900 Magazine Rd.
Petersburg, VA 23803
Office: (804) 861-0111
Fax: (804) 861-3254

South Central Wastewater Authority

Board of Directors Meeting

DATE: November 15, 2018

TIME: 2:00 PM

LOCATION: Eastside Enhancement Center
7301 Boydton Plank Road
North Dinwiddie, VA, 23803

AGENDA

1. Call to Order/Roll Call
2. Approval of Minutes: Revised Minutes of the August 16, 2018 and Minutes of the Rescheduled September Board Meeting held on October 18, 2018
3. Public Comment
4. Executive Director's Report
   - Annual Financial Report Year Ended June 30, 2018: Robinson, Farmer, Cox Associates
   - True-Up Discussion for Financial Year Ending June 30, 2018
   - Status Report: Ongoing Projects/Operations/Financials/I&I
5. Approval of Solids Building Concept Evaluation/Basis of Design Development
6. Election of Board Officers
7. Items from Counsel
8. Closed Session
9. Other Items from Board Members/Staff Not on Agenda
10. Adjourn

Cc:W. Dupler/George Hayes, Chesterfield
L. Lyons, Petersburg
W. Henley, Colonial Heights
K. Massengill, Dinwiddie County
F. Haltom, Prince George
A. Anderson, McGuire Woods

1. Call to Order/Roll Call

2. Approval of Minutes: Revised Minutes of the August 16, 2018 and Minutes of the Rescheduled September Board Meeting held on October 18, 2018

   Following are the Minutes of the Regular Board Meeting on August 16, 2018 and Minutes of the Rescheduled September Board Meeting held on October 18, 2018.

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

BOARD OF DIRECTORS MEETING

South Central Wastewater Authority
August 16, 2018 at 2:00 p.m.
Location: Appomattox River Water Authority
21300 Chesdin Road, South Chesterfield, Virginia 23803

PRESENT:
Percy Ashcraft, Chairman (Prince George)
Douglas Smith, Vice Chairman (Colonial Heights)
Joseph Casey, (Chesterfield)
Robert B. Wilson, (Dinwiddie)
Lionel Lyons, (Alternate, Petersburg)
George Hayes, Secretary/Treasurer (Alternate, Chesterfield)
Frank Haltom, (Alternate, Prince George)

ABSENT:
Aretha Ferrell-Benavides, (Petersburg)
Kevin Massengill, (Alternate, Dinwiddie)
William Henley, (Alternate, Colonial Heights)
William Dupler, (Alternate, Chesterfield)

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

OTHERS:
Keith Boswell, CEO, Virginia's Gateway Region
Jeff Mincks, Chesterfield
Mike Wooden, Arcadis
Michael Campbell, Prince George Journal/Dinwiddie Monitor
Jeff Franklin, Chesterfield
Denny Morris, Crater Region Planning Comm.

Mr. Ashcraft, Chairman, called the meeting to order at 4:15 p.m.

1. Call to Order/Roll Call.

The roll was called.

2. Approval of Minutes: Minutes of the Regular Meeting of the Board on June14, 2018

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

RESOLVED, that the minutes of the Regular Meeting of the Board on June 14, 2018 are hereby approved:

For: 5 Against: 0 Abstain: 0

3. Public Comment

There were no public comments.

4. Executive Director's Report:

- **Additional Discussion on Receipt of Leachate from Outside of Service Area**

  Dr. Wichser provided an update and discussion on landfill leachate as requested at the July Board meeting including potential receipt of additional landfill leachate from outside the SCWWA service area. He stated that landfill leachate could be characterized as a strong odor, black tea or orange colored cloudy liquid. He stated in Sussex County, Waste Management has designed and is now operating an advanced leachate treatment process and has spent approximately $100 million on this treatment system. He further stated back in the late 1990's, the then Executive Director accepted leachate from approximately sixty miles away from SCWWA and it was trucked and treated at SCWWA. He stated in 2016, SCWWA was fortunate enough to have Waste Management bringing leachate to SCWWA, where we were treating between twelve to fourteen trucks per day and at a few times up to sixteen tanker trucks per day of landfill leachate. He further stated that receipt and treatment of the landfill leachate provided substantial revenue to allow the treatment plant to survive during fiscal stress. Dr. Wichser stated that presently, we receive approximately 10,000 to 15,000 gallons daily of domestic and non-domestic septage other than landfill leachate. He explained there are septage trucks which are referred to as the "honey dippers" that come in and empty their septage tanks, whereas the leachate SCWWA receives is derived from landfills. Mr. Wilson stated that what comes in from the "honey dippers" is all generated in the five jurisdictions and Dr. Wichser replied that is correct. He further stated that all leachate trucks entering our facility are sampled individually and covered by pretreatment permits as required by VA DEQ. He stated that in 2015, before we started receiving Waste Management leachate from landfills, we conducted a landfill leachate treatment study using Hazen and Sawyer, one of our Trust Consultants. He further stated the cost of the treatability study was about $15,000 and was paid for by Waste Management. Dr. Wichser reported that currently "honey dippers" are billed at $0.05 per gallon and leachate is billed at $.095 per gallon. He stated the "honey dippers" account for approximately $125,000 in annual revenue. He further stated that SCWWA's Hauled Waste Rules and Regulations cover anything that is received, both leachate and hauled septage waste.

Dr. Wichser stated that on May 21, 2015 the SCWWA Board passed a draft Resolution allowing SCWWA to move out from member jurisdiction's borders fifteen miles to enable receipt of landfill leachate. He further stated this is how we began with Waste Management to haul from Amelia and Charles City Landfills to SCWWA. He stated we have recently talked with Waste Management and they have a landfill located in King George County, this is about fifty-five miles from Chesterfield's border. He further stated that they indicated they could provide SCWWA, if interested, another four to eight landfill leachate trucks per day from this landfill.

Dr. Wichser asked the Board if they would consider going beyond the fifteen miles from the member jurisdiction's borders and allow SCWWA to reach out fifty-five miles to Waste Management's King George Landfill. He stated we felt comfortable accepting the landfill leachate and could coordinate the trucks coming on the plant site so the citizens on the island would not be disturbed. He further stated this would potentially double our Hauled Waste revenue with landfill leachate by approximately $800K per year.

Mr. Ashcraft asked if Oakley's proposal was much further than the fifty-five miles and Dr. Wichser replied that it appeared to be, yes. He stated Mr. Oakley has asked if he could come back to the September Board meeting and talk about his proposal to be a leachate broker to us, which he would be bringing waste as far as central Pennsylvania and South Carolina.

Dr. Casey stated as he told Mr. Oakley, we are in the sewage treatment business, and we still have to figure out how to do that right. He stated SCWWA is buying $500,000 worth of nutrient credits from Chesterfield at half price of what the market is. He further stated if you are talking about how you give to the team, they could possibly sell those credits they are giving to South Central for $1,000,000 on the Exchange, whatever that could be. [1]

Mr. Ashcraft asked Mr. Anderson if there was a public hearing when this topic came up before, and Mr. Anderson stated there was a Resolution adopted that authorized the expansion to the fifteen miles and the charges were included in the budget which goes to public hearing. He stated the decision to do this was a Board decision approved by Resolution.

Mr. Wilson wanted to know if we are or aren't going to accept leachate. Mr. Lyons stated that before deciding today, we should come back in September and discuss this. He further stated based on the way it is laid out now, he would say no to this because of the potential ramifications. Mr. Smith stated he was more comfortable coming back and talking about this.

Mr. Smith asked Dr. Wichser about the need for additional credit purchasing and Dr. Wichser replied when leachate comes in it has high concentrations of phosphorus and nitrogen. He stated if a treatment plant can't remove the phosphorus, which our plant can but SCWWA is not designed to remove nitrogen, so it needs to purchase additional nitrogen credits. He further stated this is the upgrade we have been talking about for years, which could take this plant to a denitrification plant for removal of total nitrogen. He stated we have a nitrogen effluent wasteload allocation annually, and we can't remove nitrogen in the plant, so the plant needs to buy nitrogen credits in order to meet its discharge permit wasteload allocation. He further stated that SCWWA has to purchase nitrogen credits and are very pleased to be working with Chesterfield as the SCWWA supplier of needed nitrogen credits until the year 2020. He stated he believed we were buying Chesterfield's credits at 75% of what we could purchase them from the Virginia Nutrient Exchange. Dr. Casey stated he looked up the Exchange and right now it's at $5.67 for Class "B" and the deal is $2.78. Dr. Wichser stated in 2018 we would be at $3.78/per purchased nitrogen credit from the Virginia Nutrient Exchange versus $2.78/per purchased nitrogen credit from Chesterfield County

Dr. Casey stated the leachate coming here now is our own leachate so we are serving as the customer and producer of the leachate.

Mr. Wilson asked if we reduce the number of trucks will we still buy the same amount of credits regardless and Dr. Wichser stated we are committed on the number of purchased nitrogen nutrient credits from Chesterfield County until 2020 per the SCWWA agreement with Chesterfield County.

