Watering unrestricted during the first 30 days after planting and shall conform to subsection (b)(4) of this section after the 30 days.

(c) *Mandatory conservation measures.* When mandatory water conservation measures are in effect, the general public, businesses and public agencies shall comply with the following water use restrictions:

(1) *Fountains.* Operation prohibited.

(2) *Paved areas.* Washing prohibited except for immediate health and safety requirements.

(3) *Swimming pools.* Reduce filling and replenishing to levels to maintain health and safety

(4) *Gardens, plants, and established landscapes.* Water only from 8:00 p.m. to 8:00 a.m. on any day.

(5) *Vehicle washing.* Reduce non-commercial washing or mobile equipment to one day a week using a handheld hose having a positive (i.e. automatic) shutoff nozzle. Commercial mobile equipment washing businesses are exempt.

(6) *Restaurants.* Serve water to customers only upon request.

(7) *Public utilities.* Conduct sewer and hydrant flushing only to the extent required to meet immediate health and safety needs.

(8) *New landscape.* Water unrestricted during the first 30 days after planting and shall conform to subsection (b)(4) of this section after the first 30 days.

(d) *Emergency conservation measures.* When emergency water conservation measures are in effect, the general public, businesses, and public agencies shall comply with the following water use restrictions:

(1) *Fountains.* Operation prohibited.

(2) *Paved areas.* Washing prohibited except for immediate health and safety requirements.

(3) *Swimming pools.* Reduce filling and replenishing to levels to maintain health and safety.

(4) *Gardens, plants, and all landscapes.* Water only from 8:00 p.m. on Wednesdays to 8:00 a.m. on Thursdays.

(5) *Vehicle washing.* No non-commercial washing. Commercial mobile equipment washing businesses are exempt.

(6) *Restaurants.* Serve water to customers only upon request.

(7) *Public utilities.* Conduct sewer and hydrant flushing only to the extent required to meet immediate health and safety needs.

(Ord. No. 07-98, 10-23-2007)

## **Sec. 114-52. - Violations; evidentiary presumptions.**

(a) *In General.*

(1) *Violation.* It shall be a violation of this article for any person to intentionally, knowingly, recklessly or negligently use, cause the use of or permit the use of water in violation of any of the mandatory or emergency sections of this article.

(2) *Evidentiary presumptions.* For purposes of this article, when water has been used in a manner contrary to a mandatory or emergency section of this article, it shall be presumed that the person in whose name a water meter connection is registered with the department has knowingly used, caused the use of, or permitted the use of water in such a contrary manner. Proof that a particular premises had a water meter connection registered in the name of the defendant cited in a pleading filed pursuant to this article shall constitute in evidence a prima facie presumption that the defendant is the person who used, caused the use of, or permitted the use of water in a manner contrary to any mandatory or emergency section of this article.

(b) *Violations of mandatory restrictions.* On the first offense, a person violating a mandatory restriction pursuant to this article shall receive a written warning. On the second offense, the person shall be assessed a civil penalty of \$50.00. On the third offense, the person shall be assessed a civil penalty of \$100.00. On the fourth and any subsequent offense, the person shall be assessed a civil penalty of \$200.00. Any civil penalty imposed pursuant to this paragraph shall be added to and become part of the offending person's city water bill; and such civil penalty, if unpaid, shall be collected in any manner authorized for the collection of the city's water bills.

(c) *Violations of emergency restrictions.* On the first offense, a person violating an emergency restriction pursuant to this article shall be assessed a civil penalty of \$50.00. On

the second offense, the person shall be assessed a civil penalty of \$100.00. On the third offense, the person shall be assessed a civil penalty of \$200.00. On the fourth and any subsequent offense, the person shall be assessed a civil penalty of \$300.00. Any civil penalty imposed pursuant to this subsection shall be added to and become part of the offending person's city water bill; and such civil penalty, if unpaid, shall be collected in any manner authorized for the collection of the city's water bills.

*(Ord. No. 07-98, 10-23-2007)*

### **Sec. 114-53. - Appeals and enforcement.**

(a) *Appeals.* A person shall have the right to appeal to the city manager upon receiving written notice of any violation or upon the imposition of a civil penalty. The city manager shall notify the person in writing of the time and place for the hearing of the appeal within a reasonable time prior to such hearing, which shall occur no more than 15 business days after the city manager receives written notice of the appeal. The city manager shall notify the person in writing of the city manager's final decision no more than 15 business days after the hearing.

(b) *Enforcement.* The city manager is authorized to designate any qualified personnel under his supervision to enforce this article, including the imposition of civil penalties; and he is authorized to implement policies or rules for the administration of this article.

*(Ord. No. 07-98, 10-23-2007)*

# City of Colonial Heights

## City of Colonial Heights

### Article II: Water Conservation

[Added 10-16-2007 by Ord. No. 07-26]

§ 277-19 Purpose; enforcement; exemptions.

A. Purpose. The purpose of this Article is to establish water conservation measures to be imposed when the Appomattox River Water Authority ("ARWA") requests or directs such restriction or when the governor of the Commonwealth or other state or federal authority, pursuant to applicable law, declares an emergency, imposes mandatory water conservation measures, and authorizes the City to enforce such measures.

B. State or federal measures. Should the Governor or other state or federal authority, pursuant to applicable law, declare an emergency, impose mandatory water conservation measures, and authorize the City to enforce such measures, the City shall enforce those measures pursuant to this Article to the extent that such measures impose greater restrictions on the use of water than those in this Article. Otherwise, any water conservation measures imposed by this Article shall remain in effect.

C. Exemptions. This Article shall not apply to any governmental activity, institution, business, residence, or industry when it has been determined by the City Manager that an exemption is necessary for the following:

- (1) The public health, safety and welfare;
- (2) The prevention of severe economic hardship or the substantial loss of employment; or
- (3) The health of any person.

Recycled water and water supplied from public or private groundwater sources shall also be exempt from this Article.

§ 277-20

Definitions.

The following words, terms and phrases, when used in this Article, shall have the meanings ascribed to them in this Article, except where the context clearly indicates a different meaning:

**BUCKET**

A bucket or other container holding five gallons or less when used singly by one person.

**EMERGENCY WATER CONSERVATION MEASURES**

Those measures to be taken when ARWA notifies the City Manager that Lake Chesdin has a one-hundred-twenty-five-day supply of water remaining.

**ESTABLISHED LANDSCAPE**

Landscape or lawn made up of plants or seeds planted in or transplanted to an area that is more than 30 days old.

**GARDEN**

Any noncommercial garden planted primarily for household use. The term "noncommercial" as used in this definition includes the incidental direct sale of items from such a garden to the public.

**HANDHELD HOSE**

A hose attended by one person and fitted with a manual or automatic shutoff nozzle.

**LANDSCAPE PLANT**

Any member of the kingdom Plantae, including any tree, shrub, vine, herb, flower, succulent, ground cover or grass species that grows or has been planted outdoors.

**LAWN**

Ground that is covered with grass and is kept mowed.

**MANDATORY WATER CONSERVATION MEASURES**

Those measures to be taken when ARWA notifies the City Manager that Lake Chesdin has a two-hundred-day supply of water remaining.

**NEW LANDSCAPE**

Any landscape or lawn made up of plants or seeds planted in or transplanted to an area that is less than 30 days old.

**PAVED AREAS**

Streets, sidewalks, driveways, patios, parking lots, and other surface areas covered with brick, paving, tile or other material through which water cannot pass.

**RECYCLED WATER**

Water originally potable but circulated for reuse after delivery from the public water system.

**SWIMMING POOL**

Any structure, basin, chamber or tank, including hot tubs, containing an artificial body of water for swimming, diving or recreational bathing and having a depth of two feet or more at any point.

**VOLUNTARY WATER CONSERVATION MEASURES**

Those measures to be taken when ARWA notifies the City Manager that the Lake Chesdin water level is one foot below the spillway.