Dr. Casey stated he would say talk to FOLAR as well and get their two cents.

Mr. Gordon stated the current agreement we have with Waste Management is we can take up to sixteen landfill leachate trucks per day. Mr. Lyons stated there is no concern if no more than six or seven trucks per day are going to SCWWA.

Mr. Wilson asked if we treated CFS of Petersburg and Dr. Wichser replied yes as it comes through the Petersburg collection system, about 300,000 – 400,000 gallons per day. He further stated they are not charged for that discharge to SCWWA.

---

[1] Dr. Casey has requested that the following sentence be included in this note to indicate what he intended to state: "Dr. Casey further stated if you are talking about how you give to the team, Chesterfield could possibly sell those credits they are selling at a discount to South Central to someone else, giving rise to South Central needing to buy Class B for $1,000,000 on the Exchange"

Mr. Ashcraft stated they would need a report over the next thirty days what the numbers of leachate trucks are from landfills and how that works. He further stated when we built the budget it was built with “zero” and Mr. Gordon stated that is correct.

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

RESOLVED, that the leachate issue be tabled until the September 13, 2018 Board meeting combined with the other proposal we anticipate coming in at that time for further discussion:

For: 4 Against: 1 (Casey) Abstain: 0

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

  Mr. Gordon reported on the Status Reports of Ongoing Projects/Operational/Financials/I&I. Dr. Casey asked about I&I and if it was the locality’s responsibility to test their own infiltration or does SCWWA do that. Mr. Gordon stated that SCWWA is different as we only are responsible for what is inside the SCWWA gate and outside it is up to the members. He further stated each locality provides us with their flow numbers.

5. Items from Counsel

There were no Items from Counsel.

6. Closed Session

Mr. Anderson read the Resolution to go into Closed Session (attached).

Upon a motion made by Dr. Casey and seconded by Mr. Wilson the Board went into Closed Session at 5:07 p.m.

For: 5 Against: 0 Abstain: 0

Upon a motion made by Mr. Lyons and seconded by Mr. Wilson the Board came out of Closed Session at 5:51 p.m.

For: 5 Against: 0 Abstain: 0

Mr. Anderson read the Certification regarding the Closed Session and, upon a motion made by Mr. Lyons and seconded by Mr. Wilson, it was approved by a unanimous roll call vote (attached).

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

Mr. Ashcraft stated that the Prince George Board of Supervisors approved the request that Prince George County move forward with the permitting process for not only a water plant but a wastewater plant. Mr. Frank Haltom, Prince George’s Utility Director, is in charge of this project with about $300,000 budgeted for permitting the potential two treatment facilities. Mr. Wilson asked how big of a plant and Mr. Haltom reported the wastewater would be 2 MGD expandable up to 8 MGD.

8. Adjourn

Upon a motion made by Mr. Lyons and seconded by Mr. Wilson the meeting was adjourned at 5:53 p.m.

The next Regular Meeting is scheduled for Thursday, September 13, 2018 at 2:00 p.m. at the South Central Wastewater Authority.

MINUTES APPROVED BY:

____

George Hayes
Secretary/Treasurer

CLOSED MEETING RESOLUTION

SOUTH CENTRAL WASTEWATER AUTHORITY

August 16, 2018

I move that we go into a closed meeting for discussion and consideration of the performance and salaries of specific public officers, appointees, or employees of the Authority, specifically to discuss and consider the Executive Director's annual performance evaluation, as permitted by Section 2.2-3711A.1. of the Virginia Freedom of Information Act:

MOTION: Casey

SECOND: Wilson

VOTE

Ashcraft	Aye
Casey	Aye
Lyons	Aye
Smith	Aye
Wilson	Aye

ABSENT DURING VOTE: None.

ABSENT DURING CLOSED MEETING: None.

SESSION DATE: August 16, 2018

CERTIFICATION OF CLOSED MEETING

WHEREAS, the Board of the South Central Wastewater Authority (the "Authority") convened a closed meeting on August 16, 2018, pursuant to an affirmative recorded vote and in accordance with the provisions of the Virginia Freedom of Information Act; and

WHEREAS, Section 2.2-3712 of the Code of Virginia requires a certification by this Board that such closed meeting was conducted in conformity with Virginia law;

NOW THEREFORE, BE IT RESOLVED that the Board of the Authority hereby certifies that, to the best of each member's knowledge, (i) only public business matters lawfully exempted from open meeting requirements by the Virginia Freedom of Information Act were discussed in the closed meeting to which this certification resolution applies, and (ii) only such public business matters as were identified in the motion convening the closed meeting were heard, discussed or considered by the Board.

MOTION: Lyons

SECOND: Wilson

<u>VOTE</u>

Ashcraft	Aye
Casey	Aye
Lyons	Aye
Smith	Aye
Wilson	Aye

ABSENT DURING VOTE: None.

ABSENT DURING CLOSED MEETING: None.

BOARD OF DIRECTORS MEETING

South Central Wastewater Authority
October 18, 2018 at 2:00 p.m.
Location: South Central Wastewater Authority
900 Magazine Road, Petersburg, Virginia 23803

PRESENT:
Percy Ashcraft, Chairman (Prince George)
Douglas Smith, Vice Chairman (Colonial Heights)
Joseph Casey, Vice Chairman (Chesterfield)
Kevin Massengill, (Alternate, Dinwiddie)
Aretha Ferrell-Benavides, (Petersburg)
George Hayes, Secretary/Treasurer (Alternate, Chesterfield)
Frank Haltom, (Alternate, Prince George)
Lionel Lyons, (Alternate, Petersburg)

ABSENT:
Robert B. Wilson, (Dinwiddie)
William Henley, (Alternate, Colonial Heights)
William Dupler, (Alternate, Chesterfield)

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

OTHERS:
Denny Morris, (Crater Region Planning Commission)
Roger Arnold, (Hazen and Sawyer)
Wendy Austin, (FOLAR)

Mr. Ashcraft, Chairman, called the meeting to order at 3:43 p.m.

2. Call to Order/Roll Call.

The roll was called.

2. Approval of Minutes: Minutes of the Regular Meeting of the Board on August 16, 2018

Dr. Casey stated that he had an edit on page four, fourth paragraph, second sentence. He stated it mentions how SCWWA is buying $500,000 worth of nutrient credits from Chesterfield at half price of what the market is, and he stated just to clarify that is Class B Exchange or Market B Exchange, as there are various markets. He further stated the next sentence after that "he stated they could sell the credits" meaning he guesses Chesterfield could sell the credits they are giving to SCWWA for $1,000,000 on the Exchange. He stated he meant to say if Chesterfield wasn't selling the credits to SCWWA then SCWWA would be buying $1,000,000 of credits on the Market B Exchange, if that makes sense. He further stated Class B is what it's called. They wouldn't be selling them for $1,000,000 on the Exchange because they would have to go to a different process. He stated another thing under the leachate discussion, he recalled stating for Dr. Wichser to notice people who might be interested in the leachate topic and for him to specifically call FOLAR and review the leachate proposal before us with FOLAR and with Wendy Austin directly. He didn't see that in the minutes at all.

Dr. Wichser stated we would check the recording and get the exact language.

Mr. Ashcraft stated he would accept a motion to approve minutes with changes and Ms. Ferrell-Benavides made the motion. Dr. Casey stated once he saw what the revisions were and they were amended to what he said he would be in favor of them and he would second the motion then. Mr. Ashcraft stated the minutes will be on the Agenda at the November Board meeting. Ms. Ferrell-Benavides pulled her motion back.

Upon a motion made by Ms. Ferrell-Benavides and seconded by Mr. Massengill the following resolution was adopted:

RESOLVED, that the minutes of the Regular Meeting of the Board on August 16, 2018 are deferred until the next meeting on November 15, 2018:

For: 5 Against: 0 Abstain: 0

4. Public Comment

Wendy Austin. Executive Director for Friends of the Lower Appomattox River (FOLAR), stated their office is at 1964 Wakefield Street, Petersburg, VA. She further stated she is here to listen and learn and appreciates Dr. Casey notifying them. She stated she is here on behalf of her Board members and there are other members who have concerns regarding consideration of increasing acceptance of landfill leachate. She appreciates the opportunity to be here and listen and learn about that.

4. Executive Director's Report:

- **Status Report: Ongoing Projects/Operational/Financials/I&I**

Mr. Gordon reported on Ongoing Projects/Operational/Financials/I&I. He reported on the Leachate Truck Log. He stated during the month of August we saw about six to eight trucks per day and received one hundred and nine trucks for the month. He further stated that the leachate revenue goes into our capital reserve, and is $69,000 for the month of August. He stated because of the rains, leachate is a problem for the landfills. He reported for September that SCWWA was receiving six to nine trucks per day with a total of one hundred and twenty-nine trucks. He stated revenues for September were $81,500. He further stated SCWWA is receiving eight to ten trucks per day currently. Mr. Massengill asked Mr. Gordon if Nutri-Blend had been responsive, and he replied that we recently had a meeting with them and there was some communication related to scheduling. He stated SCWWA is sending biosolids to the landfill like a lot of the members due to the wet weather impacts on land application, and we held out longer than most of our surrounding members, but they are geared up now and rolling biosolids to a landfill.

- **Discussion on Additional Landfill Leachate-Mr. Jeff Oakley, President, Oakley Tank Lines**

Dr. Wichser stated Mr. Jeff Oakley, President of Oakley Tank Lines, was supposed to be here to discuss additional landfill leachate but if appears he is not present.

Dr. Casey stated the leachate was an agenda item and asked if the topic was just to hear Mr. Oakley again, or is there a discussion as far as determining what we think our role is in scope of accepting any and all proposals beyond what is currently the leachate that's produced in our region plus fifteen miles around the perimeter. Dr. Wichser stated speaking for SCWWA he was very comfortable with the Board's decision in acceptance of landfill leachate out fifteen miles of our member's boundaries. He stated we proposed to the Board in March 19, 2015 to allow the Authority to go beyond the jurisdictional boundary fifteen miles out. He further stated that on May 21, 2015, our proposed Resolution was voted on by the Board, and it states not to exceed fifteen miles of the incorporating subdivision boundaries. He stated on a motion made by Mr. Stegmaier and second by Mr. Mattis, the following resolution was adopted with: For: 3, Against: 0, Abstain: 0. He stated the rest of the Board members were absent. He further stated we felt comfortable limiting to fifteen miles out, and see no reason to entertain having a leachate broker. Dr. Casey asked if we needed to give any opinion back to Mr. Oakley, and Dr. Wichser stated he discussed with Mr. Oakley the discussion the Board had at the August Board meeting, and that could be why Mr. Oakley is not here.

Mr. Ashcraft stated so the current policy allows us to take leachate fifteen miles out, and Dr. Wichser replied yes, of the SCWWA member jurisdictional boundaries. Mr. Ashcraft asked if that included everybody and Dr. Wichser replied yes. Mr. Ashcraft stated he would not put this back on the Agenda unless there is a request from Mr. Oakley.

- **Proposed 2019 Board Meeting Dates**

Dr. Wichser reported on the proposed 2019 Board meeting dates. He stated as we really don't need to meet every month during the summer, he proposed we meet May, July and September and drop June and August.

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

RESOLVED, that the Board approved the proposed schedule of regular meetings dates for 2019 as amended:

For: 5 Against: 0 Abstain: 0

5. Items from Counsel

There were no Items from Counsel.

6. Other Items from Board Members/Staff Not on Agenda

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

7. Closed Session

Mr. Mullen read the Resolution to go into Closed Session (attached).

Upon a motion made by Mr. Massengill and seconded by Ms. Ferrell-Benavides, the Board went into Closed Session at 4:02 p.m.

For: 5 Against: 0 Abstain: 0

Upon a motion made by Mr. Massengill and seconded by Mr. Smith, the Board came out of Closed Session at 4:30 p.m.

For: 5 Against: 0 Abstain: 0

Mr. Mullen read the Certification regarding the Closed Session and, upon a motion made by Mr. Massengill and seconded by Mr. Smith, it was approved by a unanimous roll call vote (attached).

8. Adjourn

Upon a motion made by Massengill and seconded by Ms. Ferrell-Benavides the meeting was adjourned at 4:32 p.m.

The next Regular Meeting is scheduled for Thursday, November 15, 2018 at 2:00 p.m. in the "Sutherland Ballroom" at **Eastside Enhancement Center**, located at **7301 Boydton Plank Road, North Dinwiddie, VA, 23803**. .

MINUTES APPROVED BY:

____

George Hayes
Secretary/Treasurer

CLOSED MEETING RESOLUTION

SOUTH CENTRAL WASTEWATER AUTHORITY

October 18, 2018

I move that we go into a closed meeting for the following purposes:

1) Discussion and consideration of the assignment, appointment, promotion, performance, demotion, salaries, disciplining, or resignation of specific public officers, appointees, or employees of the South Central Wastewater Authority, as permitted by Va. Code § 2.2-3711(A)(1), of the Virginia Freedom of Information Act.

MOTION: Massengill

SECOND: Ferrell-Benavides

<u>VOTE</u>

Ferrell-Benavides	Aye
Massengill	Aye
Smith	Aye
Casey	Aye
Ashcraft	Aye

ABSENT DURING VOTE: 0

ABSENT DURING CLOSED MEETING: 0

SESSION DATE: October 18, 2018

CERTIFICATION OF CLOSED MEETING

WHEREAS, the Board of the South Central Wastewater Authority (the "Authority") convened a closed meeting on October 18, 2018, pursuant to an affirmative recorded vote and in accordance with the provisions of the Virginia Freedom of Information Act; and

WHEREAS, Section 2.2-3712 of the Code of Virginia requires a certification by this Board that such closed meeting was conducted in conformity with Virginia law;

NOW THEREFORE, BE IT RESOLVED that the Board of the Authority hereby certifies that, to the best of each member's knowledge, (i) only public business matters lawfully exempted from open meeting requirements by the Virginia Freedom of Information Act were discussed in the closed meeting to which this certification resolution applies, and (ii) only such public business matters as were identified in the motion convening the closed meeting were heard, discussed or considered by the Board.

MOTION: Massengill

SECOND: Smith

ROLL CALL VOTE

Ferrell-Benavides	Aye
Massengill	Aye
Smith	Aye
Casey	Aye
Ashcraft	Aye

ABSENT DURING VOTE: 0

ABSENT DURING CLOSED MEETING: 0

3. Public Comment

The Guidelines for Public Comment are:

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

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

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

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

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

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

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

4. Executive Director's Report

- Annual Financial Report Year Ended June 30, 2018: Robinson, Farmer, Cox Associates

  Following is the Annual Comprehensive Financial Report prepared and presented by Robinson, Farmer, Cox Associates.

Communication with Those Charged with Governance

To the Board of Directors
South Central Wastewater Authority

We have audited the financial statements of the business-type activities of South Central Wastewater Authority for the year ended June 30, 2018. Professional standards require that we provide you with information about our responsibilities under generally accepted auditing standards and *Government Auditing Standards*, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our letter to you dated July 10, 2018. Professional standards also require that we communicate to you the following information related to our audit.

Significant Audit Matters

Qualitative Aspects of Accounting Practices

Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by the Authority are described in Note 2 to the financial statements. As described in Note 13 to the financial statements, Appomattox River Water Authority changed accounting policies related to other postemployment benefits by adopting Statement of Governmental Accounting Standards (GASB Statement) No. 75 *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* and 85 *Omnibus 2017*. We noted no transactions entered into by the entity during the year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimates affecting the Authority's financial statements were:

> Management's estimate of the useful lives of depreciable assets is based on industry standards. Pension and OPEB estimates were determined by valuations performed by actuaries. We evaluated the key factors and assumptions used to develop the estimates in determining that they are reasonable in relation to the financial statements taken as a whole.

The financial statement disclosures are neutral, consistent, and clear.

Difficulties Encountered in Performing the Audit

We encountered no significant difficulties in dealing with management in performing and completing our audit.

Corrected and Uncorrected Misstatements

Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. Management has corrected all such misstatements. In addition, none of the misstatements detected as a result of audit procedures and corrected by management were material, either individually or in the aggregate, to each opinion unit's financial statements taken as a whole.

Disagreements with Management

For purposes of this letter, a disagreement with management is a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditors' report. We are pleased to report that no such disagreements arose during the course of our audit.

Management Representations

We have requested certain representations from management that are included in the management representation letter dated September 20, 2018.

Management Consultations with Other Independent Accountants

In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to the entity's financial statements or a determination of the type of auditors' opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Other Audit Findings or Issues

We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as the entity's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

Other Matters

We applied certain limited procedures to management's discussion and analysis and the schedules related to pension and OPEB funding, which are required supplementary information (RSI) that supplements the basic financial statements. Our procedures consisted of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We did not audit the RSI and do not express an opinion or provide any assurance on the RSI.