§ 277-21 Declaration of conservation measures.
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A. In general. The City Manager shall declare the imposition of voluntary, mandatory or emergency water conservation measures whenever ARWA notifies him of the need for such a declaration. Notices of the implementation and termination of the water conservation measures shall be publicly announced and published in a daily newspaper for at least one day. The implementation or termination of the measures shall become effective immediately upon publication of the respective notice. In addition, the City Manager shall enforce water conservation measures when the Governor or other state or federal authority declares an emergency, imposes mandatory water conservation measures, and authorizes such City enforcement of the measures.

B. Voluntary conservation measures. When voluntary water conservation measures are in effect, the City Manager shall request the general public, businesses and public agencies in the City to implement and comply with the following water use reduction measures:

- (1) Paved areas. Reduce washing to any hours during any two days in a week. Washing paved areas for immediate health and safety is exempted.
- (2) Swimming pools. Reduce filling and replenishing to levels required to maintain health and safety.
- (3) Gardens and established landscape. Reduce watering to hours between 8:00 p.m. and 8:00 a.m. on any days. Watering by bucket is unrestricted.
- (4) Vehicle washing. Reduce noncommercial washing of mobile equipment to any hours during any two days in a week using a handheld hose having a positive (i.e., automatic) shutoff nozzle. Commercial mobile equipment washing businesses are exempt.
- (5) Restaurants. No restrictions.
- (6) Public utilities. Reduce scheduled sewer and hydrant flushing by 50%. Flushing to meet immediate health and safety requirements is exempt.
- (7) New landscape. Watering unrestricted during the first 30 days after planting and shall conform to Subsection **B(3)** of this section after the 30 days.

C. Mandatory conservation measures. When mandatory water conservation measures are in effect, the general public, businesses and public agencies shall comply with the following water use restrictions:

- (1) Paved areas. Washing prohibited except for immediate health and safety requirements.
- (2) Swimming pools. Reduce filling and replenishing to levels to maintain health and safety.
- (3) Gardens and established landscapes. Water only from 8:00 p.m. on Tuesdays to 10:00 a.m. on Wednesdays; 8:00 p.m. on Thursdays to 10:00 a.m. on Fridays; and 8:00 p.m. on Saturdays to 10:00 a.m. on Sundays. Watering by bucket is unrestricted.  
[Amended 11-8-2007 by Ord. No. 07-28]
- (4) Vehicle washing. Limit noncommercial washing of mobile equipment to Saturdays only using a handheld hose having a positive (i.e., automatic) shutoff nozzle. Commercial mobile equipment washing businesses are exempt.
- (5) Restaurants. Serve water to customers only upon request.
- (6) Public utilities. Conduct sewer and hydrant flushing only to the extent required to meet immediate health and safety needs.
- (7) New landscape. Water unrestricted during the first 30 days after planting and shall conform to Subsection **C(3)** of this section after the first 30 days.

D. Emergency conservation measures. When emergency water conservation measures are in effect, the general public, businesses, and public agencies shall comply with the following water use restrictions:

- (1) Paved areas. Washing prohibited except for immediate health and safety requirements.
- (2) Swimming pools. Prohibit filling and replenishing unless in a health care facility.
- (3) Gardens and all landscapes. Water only from 8:00 p.m. on Wednesdays to 10:00 a.m. on Thursdays. Watering by bucket is unrestricted.  
[Amended 11-8-2007 by Ord. No. 07-28]
- (4) Vehicle washing. No noncommercial washing. Commercial mobile equipment washing businesses are exempt.
- (5) Restaurants. Serve water to customers only upon request.

(6) Public utilities. Conduct sewer and hydrant flushing only to the extent required to meet immediate health and safety needs.

§ 277-22 Violations; evidentiary presumptions.

A. In general.

(1) Violation. It shall be a violation of this Article for any person to intentionally, knowingly, recklessly or negligently use, cause the use of or permit the use of water in violation of any of the mandatory or emergency sections of this Article.

(2) Evidentiary presumptions. For purposes of this Article, when water has been used in a manner contrary to a mandatory or emergency section of this Article, it shall be presumed that the person in whose name a water meter connection is registered with the City has knowingly used, caused the use of or permitted the use of water in such a contrary manner. Proof that a particular premises had a water meter connection registered in the name of the defendant cited in a pleading filed pursuant to this Article shall constitute in evidence a prima facie presumption that the defendant is the person who used, caused the use of or permitted the use of water in a manner contrary to any mandatory or emergency section of this Article.

B. Violations of mandatory restrictions. On the first offense, a person violating a mandatory restriction pursuant to this Article shall receive a written warning. On the second offense, the person shall be assessed a civil penalty of \$50. On the third offense, the person shall be assessed a civil penalty of \$100. On the fourth and any subsequent offense, the person shall be assessed a civil penalty of \$200. Any civil penalty imposed pursuant to this paragraph shall be added to and become part of the offending person's City water bill; and such civil penalty, if unpaid, shall be collected in any manner authorized for the collection of the City's water bills.

C. Violations of emergency restrictions. On the first offense, a person violating an emergency restriction pursuant to this Article shall be assessed a civil penalty of \$100. On the second offense, the person shall be assessed a civil penalty of \$200. On the third offense, the person shall be assessed a civil penalty of \$300. On the fourth and any subsequent offense, the person shall be assessed a civil penalty of \$400. Any civil penalty imposed pursuant to this paragraph shall be added to and become part of the offending person's City water bill; and such civil penalty, if unpaid, shall be collected in any manner authorized for the collection of the City's water bills.

§ 277-23 Appeals and enforcement.

A. Appeals. A person shall have the right to appeal to the City Manager upon receiving written notice of any violation or upon the imposition of a civil penalty. The City Manager shall notify the person of the time and place for the hearing of the appeal within a reasonable time prior to such hearing, which shall occur no more than 15 business days after the City Manager receives notice of the appeal. The City Manager shall notify the person in writing of the City Manager's final decision no more than 15 business days after the hearing.

B. Enforcement. The City Manager is authorized to designate any qualified personnel under his supervision to enforce this Article, including the imposition of civil penalties; and he is authorized to implement policies or rules for the administration of this Article.

# Dinwiddie County

## AN ORDINANCE ADOPTING RESTRICTIONS ON THE USE OF PUBLIC WATER

BE IT ORDAINED by the Board of Supervisors of Dinwiddie County

That the following ordinance is hereby adopted as follows:

The Board of Supervisors recognizes that from time to time it may become necessary to restrict the water use to its customers on the Dinwiddie County Water Authority's water system because of drought conditions or emergency situations. It is the desire of the Board of Supervisors to prepare for those conditions prior to their occurrence.

The Board of Supervisors has entered into a Memorandum of Understanding with the Appomattox River Water Authority to equitably distribute and restrict water use during drought or emergency conditions.

### A. **Definitions**

1. Fountain: A water display where water is sprayed into the air, strictly for ornamental purposes.
2. Person: Any individual, corporation, partnership, association, company, business, trust, joint venture or other legal entity.
3. Established landscaping: Landscaping plantings existing in an area after such period of time as to accomplish the establishment and maintenance of growth.
4. Swimming pool: Any structure, basin, chamber, or tank containing an artificial body of water for swimming, diving or recreational bathing and having a depth of two feet or more at any point.
5. Vegetable garden: Any "non-commercial" vegetable garden planted primarily for household use; "non-commercial" includes incidental direct selling of produce from such vegetable garden to the public.
6. Water outage emergency: A condition in which: a) the supply of water in the system or from the supplier has ceased or is in jeopardy of cessation, b) is severely limited due to water system failure, or c) is polluted. Such emergency is required to protect human health or provide minimum potable water for human consumption.

### B. **Restrictions:**

There are three levels of restrictions. The restrictions, commonly referred to as drought stages, will be implemented when the county administrator is notified by the ARWA executive director that lake levels have reached the value for a particular restriction as detailed in Table 1 of the ARWA Drought Management Plan. The Board of Directors for ARWA has the authority to enter in to restrictions prior to the established levels.

1. **Voluntary** (Stage 1 – Drought Watch) Persons are requested to restrict their water usage. It is suggested that decorative fountains not be used, do not wash off paved areas unless there is a health reason, do not fill or replenish pools unless necessary, reduce or stop washing vehicles, limit lawn and garden watering, and golf courses water only greens and tees.