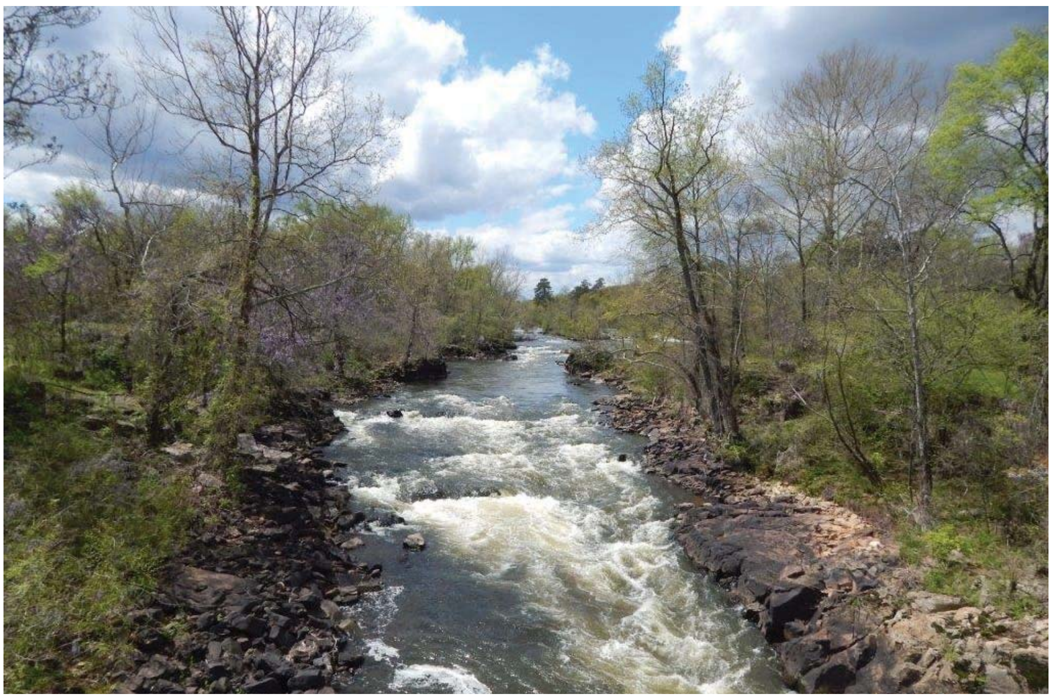
Restriction on Use

This information is intended solely for the use of the Board of Directors and management of the South Central Wastewater Authority and is not intended to be, and should not be, used by anyone other than these specified parties.

Robinson, Farmer, Cox Associates

Charlottesville, Virginia
September 20, 2018

South Central Wastewater Authority



Financial Statements
Year Ended June 30, 2018

South Central Wastewater Authority

Financial Statements
Year Ended June 30, 2018

SOUTH CENTRAL WASTEWATER AUTHORITY

Petersburg, Virginia

(A Public Body Politic and Corporation Chartered July, 1996)

- Board of Directors -

Percy C. Ashcraft, Member, Chairman
Prince George County

Douglas E. Smith, Member, Vice-Chairman
City of Colonial Heights

Dr. Joseph P. Casey, Member
Chesterfield County

Robert B. Wilson, Member
Dinwiddie County Water Authority

Aretha Ferrell-Benavides, Member
City of Petersburg

George B. Hayes, P.E., Alternate, Secretary-Treasurer
Chesterfield County

- Officials -

Dr. Robert C. Wichser, P.E., BCEE, Executive Director

James C. Gordon, Assistant Executive Director

McGuire Woods, Counsel

Table of Contents

Independent Auditors' Report

To the Honorable Members of
South Central Wastewater Authority
Petersburg, Virginia

Report on the Financial Statements

We have audited the accompanying financial statements of the business-type activities of South Central Wastewater Authority, as of and for the year ended June 30, 2018, and the related notes to the financial statements, which collectively comprise the South Central Wastewater Authority's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the *Specifications for Audits of Authorities, Boards, and Commissions,* issued by the Auditor of Public Accounts of the Commonwealth of Virginia. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the business-type activities of South Central Wastewater Authority, as of June 30, 2018, and the changes in financial position, and cash flows thereof for the year then ended in accordance with accounting principles generally accepted in the United States of America.

Change in Accounting Principle

As described in Note 13 to the financial statements, in 2018, the Authority adopted new accounting guidance, GASB Statement Nos. 75 *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* and 85 *Omnibus 2017.* Our opinion is not modified with respect to this matter.

Restatement of Beginning Balances

As described in Note 13 to the financial statements, in 2018, the Authority restated beginning balances to reflect the requirements of GASB Statement No. 75. Our opinion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and schedules related to pension and OPEB funding on pages 3-7 and 55-63 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Report on Summarized Comparative Information

We have previously audited South Central Wastewater Authority's 2017 financial statements, and expressed an unmodified opinion on those audited financial statements in our report dated September 26, 2017. In our opinion, the summarized comparative information presented herein as of and for the year ended June 30, 2017, is consistent, in all material respects, with the audited financial statements from which it has been derived.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated September 20, 2018, on our consideration of South Central Wastewater Authority's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of South Central Wastewater Authority's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering South Central Wastewater Authority's internal control over financial reporting and compliance.

Robinson, Farmer, Cox Associates

Charlottesville, Virginia
September 20, 2018

As management of the South Central Wastewater Authority (Authority), we offer readers of the South Central Wastewater Authority's financial statements this narrative overview and analysis of the financial activities of South Central Wastewater Authority for the fiscal year ending June 30, 2018.

Overview of the Financial Statements

This discussion and analysis is intended to serve as an introduction to the Authority's basic financial statements. Since the Authority is engaged only in business-type activities, its basic financial statements are comprised of only two components: 1) enterprise fund financial statements and 2) notes to the financial statements. This report also contains required supplementary information in addition to the basic financial statements themselves.

Enterprise fund financial statements. The enterprise fund financial statements are designed to provide readers with a broad overview of the Authority's finances, in a manner similar to a private-sector business.

The statement of net position presents information on the Authority's assets, deferred outflows of resources, deferred inflows of resources and liabilities. Equity of the Authority is reported as net position. Net position is the difference between assets and deferred outflows of resources and liabilities and deferred inflows of resources. Net investment in capital assets represents capital assets, reduced by accumulated depreciation and by any outstanding debt, deferred outflows of resources and deferred inflows of resources related to the acquisition, construction or improvement of those assets. Restricted net position represents restricted assets reduced by liabilities and deferred inflows of resources related to those assets. Over time, increases or decreases in net position may serve as a useful indicator of whether the financial position of the Authority is improving or deteriorating.

The statement of revenues, expenses and changes in net position presents information showing how the Authority's net position changed during the most recent fiscal year. All changes in net position are reported as soon as the underlying event giving rise to the change occurs, regardless of the timing of the cash flows. Thus, revenues and expenses are reported in this statement for some items that will only result in cash flows in future fiscal periods, (e.g. earned but unused vacation leave).

Refer to the table of contents for the basic enterprise fund financial statements.

Notes to financial statements. The notes provide additional information that is essential to a full understanding of the data provided in the financial statements. Refer to the table of contents for the notes to the financial statements. Required supplementary information presents the Authority's progress in funding its obligation to provide pension benefits to its employees.

Summary of South Central Wastewater Authority Operations

The South Central Wastewater Authority (SCWWA) staff includes thirty-four (34) full-time employees and contributes to the salaries of the Executive Director, Assistant Executive Director, Office/Business Manager, Laboratory Manager, Maintenance Manager, Chief of Maintenance, and Painter/Carpenter who are shared employees with the Appomattox River Water Authority. The Authority operates a 23 million gallon per day (mgd) wastewater treatment plant located on Pocahontas Island in the City of Petersburg. The Authority treats flow from the cities of Colonial Heights and Petersburg as well as portions of Chesterfield, Dinwiddie, and Prince George counties. Wastewater from the cities is pumped directly to the Authority through five (5) pumping stations. Wastewater from the counties is conveyed through the collection systems of the cities by conveyance agreements executed in 1996.

	2018	2017
Total Annual Flow (mg)	4288	4101
Minimum Day (mgd)	7.942 (Aug. 2017)	8.293 (Sept. 2016)
Maximum Day (mgd)	43.060 (May 2018)	36.437 (Oct. 2016)
Annual Average Day (mgd)	11.7489	11.6957

Financial Highlights

- The assets and deferred outflows of resources of the Authority exceeded its liabilities at the close of the most recent fiscal year by $29,609,609 (net position). Of this amount, $10,849,543 is reported as unrestricted net position.

- The Authority's total net position increased by $2,834,247.

- The Authority's total long-term debt which includes net OPEB obligations, net pension liability and compensated absences decreased by $188,378 during the current fiscal year. The Authority's investment in capital assets increased during the year by $504,731 after recording depreciation expense of $1,012,043. Details of these items can be found under the heading "*Capital Asset and Debt Administration*".

- Total revenues decreased by $510,680. Total expenses increased by $269,225.

Financial Analysis

As noted earlier, net position may serve over time as a useful indicator of an Authority's financial position. In the case of the Authority, assets and deferred outflows of resources exceeded liabilities and deferred inflows of resources by $29,609,609 at the close of the most recent fiscal year.

By far the largest portion of the Authority's net position (63 percent) reflects its net investment in capital assets. The Authority uses these capital assets to provide services to its customers; consequently, these assets are not available for future spending.

The following table provides a summary of the statement of net position.

	Net Position	
	2018	**2017**
Current and other assets	$ 12,016,129	$ 10,450,013
Capital assets	18,760,066	18,255,335
Total assets	$ 30,776,195	$ 28,705,348
Deferred outflows - pension related items	$ 119,474	$ 205,458
Deferred outflows - OPEB related items	9,059	-
Total deferred outflows	$ 128,533	$ 205,458
Long-term liabilities	$ 594,896	$ 783,274
Other liabilities	375,777	960,582
Total liabilities	$ 970,673	$ 1,743,856
Deferred inflows - pension related items	$ 303,934	$ 192,001
Deferred inflows - OPEB related items	20,512	-
Total deferred inflows	$ 324,446	$ 192,001
Investment in capital assets	$ 18,760,066	$ 18,255,335
Unrestricted	10,849,543	8,719,614
Total net position	$ 29,609,609	$ 26,974,949

Financial Analysis: (Continued)

At the end of the current fiscal year, the Authority is able to report positive balances in all categories of net position.

	Change in Net Position	
	2018	2017
Revenues:		
Operating revenues	$ 8,102,789	$ 8,355,884
Other nonoperating revenue	1,115,083	1,111,597
Investment income	7,772	268,843
Total revenues	$ 9,225,644	$ 9,736,324
Expenses:		
Operating expenses (excluding depreciation)	$ 5,154,821	$ 5,145,230
Depreciation expense	1,012,043	976,942
Other	224,533	-
Total expenses	$ 6,391,397	$ 6,122,172
Increase (decrease) in net position	$ 2,834,247	$ 3,614,152
Net position-July 1, as restated	26,775,362	23,360,797
Net position-June 30	$ 29,609,609	$ 26,974,949

The Authority's net position increased by $2,834,247 during the current year. Key elements of the changes in revenues and expenses are explained in greater detail under the Review of Operations section.

Capital Asset and Debt Administration

Capital Assets - The Authority's investment in capital assets as of June 30, 2018 amounts to $18,760,066 (net of accumulated depreciation). Investment in capital assets increased by approximately 2.76% during the year. Below is a comparison of the items that make up capital assets as of June 30, 2018 vs. June 30, 2017.

	2018	2017
Land	$ 92,968	$ 92,968
Water systems	33,609,033	33,352,033
Equipment	7,920,877	7,408,956
Hydro costs incurred	3,037,357	2,974,264
Accumulated depreciation	(28,490,891)	(27,480,848)
Construction in progress	2,590,722	1,907,962
Total capital assets	$ 18,760,066	$ 18,255,335

More detailed information on the Authority’s capital assets is presented in Note 4 of the notes to the financial statements.

Long-Term Debt - At the end of the current fiscal year, the Authority’s long-term debt included net OPEB obligation, net pension liability and compensated absences. Total long-term debt decreased by $188,378 including an increase in OPEB obligations and compensated absences. The net pension liability decreased by $390,264.

The Authority implemented GASB Statement No. 75 whereby reporting OPEB obligations for a standalone health insurance plan and cost sharing group life insurance plan.

More detailed information on the Authority's long-term obligations is presented in the notes to the financial statements.

Review of Operations

As previously mentioned, total revenues decreased including operating revenues which decreased by $253,095 resulting from a decrease in leachate revenue received. Operating expenses (excluding depreciation) increased $9,591 over fiscal year 2018 totals.

Authority Highlights

- The treatment facility discharge effluent quality met all VPDES permit limits during the fiscal year and no significant problems were encountered with operating the plant.

- The average flow for fiscal year 2018 was 0.559 mgd more than for fiscal year 2017. Rainfall in fiscal year 2018 (49.76 inches) was higher than in fiscal year 2017 (40.31 inches). Fiscal year 2018 was wetter at the treatment plant's rain gauge with the maximum facility flow occurring on May 18, 2018 following a significant rain event. The treatment plant recorded 4.99 inches of rain between May 16, 2018 and May 18, 2018.

- Authority staff developed and implemented private exchanges of nutrient credits for the 2018 compliance year through a contract with Chesterfield County and has established contracts for 2019 and 2020 through Chesterfield County. These credits cost less than credits purchased through the Virginia Nutrient Credit Exchange Association and provide Chesterfield County (who has excess nutrient credits to sell at this time) more revenue than they would have received through the Virginia Nutrient Credit Exchange Association.

The Authority is also maintaining an active watch on regulatory issues such as the potential for point source nutrient waste-load changes in the tidal fresh James River Estuary. The following provides more detail.

Nutrients

The Virginia Department of Environmental Quality (DEQ) finalized regulations establishing reduced limits for nitrogen and phosphorus discharges into the Chesapeake Bay and its tributaries in November 2005. The allocations for the Authority adopted by the Virginia State Water Control Board are based on concentrations of 5 milligrams per liter of total nitrogen and 0.5 milligrams per liter of total phosphorus.

In December 2010, U.S. EPA finalized the Chesapeake Bay Total Maximum Daily Load (TMDL). This is a Bay-wide program that could result in further reductions to wastewater treatment facility allocations of nutrients. The individual states in the Bay watershed will be responsible for compliance with these mandates from the U.S. EPA. One of the requirements of the TMDL is that each state submits Watershed Implementation Plans (WIP's) detailing how they intend to meet the nutrient load caps imposed by U.S. EPA. States including Virginia, who developed two-year milestone reports, and is submitting these bi-annual progress reports to U.S. EPA, showing what progress had been made.

Facilities within the James River watershed are facing the possibility of additional annual nutrient waste-load reductions. One of the issues raised during the TMDL was the harmful algae blooms in the middle segment of the James River. The end result was that DEQ adopted the task of conducting a detailed and scientifically acceptable study on algae chlorophyll within the middle segment of the James River to determine if further reductions to nutrient loads within the James River basin are necessary to prevent and control harmful algae blooms. Any potential reductions to existing nutrient allocations to wastewater plant nutrient allocations based on current actual flows rather than design flows would have a significant impact on wastewater plants discharging into the tidal fresh James River, including SCWWA.

Authority Highlights: (Continued)

Nutrients: (Continued)

The SCWWA Board of Directors elected to defer a nutrient reduction upgrade project at this time and instead purchase nutrient credits. In February 2012, the Board gave indication that constructing a nutrient reduction project would probably not be approved by their various governing bodies until the cost of debt service was less than the purchase of nutrient credits. Given current project cost estimates and credit costs, this is expected to take place no earlier than 2022, when the start of design and then construction of a nutrient removal upgrade project might occur. It is possible, however, that regulatory drivers that would eliminate surplus credits available (such as a reduction in middle James River point-source allocations or localities using excess nutrient credits to offset non-point loads) would require the project be on-line by 2026 or perhaps even earlier.

Wet Weather Infiltration & Inflow (I&I)

The wastewater facility biological treatment process is very vulnerable to upsets due to high influent flows during wet-weather events. The base design of the SCWWA plant allows for a peak day flow of 57.5 MGD (2.5 times average) and a peak hour flow of 69.0 MGD (3.0 times average). The Authority does not own the wastewater collection systems transporting the influent to the SCWWA facility. From the regulatory perspective, there is the potential that the contributing jurisdictions will be responsible for finding and eliminating I & I sources in their collection systems. The jurisdictions may also need to consider constructing and operating flow equalization facilities to mitigate the I & I that is not practicable to eliminate to prevent surges to the Authority treatment plant. The City of Petersburg has installed a wastewater equalization (holding) basin at their Poor Creek Pump Station to mitigate peak flows from this sewer-shed. In recent years, the Authority has begun noting compliance actions have occurred in Virginia against facilities/jurisdictions with flows in the range of 10 to 100 MGD that have noted sewer system overflows in the collection system.

Biosolids Handling

South Central Wastewater Authority utilizes land application for disposal of generated biosolids. Revised Virginia biosolids regulations were approved by the Virginia State Water Control Board in September 2011, and while not all aspects of the regulatory changes were favorable, the regulations do not constitute any significant additional regulatory burden for South Central's biosolids land application program. The Authority presently has an agreement with the Hopewell Regional Wastewater Facility (HRWWF) for back-up incineration of SCWWA biosolids at the HRWWF should the need arise. The Authority, through our biosolids disposal contract, also has an additional backup option to landfill biosolids, if needed. As of June 30, 2018, SCWWA had not encountered the need to send biosolids to HRWWF for disposal by incineration or to a landfill for disposal.

Economic Conditions

The Authority continues to operate under sound management current working capital and positive cash flows from operations and an outside revenue stream. Overall finances for the Authority for fiscal year 2018 as viewed by management, including the Board of Directors, is considered sound.

Contacting the Authority

Questions concerning this report or requests for additional information should be directed to the Executive Director, 21300 Chesdin Road, S. Chesterfield, Virginia 23803, telephone (804) 590-1145.