2. **Mandatory** (Stage 2 – Drought Warning) Prohibit use of decorative fountains, prohibit washing of paved areas except for health reasons, no filling or replenishing of pools except for health care facilities, restrict vehicle washings to one per week, limit lawn and garden watering to odd/even days (odd last digit home addresses water on Tuesday, Thursday and Saturday and even last digit home addresses water on Wednesday, Friday and Sunday), shrubs limited to one five gallon bucket per day, golf courses water tees and greens only and restaurants serve water only when requested.

3. **Emergency** (Stage 3 – Drought Emergency) All persons shall curtail all non-essential water use and in addition to the mandatory restrictions: stop pool filling or replenishing, except for health care facilities, stop vehicle washing, including commercial washing, no lawn watering, no watering for gardens, trees and scrubs, no watering of golf courses, restaurants will not serve water unless it is the meal beverage, *all businesses must limit water usage to those essential for the business and human hygiene and fire hydrants will only be used for health and safety purposes.*

**C. When the restrictions go into effect.**

- a) When the County Administrator is notified by the Appomattox River Water Authority that lake levels have reached one of the levels outlined in Table 1 of the ARWA Drought Management Plan, the County Administrator will promptly take steps necessary to notify the public that the restrictions are in effect and publish a notice of such restrictions in a newspaper having general circulation within the area.
- b) The conditions will remain in effect until the level of the lake warrants reduced restrictions per the ARWA Drought Management Plan

**D. Violation**

It shall be a violation of this Ordinance for any person to use water, or allow or cause the use of water, in violation of the provisions of this Ordinance after the publication of such notice of restriction date.

**E. Penalty**

- a) Any person who violates the mandatory or emergency provision of this Ordinance shall be subject to a fine of fifty dollars (\$50).
- b) For the second offense, violator shall be fined one hundred dollars (\$100).
- c) For the third offense, violators shall be fined two hundred dollars (\$200).
- d) For a fourth and each subsequent offense, violators shall be fined four hundred dollars (\$400).
- e) Each violation by a person shall be counted as a separated violation by that person, irrespective of the location at which the violation occurs.
- f) The County Administrator may authorize cutting off a person's water supply for repeated violations.

This Ordinance shall supersede any past water restriction ordinance.

The provisions of this Ordinance are severable, and the unenforceability of any provision in the Ordinance, as determined by a court of competent jurisdiction, shall not affect the enforceability of any other provision in the Ordinance.

This Ordinance shall not be set out in the Code.

# Prince George County

## Prince George County

### Sec. 82-39. Water supply available.

The director shall be generally responsible for ensuring the availability of an adequate supply of potable water to all users connected to the public water system.

*(Code 1988, § 16-9)*

### Sec. 82-40. Periods of water shortage.

#### A. *Definitions*

1. *Fountain: A water display where water is sprayed into the air, strictly for ornamental purposes.*
2. *Person: Any individual, corporation, partnership, association, company, business, trust, joint venture or other legal entity.*
3. *Established landscaping: Landscaping plantings existing in an area after such period of time as to accomplish the establishment and maintenance of growth.*
4. *Swimming pool: Any structure, basin, chamber, or tank containing an artificial body of water for swimming, diving or recreational bathing and having a depth of two feet or more at any point.*
5. *Vegetable garden: Any "non-commercial" vegetable garden planted primarily for household use; "non-commercial" includes incidental direct selling of produce from such vegetable garden to the public.*
6. *Water outage emergency: A condition in which: a) the supply of water in the system or from the supplier has ceased or is in jeopardy of cessation, b) is severely limited due to water system failure, or c) is polluted. Such emergency is required to protect human health or provide minimum potable water for human consumption.*

#### B. *Levels of Restrictions:*

There are three levels of restrictions. The restrictions, commonly referred to as drought stages, will be implemented when the county administrator is notified by the ARWA executive director that lake levels have reached the value for a particular restriction as

detailed in Table 1 of the ARWA Drought Management Plan. The Board of Directors for ARWA has the authority to enter in to restrictions prior to the established levels.

1. *Voluntary*

*(Stage 1 – Drought Watch) Persons are requested to restrict their water usage. It is suggested that decorative fountains not be used, do not wash of paved areas unless there is a health reason, do not fill or replenish pools unless necessary, reduce or stop washing vehicles, limit lawn and garden watering, and golf courses water only greens and tees.*

2. *Mandatory*

*(Stage 2 – Drought Warning )Prohibit use of decorative fountains, prohibit washing of paved areas except for health reasons, no filling or replenishing of pools except for health care facilities, restrict vehicle washings to one per week, limit lawn and garden watering to odd/even days (odd last digit home addresses water on Tuesday, Thursday and Saturday and even last digit home addresses water on Wednesday, Friday and Sunday), shrubs limited to one five gallon bucket per day, golf courses water tees and greens only and restaurants serve water only when requested.*

3. *Emergency*

*(Stage 3 – Drought Emergency) All persons shall curtail all non-essential water use and in addition to the mandatory restrictions: stop pool filling or replenishing, except for health care facilities, stop vehicle washing, including commercial washing, no lawn watering, no watering for gardens, trees and scrubs, no watering of golf courses, restaurants will not serve water unless it is the meal beverage, all businesses must limit water usage to those essential for the business and human hygiene and fire hydrants will only be used for health and safety purposes.*

C. *Effective Date of Restrictions*

1. *When the County Administrator is notified by the Appomattox River Water Authority that lake levels have reached one of the levels outlined in Table 1 of the ARWA Drought Management Plan. The County Administrator will promptly take steps necessary to notify the public that the restrictions are in effect and publish a notice of such restrictions in a newspaper having general circulation within the area.*
2. *The conditions will remain in affect until the level of the lake warrants reduced restrictions per the ARWA Drought Management Plan*

D. *Violation*

*It shall be a violation of this Ordinance for any person to use water, or allow or cause the use of water, in violation of the provisions of this Ordinance after the publication of such notice of restriction date.*

*E. Penalty*

- 1. Any person who violates the mandatory or emergency provision of this Ordinance shall be subject to a fine of fifty dollars (\$50).*
- 2. For the second offense, violator shall be fined one hundred dollars (\$100).*
- 3. For the third offense, violators shall be fined two hundred dollars (\$200).*
- 4. For a fourth and each subsequent offense, violators shall be fined four hundred dollars (\$400).*
- 5. Each violation by a person shall be counted as a separated violation by that person, irrespective of the location at which the violation occurs.*
- 6. The County Administrator may authorize cutting off a person's water supply for repeated violations.*

*F. Applicability*

*Sec. 82-40, Subsections B will not immediately apply to those County Water Systems that have groundwater as a source of supply instead of ARWA. These areas may be imposed with the restrictions located in Section B either before or after the County is notified of a drought condition as indicated in Sec. 82-40, Item C.*

# MODEL ORDINANCE

## DRAFT FOR CONSIDERATION

### Ordinance Adopting Restrictions on the Use of Public Water Provided by the Appomattox River Water Authority (ARWA)

Adopted by:  
Chesterfield County  
City of Petersburg  
City of Colonial Heights  
Dinwiddie County  
Prince George County