- Financial Statements -

SOUTH CENTRAL WASTEWATER AUTHORITY

Statement of Net Position
June 30, 2018
(With Comparative Totals for the Prior Year)

		2018		2017
Assets				
Current Assets				
Cash and cash equivalents	$	6,309,418	$	4,520,807
Cash and cash equivalents - Board designated		4,895,457		4,473,396
Accounts receivable		146,920		799,729
Inventory		664,334		656,081
Total Current Assets	$	12,016,129	$	10,450,013
Noncurrent Assets				
Capital Assets:				
Land and land rights	$	92,968	$	92,968
Sewer system		33,609,033		33,352,033
Plant machinery		7,920,877		7,408,956
Equipment and vehicles		3,037,357		2,974,264
Accumulated depreciation		(28,490,891)		(27,480,848)
Sub-total net capital assets	$	16,169,344	$	16,347,373
Construction in progress		2,590,722		1,907,962
Total net capital assets	$	18,760,066	$	18,255,335
Total Noncurrent Assets	$	18,760,066	$	18,255,335
Total Assets	$	30,776,195	$	28,705,348
Deferred Outflows of Resources				
Pension related items	$	119,474	$	205,458
OPEB related items		9,059		-
Total Deferred Outflows of Resources	$	128,533	$	205,458

SOUTH CENTRAL WASTEWATER AUTHORITY

Statement of Net Position
June 30, 2018 (continued)
(With Comparative Totals for the Prior Year)

	2018	2017
Liabilities		
Current Liabilities		
Accounts payable and other accrued expenses	$ 375,777	$ 233,127
Refunds due to member localities	-	727,455
Total Current Liabilities	$ 375,777	$ 960,582
Noncurrent Liabilities		
Net OPEB liabilities	$ 266,609	$ 71,800
Net pension liability	105,031	495,295
Compensated absences	223,256	216,179
Total Noncurrent Liabilities	$ 594,896	$ 783,274
Total Liabilities	$ 970,673	$ 1,743,856
Deferred Inflow of Resources		
Pension related items	$ 303,934	$ 192,001
OPEB related items	20,512	-
Total Deferred Inflows of Resources	$ 324,446	$ 192,001
Net Position		
Investment in capital assets	$ 18,760,066	$ 18,255,335
Unrestricted	10,849,543	8,719,614
Total Net Position	$ 29,609,609	$ 26,974,949

The accompanying notes to financial statements are an integral part of this statement.

SOUTH CENTRAL WASTEWATER AUTHORITY

Statement of Revenues, Expenses and Changes in Net Position
Year Ended June 30, 2018
(With Comparative Totals for the Prior Year)

		2018		2017
Operating Revenues				
Charges for services	$	7,084,300	$	6,371,445
Septage and miscellaneous		1,018,489		1,984,439
Total Operating Revenues	$	8,102,789	$	8,355,884
Operating Expenses				
Operating and maintenance:				
Salaries	$	1,854,165	$	1,610,725
Employee benefits		563,363		549,351
Contractual services		225,495		433,718
Chemicals		510,259		534,767
Materials and supplies		559,093		340,305
Sludge disposal		269,375		297,751
Other charges		562,996		548,961
Nutrient credit purchases		610,075		829,652
Depreciation		1,012,043		976,942
Total Operating Expenses	$	6,166,864	$	6,122,172
Net Operating Income (Loss)	$	1,935,925	$	2,233,712
Nonoperating Revenues (Expenses)				
Contributions from member localities:				
Equipment repair and replacement	$	429,215	$	426,495
Operations and maintenance reserves		685,868		676,801
Interest income		7,772		268,843
Other revenue (expense)		(224,294)		8,301
Loss on disposal of equipment		(239)		-
Total Nonoperating Revenues (Expenses)	$	898,322	$	1,380,440
Change in net position	$	2,834,247	$	3,614,152
Net position, beginning of year, as restated		26,775,362		23,360,797
Net position, end of year	$	29,609,609	$	26,974,949

The accompanying notes to financial statements are an integral part of this statement.

SOUTH CENTRAL WASTEWATER AUTHORITY

Statement of Cash Flows
Year Ended June 30, 2018
(With Comparative Totals for the Prior Year)

	2018	2017
Cash flows from operating activities:		
Receipts from customers and users	$ 8,028,143	$ 8,228,706
Payments to suppliers and vendors	(2,681,386)	(3,196,676)
Payments to and on behalf of employees	(2,596,123)	(2,185,402)
Net cash provided by (used for) operating activities	$ 2,750,634	$ 2,846,628
Cash flows from capital and related financing activities:		
Intergovernmental revenue - equipment replacement	$ 429,215	$ 426,495
Acquisition of plant and equipment	(1,438,548)	(1,068,621)
Proceeds from sale of equipment	25	-
Net cash provided by (used for) capital and related financing activities	$ (1,009,308)	$ (642,126)
Cash flows from noncapital financing activities:		
Intergovernmental revenue - operation and maintenance reserves	$ 685,868	$ 676,801
Other revenue (expense)	(224,294)	8,301
Net cash provided by (used for) noncapital financing activities	$ 461,574	$ 685,102
Cash flows from investing activities:		
Interest received	$ 7,772	$ 268,843
Net cash provided by (used for) investing activities	$ 7,772	$ 268,843
Net increase (decrease) in cash and cash equivalents	$ 2,210,672	$ 3,158,447
Cash and cash equivalents at beginning of year	$ 8,994,203	$ 5,835,756
Cash and cash equivalents at end of year	$ 11,204,875	$ 8,994,203
Reconciliation of operating income (loss) to net cash provided by (used for) operating activities:		
Operating income (loss)	$ 1,935,925	$ 2,233,712
Adjustments to reconcile operating income (loss) to net cash provided by (used for) operating activities:		
Depreciation	1,012,043	976,942
Changes in operating assets and liabilities:		
(Increase) decrease in receivables	652,809	(362,763)
(Increase) decrease in inventories	(8,253)	(117,417)
Increase (decrease) in operating accounts payable and accrued expenses	64,160	(94,105)
Increase (decrease) in refunds due member localities	(727,455)	235,585
Increase (decrease) in compensated absences	7,077	36,274
(Increase) decrease in net pension liability	(390,264)	(31,357)
(Increase) decrease in pension deferred outflow of resources	85,984	(69,068)
(Increase) decrease in OPEB deferred outflow of resources	(1,059)	-
Increase (decrease) in pension deferred inflow of resources	111,933	26,725
Increase (decrease) in OPEB deferred inflow of resources	20,512	-
Increase (decrease) in OPEB liabilities	(12,778)	12,100
Net cash provided by (used for) operating activities	$ 2,750,634	$ 2,846,628

The accompanying notes to financial statements are an integral part of this statement.

NOTE 1 – ORGANIZATION AND NATURE OF BUSINESS:

The South Central Wastewater Authority (Authority) is a public body organized under the provisions of the Virginia Water and Sewer Authorities Act, by the governing bodies of the City of Petersburg, Virginia, the City of Colonial Heights, Virginia, and the Counties of Chesterfield, Dinwiddie, and Prince George, Virginia. The purpose of the Authority is to operate and maintain wastewater treatment and related facilities for the members of the Authority.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

A. Financial Reporting Entity

The Authority's governing body is comprised of one member appointed by each of the five participating jurisdictions. These governmental entities have an ongoing financial responsibility to the Authority because its continued existence depends on continued funding by the participants. The Authority is a legally separate entity from the participating governments and no participating government has access to its resources or surpluses, nor is any participant liable for the Authority's debts or deficits. The Authority also has the ability to finance its capital projects through user charges or the sale of revenue bonds.

The Authority has been determined to be a joint venture of the five participating jurisdictions. The Authority is not a component unit of any of the participating governments. There are no component units to be included in the Authority's financial statements.

B. Basis of Accounting

South Central Wastewater Authority operates as an enterprise fund, uses the flow of economic resources measurement focus and its accounts are maintained on the accrual basis of accounting. Under this method, revenues are recognized when earned, and expenses are recorded as liabilities when incurred, without regard to receipt or payment of cash. The Authority accrues revenue for services rendered but not yet billed at the end of the fiscal year. The Authority follows Governmental Accounting Standards Board (GASB) pronouncements.

The Authority distinguishes *operating* revenues and expenses from *nonoperating* items. Operating revenues and expenses generally result from providing services, and producing and delivering goods in connection with the Authority's principal ongoing operations. The principal operating revenues of the Authority are charges to customers for sales and services. Operating expenses include the cost of sales and services, administrative expenses, and depreciation on capital assets. All revenues and expenses not meeting this definition are reported as nonoperating revenues and expenses.