**Declaration of: Seasonal Voluntary Water Conservation: Effective Memorial Day  
through Labor Day**

**Stage 1- Drought Watch: Water conservation reductions**

**Stage 2- Drought Warning: Mandatory public water use restrictions**

**Stage 3- Drought Emergency: Emergency public water use restrictions**

The Appomattox River Water Authority (ARWA) Executive Director will recommend to the ARWA Board of Directors that entry into Drought Stage 1(Drought Watch), Drought Stage 2 (Drought Warning) or Drought Stage 3 (Drought Emergency) be made upon reaching the specific water elevations shown in the ARWA Drought Management Plan Table 1. Following this request by the ARWA Executive Director, the ARWA Utility Directors (for Chesterfield & Prince George Counties), or Public Works Directors (for Cities of Colonial Heights & Petersburg), or Executive Director Dinwiddie Water Authority (for Dinwiddie County) shall recommend to their respective County Administrator (for Counties of Chesterfield, Dinwiddie, Prince George) or City Manager (for Cities of Colonial Heights and Petersburg) that he

declares Stage 1 (Drought Watch), Stage 2 (Drought Warning) or Stage 3 (Drought Emergency) water use restrictions during periods of extended droughts or other emergency conditions in which available water resources are compromised. Water use restrictions will become effective the date the City Manager or County Administrator declares in writing the need for the restrictions. Water use restrictions shall be declared to assure maximum beneficial use of available water resources for the public welfare. The Directors shall use as a basis for declaring or recommending water use restrictions the ARWA Executive Director's request for water restrictions in response to the water levels shown in the Virginia Water Protection (VWP) Permit No. 01-1719 under Part I.D.7 on page 5 of 8 and as shown in Table 1 of ARWA's Drought Management Plan. Emergency water use restrictions may also be imposed based on a determination that an emergency condition of any nature exists that threatens the availability or quality of the public drinking water supply. The ARWA Executive Director shall likewise recommend to the ARWA Board of Directors the nullification of drought stage water restrictions at such time that the Chesdin Reservoir storage capacity reaches the Drought Stage water elevation levels shown in the ARWA Drought Management Plan Table 1, and maintains this level or a higher elevation for a minimum of fourteen (14) consecutive days.

**Seasonal Voluntary Water Conservation Measures  
(Effective Memorial Day through Labor Day)**

**Same as Stage 1-Drought Watch Voluntary Water Conservation  
Reductions**

Member localities will encourage and educate customers within their respective service areas to reduce and conserve water through the following measures:

- Limiting filling of decorative fountains
- Limiting washing of paved areas to two days per week unless for health or safety concerns
- Limiting washing of impervious surfaces unless required for health and safety use
- Fill or replenish swimming pools only when necessary unless for health or safety concerns

**Irrigation or outdoor watering:**

- Limit landscape (includes lawn) watering to three days per week by address (See local Water Utility guidelines for specifics)
- Irrigation with hose-end sprinklers and automatic sprinkler systems is prohibited between the hours of 11:00 a.m. and 6:00 p.m.
- Date and time restrictions for irrigation do not apply during repair or testing of a new or existing irrigation system
- Irrigation with hand-held bucket, hand-held hose, soaker hose and drip irrigation systems is allowed on any day and at any time
- Irrigation of vegetable gardens is allowed on any day and at any time
- New Landscaping: All watering is permitted for the first ten days after planting (See local Water Utility guidelines for specifics)
- Irrigation of golf courses, athletic fields and commercial nurseries with sprinklers is prohibited between the hours of 11:00 a.m. and 6:00 p.m. Greens and tees exempted from this restriction

**Vehicle Washing:**

- Charity car washes are allowed, but must be done using a hand-held bucket or a hand-held hose equipped with a positive shutoff device.
- Non-commercial vehicle washing is allowed on any day and at any time, but must be done using a hand-held bucket or a hand-held hose equipped with a positive shutoff device
- Commercial vehicle washing is allowed on any day and at any time
- Businesses: Limit to essential use only; Restaurants: No restrictions
- All other consumption: Conservation by any other means highly encouraged.
- Waste of water is prohibited at all times

## **Stage 1-Drought Watch: (Voluntary Water Conservation Reductions)**

Request Citizens in member's service areas to reduce and conserve water by:

- Limiting filling of decorative fountains
- Limiting washing of paved areas to two days per week unless for health or safety concerns
- Limiting washing of impervious surfaces unless required for health and safety use
- Fill or replenish swimming pools only when necessary unless for health or safety concerns

### **Irrigation:**

- Limit landscape (includes lawn) watering to three days per week by address (See local Water Utility guidelines for specifics)
- Irrigation with hose-end sprinklers and automatic sprinkler systems is prohibited between the hours of 11:00 a.m. and 6:00 p.m.
- Date and time restrictions for irrigation do not apply during repair or testing of a new or existing irrigation system
- Irrigation with hand-held bucket, hand-held hose, soaker hose and drip irrigation systems is allowed on any day and at any time
- Irrigation of vegetable gardens is allowed on any day and at any time
- New Landscaping: All watering is permitted for the first ten days after planting (See local Water Utility guidelines for specifics)
- Irrigation of golf courses, athletic fields and commercial nurseries with sprinklers is prohibited between the hours of 11:00 a.m. and 6:00 p.m. Greens and tees exempted from this restriction

## **Vehicle Washing:**

- Charity car washes are allowed, but must be done using a hand-held bucket or a hand-held hose equipped with a positive shutoff device.
- Non-commercial vehicle washing is allowed on any day and at any time, but must be done using a hand-held bucket or a hand-held hose equipped with a positive shutoff device
- Commercial vehicle washing is allowed on any day and at any time
- Businesses: Limit to essential use only; Restaurants: No restrictions
- All other consumption: Conservation by any other means highly encouraged.
- Waste of water is prohibited at all times

## **Stage 2- Drought Warning: (Mandatory Public Water Use Restrictions)**

### **Water Restrictions:**

- Prohibit filling of decorative fountains
- Prohibit washing of paved areas unless for health and safety requirements
- Prohibit swimming pool filling and replenishing except to maintain health and safety. Health care facilities are exempt.
- Noncommercial vehicle washing is limited to one day per week using only hoses with an automatic shut-off nozzle. Commercial vehicles washing businesses are permitted to operate under normal conditions and are highly encouraged to utilize washing processes that recycle water.

### **Irrigation:**

- Limit landscape (includes lawn) watering to three days per week by address (See local Water Utility guidelines for specifics)
- Irrigation with hose-end sprinklers and automatic sprinkler systems is prohibited between the hours of 11:00 a.m. and 6:00 p.m.
- Irrigation with hand-held bucket, hand-held hose, soaker hose and drip irrigation systems is allowed on any day and at any time

- New Landscaping: All watering is permitted for the first ten days after planting (See local Water Utility guidelines for specifics)
- Irrigation of golf courses, athletic fields and commercial nurseries with sprinklers is prohibited between the hours of 11:00 a.m. and 6:00 p.m. Greens and tees exempted from restriction.
- Businesses: Limit to essential use only; Restaurants: No restrictions
- All other consumption: Conservation by any other means highly encouraged.

### **Stage 3- Drought Emergency: (Emergency Public Water Use Restrictions)**

All Citizens are requested to stop all non-essential water use.

- Filling of decorative fountains is prohibited
- Washing of paved areas is prohibited
- No filling or replenishing of swimming pools. Health care facilities are exempt.
- No washing of vehicles including commercial vehicles
- Established landscaping-All water use is prohibited
- New landscaping- All water use is prohibited
- Golf courses- All water use is prohibited
- Businesses - Limit water usage to those essential for business and human hygiene
- Restaurants – Water use only for cooking, hygiene and meal beverage
- All other consumption – Limit water to essential use only.

Note: Stage 3 Drought Emergency restrictions may be called for by Declaration by the Governor of Virginia or the Virginia Drought Coordinator. Upon the determination by the Commonwealth of Virginia's Drought Monitoring Task Force that a Drought Watch, Drought Warning, or Emergency condition exists for the Middle James Drought Evaluation Region of Amelia or Chesterfield Counties, or in the Chowan Drought Evaluation Region of Dinwiddie County or a Declaration by the Governor of the Commonwealth of Virginia has been made, the ARWA Member Jurisdictions will immediately comply with the Commonwealth's recommendations or

requirements under the issued drought stage. Water use prohibitions would apply to all uses from all sources (including wells) of water.

**Public notification:**

Notice of the declaration of drought watch water conservation reduction measures will be furnished to local media formats including but not limited to print media, radio, television and appropriate computer-based websites. Notice of the declaration of mandatory and emergency public water use restrictions shall be furnished to the same local media formats. Additionally, declaration for mandatory and emergency public water use restrictions shall be published in widely circulated print media for a minimum of one day per week for each week that the restrictions are in force.

**Violation:**

It shall be a violation for any person to use water or allow or cause the use of water in violation of the provisions for mandatory and emergency water use restrictions after the first publication required by herein.

**Penalty:**

(a) Any person who violates any provisions of this article related to mandatory water use restrictions shall be subject to the following penalties:

(1) For the first offense, violators shall be fined \$100.00. For the second offense, violators shall be fined \$200.00. For the third offense, violators shall be fined \$400.00. For the fourth offense, violators shall be fined \$800.00. For the fifth and each subsequent offense, violators shall be fine \$1,600.00. All fines shall be imposed on the violator's next water bill.

(2) Each violation by a person shall be counted as a separate violation by that person, irrespective of the location at which the violation occurs.

(3) Persons shall have the right to challenge the assessment of a penalty. Such challenge shall be filed within ten days of the assessment of the penalty by notifying the county attorney of such challenge, in writing. Upon receipt of such challenge, the county attorney shall file a civil warrant in General District Court seeking adjudication of the imposition of the fine.

(b) Any person who violates any provisions of this article related to emergency water use restrictions shall be subject to the following penalties:

(1) For the first offense, violators shall be fined \$200.00. For the second offense, violators shall be fined \$400.00. For the third offense, violators shall be fined \$800.00. For the fourth and each subsequent offense, violators shall be fine \$1,600.00. All fines shall be imposed on the violator's next water bill.

(2) Each violation by a person shall be counted as a separate violation by that person, irrespective of the location at which the violation occurs.

(3) Persons shall have the right to challenge the assessment of a penalty. Such challenge shall be filed within ten days of the assessment of the penalty by notifying the county attorney of such challenge, in writing. Upon receipt of such challenge, the county attorney shall file a civil warrant in General District Court seeking adjudication of the imposition of the fine.

### **Definitions:**

The following words and phrases, when used in this article, shall have the meaning ascribed to them below, except in those instances where the context clearly indicates a different meaning:

*Established landscaping:* Landscaping plantings, including but not limited to lawns, vegetable gardens, flowers, trees and shrubs existing in an area after such period of time as to accomplish an establishment and maintenance of growth.

*New landscaping:* Any landscaping made up of plants or seeds in or transplanted to an area within such period of time as to accomplish a reasonable establishment and maintenance of growth. Over seeding an existing lawn does not qualify as new landscaping.

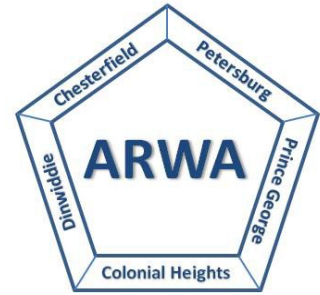
*Person:* Any individual corporation, partnership, association, company, business, trust, joint venture or other legal entity.

*Swimming pool:* Any structure, basin, chamber, or tank, containing an artificial body of water for swimming, diving or recreational bathing and having a depth of two feet or more at any point.

*Vegetable garden:* Any "non-commercial" vegetable garden planted primarily for household use; "non-commercial" includes incidental direct selling of produce from such a vegetable garden to the public.



# Appomattox River Water Authority



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

## Exhibit F

TO: Appomattox River Water Authority Board of Directors

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

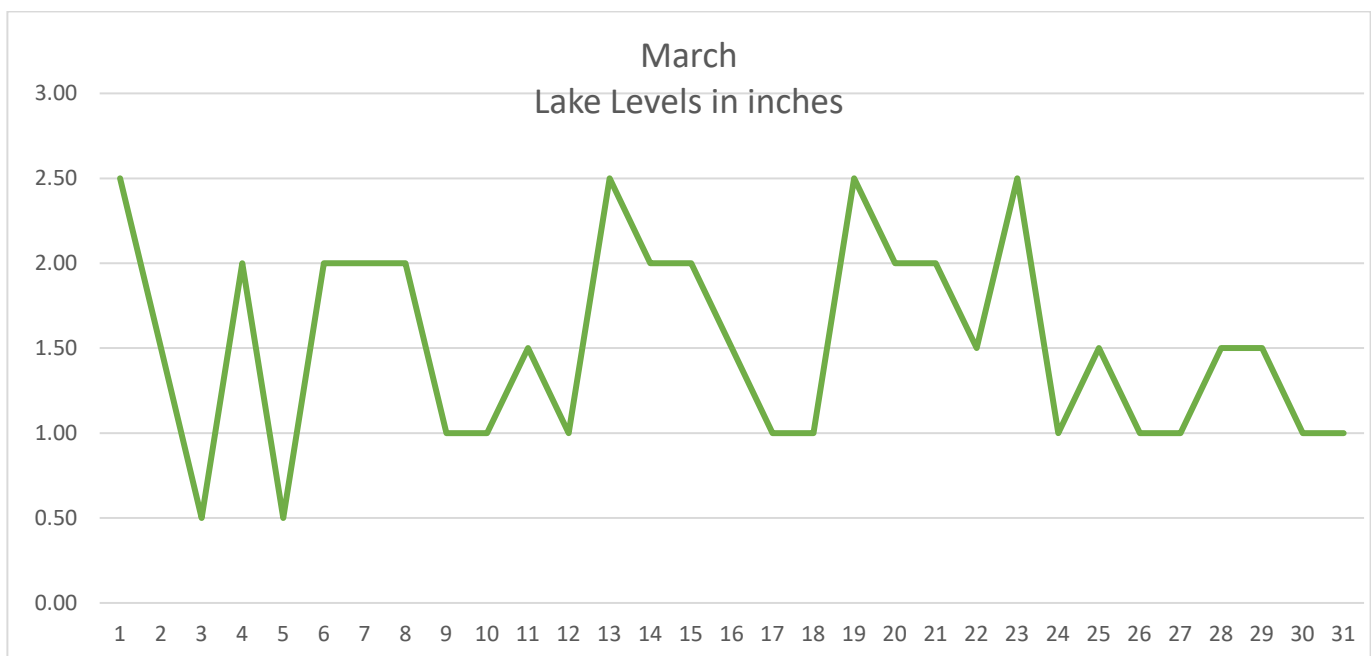
DATE: May 21, 2026

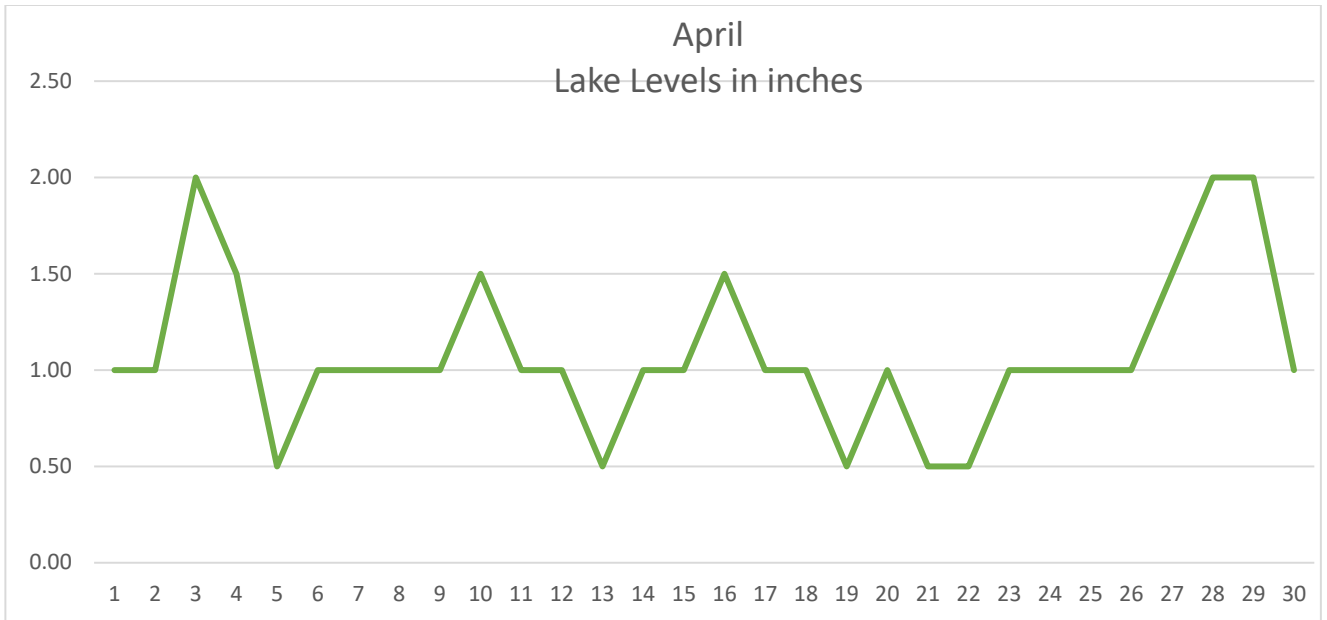
SUBJECT: Status Report

### ➤ General

- The next meeting is scheduled for July 16<sup>th</sup> at 2:00 p.m. at the Appomattox River Water Authority.
- The executive director will be out the office May 25<sup>th</sup> through June 5<sup>th</sup>.