Governmental Accounting Standards Board (GASB) Statement No. 34, *Basic Financial Statements and Management's Discussion and Analysis for State and Local Governments* requires the financial statements to include a Management's Discussion and Analysis (MD&A) section providing an analysis of the Authority's overall financial position and results of operations.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES: (CONTINUED)

C. Basic Financial Statements

Since the Authority is only engaged in business-type activities, it is required to present only the financial statements required for enterprise funds. For the Authority, the basic financial statements and required supplementary information consist of:

– Management's Discussion and Analysis

– Enterprise Fund Financial Statements
  - Statement of Net Position
  - Statement of Revenues, Expenses and Changes in Net Position
  - Statement of Cash Flows
  - Notes to Financial Statements

– Schedule of Changes in Net Pension (Asset) Liability and Related Ratios
– Schedule of Employer Contributions
– Notes to Required Supplementary Information
– Schedule of Changes in Total OPEB Liability (Asset) and Related Ratios - Health Insurance
– Notes to Required Supplementary Information - OPEB - Health Insurance
– Schedule of Authority's Share of Net OPEB Liability Group Life Insurance Program
– Schedule of Employer Contributions Group Life Insurance Program
– Notes to Required Supplementary Information Group Life Insurance Program

D. Cash and Cash Equivalents

Cash and cash equivalents include amounts in demand deposits as well as short-term investments, stated at cost which approximates fair value, with original maturity dates within three months of the dates acquired by the Authority.

E. Accounts Receivable

Accounts receivable is recorded at face value. Since substantially all of the Authority's receivables are from the participating jurisdictions, no allowance for uncollectible accounts is deemed necessary.

F. Inventories

Inventories are valued at cost using the first-in, first-out method. Inventories consist of expendable supplies held for consumption and are recorded as expenses when used (consumption method).

G. Capital Assets

Capital assets, which include property, plant, equipment, and infrastructure assets (e.g., roads, bridges, sidewalks, and similar items), are reported in the financial statements. Capital assets are defined by the Authority as assets with an initial, individual cost of more than $5,000 (amount not rounded) and an estimated useful life in excess of one year. Such assets are recorded at historical cost or estimated historical cost if purchased or constructed. Donated capital assets are recorded at acquisition value at the date of donation.

The costs of normal maintenance and repairs that do not add to the value of the asset or materially extend the asset's life are not capitalized.

Major outlays for capital assets and improvements are capitalized as projects are constructed. Interest incurred during the construction phase of capital assets of business-type activities is included as part of the capitalized value of the assets constructed. No interest was capitalized during the current or previous fiscal year.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES: (CONTINUED)

G. Capital Assets: (Continued)

Property, plant, equipment and infrastructure is depreciated using the straight-line method over the following estimated useful lives:

Sewer system	40 years
Plant machinery	15 years
Equipment and vehicles	5 years

H. Compensated Absences

Authority employees are granted vacation and sick leave in varying amounts. In the event of termination other than retirement, Authority employees are paid for accumulated vacation days based on years of service and are not paid for accumulated sick leave. Upon retirement, Authority employees are paid for accumulated vacation days and a portion of accumulated sick leave. The unused vested portion of vacation and sick leave is recorded as a liability at year end.

I. Use of Estimates

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues, and expenses and disclosure of contingent assets and liabilities for the reported periods. Actual results could differ from those estimates and assumptions.

J. Net Position

Net position is the difference between a) assets and deferred outflows of resources and (b) liabilities and deferred inflows of resources. Net investment in capital assets represents capital assets, less accumulated depreciation, less any outstanding debt related to the acquisition, construction or improvement of those assets. Deferred outflows of resources and deferred inflows of resources that are attributable to the acquisition, construction, or improvement of those assets or related debt are also included in this component of net position.

K. Deferred Outflows/Inflows of Resources

In addition to assets, the statement of financial position will sometimes report a separate section for deferred outflows of resources. This separate financial statement element, deferred outflows of resources, represents a consumption of net position that applies to a future period(s) and so will not be recognized as an outflow of resources (expense/expenditure) until then. The Authority has one item that qualifies for reporting in this category. It is comprised of certain items related to the measurement of the net pension asset/liability and net OPEB liabilities and contributions to the pension and OPEB plans made during the current year and subsequent to the net pension asset/liability and net OPEB liability measurement date. For more detailed information on these items, reference the related notes.

In addition to liabilities, the statement of financial position will sometimes report a separate section for deferred inflows of resources. This separate financial statement element, deferred inflows of resources, represents an acquisition of net position that applies to a future period(s) and so will not be recognized as an inflow of resources (revenue) until that time. The Authority has one type of item that qualifies for reporting in this category. Certain items related to the measurement of the net pension asset/liability and net OPEB liabilities are reported as deferred inflows of resources. For more detailed information on these items, reference the related notes.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES: (CONTINUED)

L. Prepaid Expenses

Certain payments to vendors represent costs applicable to future accounting periods and are recorded as prepaid items in both the government-wide and fund financial statements. The cost of prepaid items is recorded as expenditures/expenses when consumed rather than when purchased.

M. Pensions

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the Authority's Retirement Plan and the additions to/deductions from the Authority's Retirement Plan's net fiduciary position have been determined on the same basis as they were reported by the Virginia Retirement System (VRS). For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

N. Other Postemployment Benefits (OPEB)

Group Life Insurance

The Virginia Retirement System (VRS) Group Life Insurance (GLI) Program provides coverage to state employees, teachers, and employees of participating political subdivisions. The GLI Program was established pursuant to §51.1-500 et seq. of the Code of Virginia, as amended, and which provides the authority under which benefit terms are established or may be amended. The GLI Program is a defined benefit plan that provides a basic group life insurance benefit for employees of participating employers. For purposes of measuring the net GLI Program OPEB liability, deferred outflows of resources and deferred inflows of resources related to the GLI OPEB, and GLI OPEB expense, information about the fiduciary net position of the VRS GLI Program OPEB and the additions to/deductions from the VRS GLI OPEB's net fiduciary position have been determined on the same basis as they were reported by VRS. In addition, benefit payments are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

O. Net Position Flow Assumption

Sometimes the Authority will fund outlays for a particular purpose from both restricted (e.g., restricted bond) and unrestricted resources. In order to calculate the amounts to report as restricted - net position and unrestricted - net position, a flow assumption must be made about the order in which the resources are considered to be applied. It is the Authority's policy to consider restricted - net position to have been depleted before unrestricted - net position is applied.

P. Financial Statement Presentation

Certain amounts in the financial statements of the prior fiscal year have been reclassified to conform to the current financial statement presentation.

NOTE 3 – DEPOSITS AND INVESTMENTS:

Deposits

Deposits with banks are covered by the Federal Deposit Insurance Corporation (FDIC) and collateralized in accordance with the Virginia Security for Public Deposits Act (the "Act") Section 2.2-4400 et. seq. of the Code of Virginia. Under the Act, banks and savings institutions holding public deposits in excess of the amount insured by the FDIC must pledge collateral to the Commonwealth of Virginia Treasury Board. Financial Institutions may choose between two collateralization methodologies and depending upon that choice, will pledge collateral that ranges in the amounts from 50% to 130% of excess deposits. Accordingly, all deposits are considered fully collateralized.

Investments

Statutes authorize the Authority to invest in obligations of the United States or agencies thereof, obligations of the Commonwealth of Virginia or political subdivisions thereof, obligations of the International Bank for Reconstruction and Development (World Bank), the Asian Development Bank, the African Development Bank, "prime quality" commercial paper and certain corporate notes, banker's acceptances, repurchase agreements and the State Treasurer's Local Government Investment Pool (LGIP).

Concentration of credit risk

The Authority's Policy establishes limitations on portfolio composition by issuer in order to control concentration of credit risk. No more than 5% of the Authority's portfolio will be invested in the securities of any one issuer with the exception of: (1) the U.S. government or agencies thereof, (2) fully insured/collateralized certificates of deposit or repurchase agreements that are collateralized by the U.S. government or agencies thereof, and (3) mutual funds whereby the portfolio is limited to U.S. government or agency securities.

As of June 30, 2018, the Authority held no investments.

NOTE 4 – CAPITAL ASSETS:

A summary of the Authority's capital assets and the changes therein for the year ended June 30, 2018, follows:

	Beginning Balance	Increases	Decreases	Ending Balance
Capital assets not being depreciated:				
Land and land rights	$ 92,968	$ -	$ -	$ 92,968
Construction in progress	1,907,962	939,760	257,000	2,590,722
Total capital assets not being depreciated	$ 2,000,930	$ 939,760	$ 257,000	$ 2,683,690
Other capital assets, being depreciated:				
Sewer system	$ 33,352,033	$ 257,000	$ -	$ 33,609,033
Plant machinery	7,408,956	511,921	-	7,920,877
Equipment and vehicles	2,974,265	65,358	2,266	3,037,357
Total other capital assets being depreciated	$ 43,735,254	$ 834,279	$ 2,266	$ 44,567,267
Accumulated depreciation:				
Sewer system	$ (19,037,179)	$ (711,855)	$ -	$ (19,749,034)
Plant machinery	(6,076,029)	(172,764)	-	(6,248,793)
Equipment and vehicles	(2,367,641)	(127,424)	(2,001)	(2,493,064)
Total accumulated depreciation	$ (27,480,849)	$ (1,012,043)	$ (2,001)	$ (28,490,891)
Other capital assets being depreciated, net	$ 16,254,405	$ (177,764)	$ 265	$ 16,076,376
Capital assets, net	$ 18,255,335	$ 761,996	$ 257,265	$ 18,760,066

Depreciation expense for the fiscal year totaled $1,012,043.