### ➤ Lake Level Update





The average daily usage for March was 28.52 mgd and total raw water withdrawn from the lake was 1.01 BG. The average daily usage for April was 40.07 mgd and the total withdrawn from the lake was 1.30 BG. This is the sixth driest April on record.

➤ Operations/Process Control

- Carbon exchange completed on filters 13 through 22. New sand layer added also.
- Switched to 50% caustic for the summer.
- Polymer system taken offline and flushed for summer.
- All dry chemical feeders calibrated.
- Quarterly draining and cleaning of sedimentation basins and flocculators.
- Central State meter electrical panel upgraded.
- Mount Vernon Tank RTU panel upgraded.
- Clarivac #10 RTU panel upgraded.
- Hypo controls upgraded with the installation of the new chemical feed pumps.
- Robert Drake retired from the Process Control section after 6+ years of service. His replacement, Daniel Lease, started May 1<sup>st</sup>.
- Jay Vick passed his Class 1 licensure.

➤ Maintenance

- Replaced light fixtures in lab as part of renovation.
- Replaced hypo pipe manifold for new sodium hypochlorite pumps.
- Got boats ready for summer season.
- Installed two new exclusionary zone markers at dam.
- Annual fire extinguisher inspections. Escorted third party vendor through plant.
- Locked out and tagged out equipment for raw water pump station #1 so divers could remove

- baskets off pump #2 and pump #3. Ordered new antivortex baskets for pumps.
  - Repaired check valve #23 in raw water pump station #2 and placed back in service.
  - Replacing lights on the filter floor.
  - Overseeing boathouse addition for Chesterfield County police boat.
  - Worked with Baker Roofing to identify source of roof leak on raw water pump station #2.
  - Added security bollards to access road between sedimentation basin #6 and #7.
- SIIT – Systems Integration/Instrumentation Technology support group (technical support)
- Replaced administrative office network switch.
  - Replaced laboratory IT switch.
  - Oversaw contractor cleaning and testing 2,000-amp transformer finished water pump station #2. The 480-volt breaker failed on the 4160 transformer. Had contractor pull 480-volt breaker off spare 2,000-amp transformer and install on existing transformer – tested and put in service. Ordered a new 480 breaker for spare transformer.
  - Oversaw contractor cleaning and testing transformer for raw water pump station #2. No issues found. Transformers are 2007 vintage.
  - Transformers added to maintenance schedule for scheduled shutdown and cleaning every three years.
- Laboratory
- Monthly eDMR submitted to DEQ for March and April – no exceedances or issues.
  - Monthly CMDP (Compliance Monitoring Data Portal) (bacti and chemistry) submitted to VDH.
  - Monthly Water Quality Reports distributed.
  - Monthly State Health Department submitted.
  - Daily support to operations for QA/QC and compliance sampling.
  - Whole Effluent Toxicity (WET) completed for Q1. There was an exceedance of the limit and the Authority provided an explanation which DEQ accepted. The Authority was issued a Notice of Violation letter for the exceedance with no further action required.
  - Quarterly calibration of pipettes and thermometers.
  - Moved equipment and lab operations back into renovated lab.
- FERC License Surrender
- FERC has made several Tribal notifications that the license is up for renewal. The Surrender Application will not be turned in until January. We are still gathering supporting information for the application.
  - Staff and HDR representatives (our Surrender Application consultant) met with five representatives of DWR via Teams to discuss the fish elevator currently operated by Kruger. The purpose of the meeting was to get an idea if the Authority would be required to operate the fish elevator at the expiration of the FERC license. DWR will request through the Surrender Application process to have the fish elevator left in place and continually operated. DWR

representatives explained that there is clear passage from the Chesapeake Bay to the base of the Brasfield Dam for fish. The Authority requested any information they had on fish surveys and was advised they do not have that information. DWR did thank the Authority for meeting with them and soliciting their input prior to sending them a draft copy of the Surrender Application.

- DWR was supportive of continuing hydro operations at the dam. The executive director advised that the Authority is allowing the Deed of Easement to expire in conjunction with the FERC permit expiration for business reasons and future raw water development.
- There are no issues with the current hydro operator, Kruger.
- From this discussion, the Authority will need to leave the fish elevator in service after the hydro facility is removed.
- There will need to be an operating capital outlay item in the FY2033 budget for fish elevator rehabilitation.
- Staff is still identifying what will need to be removed in 2032. This must be outlined on the Surrender Application.

➤ Liquid Lime System

- System placed in service. Operations staff satisfied with process to date.
- Working with contractor to have a mixer motor replaced under warranty.
- We are still holding the retainage.

➤ Hydrilla

- Nothing to report.

➤ VPDES renewal for waste lagoons

- Site Characterization Plan completed, reviewed, and submitted to DEQ for review and comment.
- A Teams meeting was held with staff, WSP (the Authority's consultant) and representatives from DEQ.
  - WSP requested the variance as outlined in the Site Characterization Plan.
  - DEQ suggested a variance would be a heavy lift and suggested continued monitoring without continued risk assessments. The submitted risk assessments are acceptable based on the data received to date. If the data changes, values increase significantly, then we would revisit the necessity to do another risk assessment.
  - We are comfortable continuing sampling as discussed.
  - WSP will follow up with a formal letter memorializing the discussion and continued groundwater monitoring to DEQ.

➤ 60" sluice gate isolation

- Met with trust engineer and inspected existing sluice channels.
- Engineer is working with a structural engineer and dam consultant to determine if the sluice

channels can withstand the pressure and forces if a downstream gate is added – pressurizing the sluice channels.

- Discussing putting the metal plate in place hanging from the structural steel in the event of an emergency for the west sluice channel. This is from a previous gate failure where a contractor was brought in to break through the sluice channel to install a metal plate to equalize pressure on the back side of the gate so it could be closed.
- Engineer will generate a PER for further discussion.

➤ Regional State Water Plan

- Nothing to report.

➤ Elevated Tank Design

- The Authority received Site Plan Approval from Chesterfield County.
- This will be discussed further during the FY28 budget process – this December.

➤ VWP – Phase II

- An in-person update was provided to members on March 23<sup>rd</sup>.
  - Completed integration of BV and OASIS hydrologic models, including calibration and validation.
  - Created “base case” OASIS model, calculating Theoretical, Regulatory and Operational Safe Yield parameters.
  - Implemented Resiliency Criteria Analysis metrics into the OASIS model for base case model.
  - For the three new Off-site Storage Reservoirs (OSR’s)
    - Utilized latest USGS topographic information to update the Stage-Area-Storage curves for each of the three OSR sites.
    - Created baseline hydrologic models in OASIS for each of the three OSR sites calculating additional Safe Yield added by each site.
    - Presented preliminary hydrologic findings to ARWA (March workshop).
  - Preliminary hydrologic model results indicated potential additional Theoretical Safe Yield of 23, 37 and 20 MGD for Stock, Sandy, and Dawson’s Creek OSRs respectively – additional raw water capacity.
  - Next Steps: The BV team is currently working on the next tasks:
    - Preparing preliminary cost estimates for each of the three OSR sites
    - Preparing regulatory roadmaps outlining the steps and durations needed to construct all three OSR sites.
    - Identifying major obstacles/risks that are anticipated to be encountered for each OSR site.
    - Implementing Resiliency Criteria Metrics for each OSR sites to further analyze/quantify benefits of constructing each OSR.

- Next workshop will be scheduled for the end of May/beginning of June. Member directors will be invited.

➤ Boathouse Addition

- Met with Police Department and agreed on height for opening for police boat.
- Contractor completed framing and is installing the aluminum siding.
- Power and water line run to the existing boathouse.

➤ Chlorine Dioxide Tank Farm Addition

- Engineer incorporating staff comments into the plans.

➤ Dry Boat Storage Facility

- Engineer continues to work on design.

➤ Dock Permits

- We received one inquiry to build a floating dock at 835 Even Keel Lane (Dinwiddie County). We provided the property owner with the requirements for the new Corps of Engineers' online dock approval process.
- We have streamlined the Authority's process to a one-page application. Staff provided the new one-page application to the property owner for 835 Even Keel Lane with the appropriate attachments – adjacent property acknowledgement form; construction and use permit agreement; use of Authority property by adjacent property owners.

## Exhibit G

Appomattox River Water Authority  
YTD Income Statement for the period ending April 30, 2026

Budget	Budget	Actual	YTD Budget	Variance
FY 25/26	Year-to-Date	Year-to-Date	vs. Actual	Percentage

Water Rate Center

Revenues and Expenses Summary

**Operating Budget vs. Actual**

**Revenues**

Board Approved True-Up-Prior FY	\$ -	\$ -	\$ -	\$ -	#DIV/0!
Water Sales	\$ 13,533,860	\$ 10,150,395	\$ 10,419,588	\$ 269,194	2.65%
Rent/Misc. Income	\$ 30,000	\$ 22,500	\$ 51,831	\$ 29,331	130.36%
<b>Total Operating Revenues</b>	<b>\$ 13,563,860</b>	<b>\$ 10,172,895</b>	<b>\$ 10,471,420</b>	<b>\$ 298,525</b>	<b>2.93%</b>

**Expenses**

Personnel Cost	\$ 3,114,703	\$ 2,595,586	\$ 2,476,814	\$ (118,772)	-4.58%
Contractual/Professional Services	\$ 1,279,700	\$ 1,067,250	\$ 931,328	\$ (135,922)	-12.74%
Utilities	\$ 1,128,100	\$ 940,083	\$ 808,913	\$ (131,170)	-13.95%
Communication/Postal/Freight	\$ 62,000	\$ 51,667	\$ 36,844	\$ (14,823)	-28.69%
Office/Lab/Janitorial Supplies	\$ 126,000	\$ 105,000	\$ 114,679	\$ 9,679	9.22%
Insurance	\$ 140,000	\$ 116,667	\$ 142,363	\$ 25,696	22.03%
Lease/Rental Equipment	\$ 20,000	\$ 16,667	\$ 6,171	\$ (10,495)	-62.97%
Travel/Training/Dues	\$ 78,000	\$ 65,000	\$ 50,593	\$ (14,407)	-22.17%
Safety/Uniforms	\$ 40,000	\$ 33,333	\$ 25,143	\$ (8,190)	-24.57%
Chemicals	\$ 4,000,000	\$ 3,333,333	\$ 2,454,640	\$ (878,693)	-26.36%
Repair/Maintenance Parts & Supplies	\$ 368,000	\$ 306,667	\$ 393,022	\$ 86,355	28.16%
<b>Total Operating Expenses</b>	<b>\$ 10,356,503</b>	<b>\$ 8,631,253</b>	<b>\$ 7,440,510</b>	<b>\$ (1,190,743)</b>	<b>-13.80%</b>
<b>Operating Results Suplus/(Deficit)</b>	<b>\$ 3,207,356</b>	<b>\$ 1,541,642</b>	<b>\$ 3,030,909</b>	<b>\$ 1,489,267</b>	<b>96.60%</b>

**Replacement Outlay Budget vs. Actual**

Machinery & Motors-Process	\$ 180,000	\$ 150,000	\$ 159,122	\$ 9,122	6.08%
Instrumentation	\$ 166,000	\$ 138,333	\$ 154,762	\$ 16,428	11.88%
SCADA	\$ 15,750	\$ 13,125	\$ -	\$ (13,125)	-100.00%
Computer Equipment	\$ 5,500	\$ 4,583	\$ 2,155	\$ (2,428)	-52.98%
Furniture/Fixtures	\$ 130,000	\$ 108,333	\$ 117,242	\$ 8,908	8.22%
Motor Vehicles	\$ -	\$ -	\$ -	\$ -	#DIV/0!
Maintenance Equipment	\$ 25,000	\$ 20,833	\$ -	\$ (20,833)	-100.00%
Elevated Tank-Engineering Report	\$ -	\$ -	\$ 36,000	\$ 36,000	#DIV/0!
Clearwell Roof	\$ -	\$ -	\$ 866,100	\$ 866,100	#DIV/0!
Air Release Vault	\$ 110,000	\$ 91,667	\$ 28,647	\$ (63,019)	-68.75%
Basin 10-12 Influent Actuator	\$ 135,000	\$ 112,500	\$ -	\$ (112,500)	-100.00%
Cone Valve	\$ 50,000	\$ 41,667	\$ -	\$ (41,667)	-100.00%
Swift Creek Meter Vault	\$ 300,000	\$ 250,000	\$ 4,875	\$ (245,125)	-98.05%
<b>Total Capital Outlay</b>	<b>\$ 1,117,250</b>	<b>\$ 931,042</b>	<b>\$ 1,368,902</b>	<b>\$ 437,861</b>	<b>47.03%</b>

**BOD Designated Surplus Fund**

Liquid Lime System	\$ -	\$ -	\$ -	\$ -	#DIV/0!
Raw Water Supply-Alt Analysis	\$ -	\$ -	\$ 294,207	\$ -	#DIV/0!
Risk & Resilience Analysis	\$ -	\$ -	\$ 18,275	\$ -	#DIV/0!
New Server Building	\$ -	\$ -	\$ 4,800	\$ -	#DIV/0!
Filter Inspections	\$ -	\$ -	\$ 45,000	\$ -	#DIV/0!
Boat House-Chesterfield	\$ -	\$ -	\$ 127,492	\$ -	#DIV/0!
Multipurpose Bldg/Boat Storage	\$ -	\$ -	\$ 21,000	\$ -	#DIV/0!
Chlorine Dioxide Tank Farm	\$ -	\$ -	\$ 71,250	\$ -	#DIV/0!
Sodium Hypo Pumps	\$ -	\$ -	\$ 67,239	\$ -	#DIV/0!
2024 Chevy Colorado-Warehouse	\$ -	\$ -	\$ 34,310	\$ -	#DIV/0!
<b>Total BOD Designated Surplus Funds</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 683,573</b>	<b>\$ -</b>	<b>#DIV/0!</b>

**Debt Service Budget vs. Actual**

Interest Income	\$ -	\$ -	\$ 596,390	\$ 596,390	#DIV/0!
Other (Income)	\$ -	\$ -	\$ -	\$ -	#DIV/0!
Sell of Asset	\$ -	\$ -	\$ 7,020	\$ 7,020	#DIV/0!
Interest Expense	\$ 320,106	\$ 320,106	\$ 320,106	\$ -	0.00%
Int on Purchase of US Treas	\$ -	\$ -	\$ -	\$ -	#DIV/0!
Bond Issuance Cost	\$ -	\$ -	\$ -	\$ -	#DIV/0!
Principal Payments	\$ 1,770,000	\$ 1,770,000	\$ -	\$ (1,770,000)	-100.00%

**Other Expenses Deprec/Amort**

Depreciation Expense	\$ -	\$ -	\$ -	\$ -	#DIV/0!
Amortizatin Expense-ROU Asset	\$ -	\$ -	\$ -	\$ -	#DIV/0!
check	\$ (0)	\$ (1,479,506)	\$ 1,261,738	\$ 3,424,817	
	0	\$ (1,479,506)	\$ 1,261,738		
	\$ (0.00)	\$ -	\$ 0.00		

## Appomattox River Water Authority-Balance Sheet

For Month Ending April 30, 2026

### Assets

#### Current Assets

Petty Cash	\$	400
SunTrust Operating Fund	\$	2,031,885
SunTrust Replacement Fund	\$	-
<i>Total Unrestricted Cash</i>	<b>\$</b>	<b>2,032,285</b>

Water Revenue	\$	6,508,194
LGIP-O&M Reserve	\$	6,528,047
LGIP-Revenue Surplus	\$	2,440,125
LGIP-BOD Projects	\$	461,721
ERRF (Equipment Repair/Replacement)	\$	2,500,000
Debt Service Reserve	\$	2,134,290
Bond Principal/Interest	\$	513,139
<i>Total Restricted Cash</i>	<b>\$</b>	<b>21,085,516</b>

<b>Total Checking/Savings</b>	<b>\$</b>	<b>23,117,801</b>
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Accounts Receivable	\$	-
Other Current Assets	\$	84,949
Inventory	\$	1,128,009

<b>Total Current Assets</b>	<b>\$</b>	<b>24,330,759</b>
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#### Fixed Assets

Right to Use Lease Assets	\$	14,630
Accum amort-right of use lease	\$	(2,134)
Land and Land Rights	\$	1,044,167
Water System	\$	100,620,240
Equipment	\$	1,804,208
Hydro	\$	34,873
Furniture & Equipment	\$	32,910
Building Improvements	\$	572,581
Software	\$	22,250
Construction in Progress	\$	3,138,028
Accumulated Amortization	\$	(34,873)
Accumulated Depreciation	\$	(61,563,161)

<b>Total Fixed Assets</b>	<b>\$</b>	<b>45,683,720</b>
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#### Other Assets

Def Outflow-OPEB GLI	\$	30,776
Def Out Res-Post ER Pension Costs	\$	-
Deferred Outflow-OPEB GLI	\$	-
Def Out Res-Net Dif Pension Inv	\$	-
Def Out Res-OPEB Experience	\$	10,794
Def Out Res-OPEB Assumptions	\$	2,068
Def Out Res-OPEB Subsequent	\$	-
Def Outfi-diff b/w exp & act e	\$	77,192
<b>Total Other Assets</b>	<b>\$</b>	<b>120,830</b>

<b>Total Assets</b>	<b>\$</b>	<b>70,135,309</b>
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## Appomattox River Water Authority-Balance Sheet

For Month Ending April 30, 2026

### Liabilities & Equity

#### Current Liabilities

Accounts Payable	\$	115,267
Retainage Payable	\$	118,792
Accrued Interest Payable	\$	85,707
Accrued Interest-GASB 87	\$	57
Lease Liability-current portion	\$	3,572
<b>Total Current Liabilities</b>	<b>\$</b>	<b>323,396</b>

#### Long Term Liabilities

Def Inf Res-Net Dif Pension Inv	\$	67,085
Def Inf Res-Pen Chg Assumptions	\$	-
Def Inf Res-Pens Dif Proj/Act E	\$	214,265
Net Pension Liability	\$	(2,134,004)
Def Infl-OPEB Chg of Assumptions	\$	497
Deferred Inflow-OPEB GLI	\$	19,508
Deferred Inflow-Expect & Actual	\$	388
Bonds Payable-2012	\$	585,000
Bonds Payable-2017	\$	6,935,000
Bonds Payable-2019 Refunding Bond Payment	\$	3,890,000
Bonds Payable-2019 Def Amt on Refunding	\$	(58,302)
Lease Liability-non-current	\$	8,984
Accrued Leave Payable	\$	336,392
Post Employment Benefit	\$	63,815
OPEB Liability-GLI	\$	85,143
<b>Total Long-Term Liabilities</b>	<b>\$</b>	<b>10,013,772</b>

### Total Liabilities

**\$ 10,337,167**

### Equity

Retained Earnings	\$	5,365,384
Reserve for Water Revenue	\$	16,498,969
Reserve for Operations	\$	-
Reserve for Suplus	\$	-
Reserve for Replacements	\$	2,500,000
Reserve for Bond Interest	\$	106,942
Reserve for Debt Service	\$	2,094,831
Reserve for Bond Principal	\$	-
Reserve for Reserve	\$	-
Fixed Assets, Net of Debt	\$	31,970,278

Net Income	\$	1,261,738
<b>Total Equity</b>	<b>\$</b>	<b>59,798,141</b>

### Total Liabilities & Equity

**\$ 70,135,309**

\$ -

**Appomattox River Water Authority  
Executive Review  
Cash And Debt Highlights  
As of April 30, 2026**

<b>Highlights: ARWA Cash Positions</b>	<b>30-Jun-25</b>	<b>30-Apr-26</b>	<b>Change</b>	<b>Explanation</b>
<b>Unrestricted Cash &amp; Investments:</b>				
Petty Cash	\$ 400.00	\$ 400.00	\$ -	see explanation (a) below
SunTrust Operating Account	\$ 2,347,329.37	\$ 2,031,884.83	\$ (315,444.54)	see explanation (b) below
<b>Restricted Cash and Investments:</b>				
Water Revenue	\$ 3,686,977.56	\$ 6,508,193.50	\$ 2,821,215.94	see explanation (d) below
LGIP-O&M Reserve	\$ 6,311,395.04	\$ 6,528,047.20	\$ 216,652.16	see explanation (e) below
LGIP-Revenue Surplus	\$ 1,654,716.83	\$ 2,440,125.24	\$ 785,408.41	see explanation (f) below
LGIP-BOD Projects	\$ -	\$ 461,720.81	\$ 461,720.81	see explanation (g) below
ERRF (Equipment Repair/Replacement)	\$ 2,543,579.90	\$ 2,500,000.00	\$ (43,579.90)	see explanation (h) below
Debt Service Reserve	\$ 2,098,816.01	\$ 2,134,290.49	\$ 35,474.48	see explanation (i) below
2012 Bond Principal/Interest	\$ 300,449.48	\$ 81,057.14	\$ (219,392.34)	
2017 Bond Principal/Interest	\$ 1,017,506.90	\$ 259,393.07	\$ (758,113.83)	
2019 Bond Principal/Interest	\$ 661,635.76	\$ 172,688.75	\$ (488,947.01)	
<b>Total Cash and Investments</b>	<b>\$ 20,622,806.85</b>	<b>\$ 23,117,801.03</b>	<b>\$ 2,494,994.18</b>	

<b>Highlights: ARWA Outstanding Bonds</b>	<b>30-Jun-25</b>	<b>30-Apr-26</b>	<b>Change</b>
2012 Bond	\$ 865,000.00	\$ 585,000.00	\$ (280,000.00)
2017 Bond	\$ 7,830,000.00	\$ 6,935,000.00	\$ (895,000.00)
2019 Bond	\$ 4,485,000.00	\$ 3,890,000.00	\$ (595,000.00)
2019 Bond-Def Amt on Refund	\$ (58,301.79)	\$ (58,301.79)	\$ -
<b>Total Bonds Outstanding</b>	<b>\$ 13,121,698.21</b>	<b>\$ 11,351,698.21</b>	<b>\$ (1,770,000.00)</b>

**Explanation of Unrestricted and Restricted Cash positions:**

- a. On-Hand Petty Cash for incidental expenses
- b. Financial Policy: Based on next four months of O&M expense
- d. Financial Policy: Held by Trustee for all operating water revenues
- e. Financial Policy: 50% of current FY O&M Budget
- f. Board Approval: Surplus Revenue approved for specific projects.
- g. BOD Designated: Projects
- h. Financial Policy: Must maintain a minimum of \$2.5M
- i. Financial Policy: Held by Trustee, funded at such amount as may be necessary.