NOTE 5 – PENSION PLAN:

Plan Description

All full-time, salaried permanent employees of the Authority are automatically covered by a VRS Retirement Plan upon employment. This is an agent multiple-employer plan administered by the Virginia Retirement System (the System) along with plans for other employer groups in the Commonwealth of Virginia. Members earn one month of service credit for each month they are employed and for which they and their employer pay contributions to VRS. Members are eligible to purchase prior service, based on specific criteria as defined in the Code of Virginia, as amended. Eligible prior service that may be purchased includes prior public service, active military service, certain periods of leave, and previously refunded service.

The System administers three different benefit structures for covered employees – Plan 1, Plan 2, and Hybrid. Each of these benefit structures has different eligibility criteria. The specific information for each plan and the eligibility for covered groups within each plan are set out in the table below:

RETIREMENT PLAN PROVISIONS		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
About Plan 1 Plan 1 is a defined benefit plan. The retirement benefit is based on a member's age, creditable service and average final compensation at retirement using a formula.	**About Plan 2** Plan 2 is a defined benefit plan. The retirement benefit is based on a member's age, creditable service and average final compensation at retirement using a formula.	**About the Hybrid Retirement Plan** The Hybrid Retirement Plan combines the features of a defined benefit plan and a defined contribution plan. • The defined benefit is based on a member's age, creditable service and average final compensation at retirement using a formula. • The benefit from the defined contribution component of the plan depends on the member and employer contributions made to the plan and the investment performance of those contributions.

NOTE 5 – PENSION PLAN: (CONTINUED)

Plan Description (Continued)

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
About Plan 1 (Cont.)	**About Plan 2 (Cont.)**	**About the Hybrid Retirement Plan (Cont.)** • In addition to the monthly benefit payment payable from the defined benefit plan at retirement, a member may start receiving distributions from the balance in the defined contribution account, reflecting the contributions, investment gains or losses, and any required fees.
Eligible Members Employees are in Plan 1 if their membership date is before July 1, 2010, and they were vested as of January 1, 2013 and they have not taken a refund. **Hybrid Opt-In Election** VRS non-hazardous duty covered Plan 1 members were allowed to make an irrevocable decision to opt into the Hybrid Retirement Plan during a special election window held January 1 through April 30, 2014. The Hybrid Retirement Plan's effective date for eligible Plan 1 members who opted in was July 1, 2014. If eligible deferred members returned to work during the election window, they were also eligible to opt into the Hybrid Retirement Plan.	**Eligible Members** Employees are in Plan 2 if their membership date is on or after July 1, 2010, or their membership date is before July 1, 2010, and they were not vested as of January 1, 2013. **Hybrid Opt-In Election** Eligible Plan 2 members were allowed to make an irrevocable decision to opt into the Hybrid Retirement Plan during a special election window held January 1 through April 30, 2014. The Hybrid Retirement Plan's effective date for eligible Plan 2 members who opted in was July 1, 2014. If eligible deferred members returned to work during the election window, they were also eligible to opt into the Hybrid Retirement Plan.	**Eligible Members** Employees are in the Hybrid Retirement Plan if their membership date is on or after January 1, 2014. This includes: • Political subdivision employees* • Members in Plan 1 or Plan 2 who elected to opt into the plan during the election window held January 1-April 30, 2014; the plan's effective date for opt-in members was July 1, 2014. ***Non-Eligible Members** Some employees are not eligible to participate in the Hybrid Retirement Plan. They include: • Political subdivision employees who are covered by enhanced benefits for hazardous duty employees.

NOTE 5 – PENSION PLAN: (CONTINUED)

Plan Description (Continued)

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
Hybrid Opt-In Election (Cont.) Members who were eligible for an optional retirement plan (ORP) and had prior service under Plan 1 were not eligible to elect the Hybrid Retirement Plan and remain as Plan 1 or ORP.	**Hybrid Opt-In Election (Cont.)** Members who were eligible for an optional retirement plan (ORP) and have prior service under Plan 2 were not eligible to elect the Hybrid Retirement Plan and remain as Plan 2 or ORP.	***Non-Eligible Members (Cont.)** Those employees eligible for an optional retirement plan (ORP) must elect the ORP plan or the Hybrid Retirement Plan. If these members have prior service under Plan 1 or Plan 2, they are not eligible to elect the Hybrid Retirement Plan and must select Plan 1 or Plan 2 (as applicable) or ORP.
Retirement Contributions Employees contribute 5% of their compensation each month to their member contribution account through a pre-tax salary reduction. Member contributions are tax-deferred until they are withdrawn as part of a retirement benefit or as a refund. The employer makes a separate actuarially determined contribution to VRS for all covered employees. VRS invests both member and employer contributions to provide funding for the future benefit payment.	**Retirement Contributions** Employees contribute 5% of their compensation each month to their member contribution account through a pre-tax salary reduction.	**Retirement Contributions** A member's retirement benefit is funded through mandatory and voluntary contributions made by the member and the employer to both the defined benefit and the defined contribution components of the plan. Mandatory contributions are based on a percentage of the employee's creditable compensation and are required from both the member and the employer. Additionally, members may choose to make voluntary contributions to the defined contribution component of the plan, and the employer is required to match those voluntary contributions according to specified percentages.

NOTE 5 – PENSION PLAN: (CONTINUED)

Plan Description (Continued)

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
Creditable Service Creditable service includes active service. Members earn creditable service for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional creditable service the member was granted. A member's total creditable service is one of the factors used to determine their eligibility for retirement and to calculate their retirement benefit. It also may count toward eligibility for the health insurance credit in retirement, if the employer offers the health insurance credit.	**Creditable Service** Same as Plan 1.	**Creditable Service** **Defined Benefit Component:** Under the defined benefit component of the plan, creditable service includes active service. Members earn creditable service for each month they are employed in a covered position. It also may include credit for prior service the member has purchased or additional creditable service the member was granted. A member's total creditable service is one of the factors used to determine their eligibility for retirement and to calculate their retirement benefit. It also may count toward eligibility for the health insurance credit in retirement, if the employer offers the health insurance credit. **Defined Contribution Component:** Under the defined contribution component, creditable service is used to determine vesting for the employer contribution portion of the plan.

NOTE 5 – PENSION PLAN: (CONTINUED)

Plan Description (Continued)

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
Vesting Vesting is the minimum length of service a member needs to qualify for a future retirement benefit. Members become vested when they have at least five years (60 months) of creditable service. Vesting means members are eligible to qualify for retirement if they meet the age and service requirements for their plan. Members also must be vested to receive a full refund of their member contribution account balance if they leave employment and request a refund. Members are always 100% vested in the contributions that they make.	**Vesting** Same as Plan 1.	**Vesting** **<u>Defined Benefit Component:</u>** Defined benefit vesting is the minimum length of service a member needs to qualify for a future retirement benefit. Members are vested under the defined benefit component of the Hybrid Retirement Plan when they reach five years (60 months) of creditable service. Plan 1 or Plan 2 members with at least five years (60 months) of creditable service who opted into the Hybrid Retirement Plan remain vested in the defined benefit component. **<u>Defined Contribution Component:</u>** Defined contribution vesting refers to the minimum length of service a member needs to be eligible to withdraw the employer contributions from the defined contribution component of the plan. Members are always 100% vested in the contributions that they make.

NOTE 5 – PENSION PLAN: (CONTINUED)

Plan Description (Continued)

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
Vesting (Cont.)	**Vesting (Cont.)**	**Vesting (Cont.)** **Defined Contribution Component: (Cont.)** Upon retirement or leaving covered employment, a member is eligible to withdraw a percentage of employer contributions to the defined contribution component of the plan, based on service. • After two years, a member is 50% vested and may withdraw 50% of employer contributions. • After three years, a member is 75% vested and may withdraw 75% of employer contributions. • After four or more years, a member is 100% vested and may withdraw 100% of employer contributions. Distribution is not required by law until age 70½.
Calculating the Benefit The Basic Benefit is calculated based on a formula using the member's average final compensation, a retirement multiplier and total service credit at retirement. It is one of the benefit payout options available to a member at retirement.	**Calculating the Benefit** See definition under Plan 1.	**Calculating the Benefit** **Defined Benefit Component:** See definition under Plan 1.

NOTE 5 – PENSION PLAN: (CONTINUED)

Plan Description (Continued)

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
Calculating the Benefit (Cont.) An early retirement reduction factor is applied to the Basic Benefit if the member retires with a reduced retirement benefit or selects a benefit payout option other than the Basic Benefit.	**Calculating the Benefit (Cont.)**	**Calculating the Benefit (Cont.)** **<u>Defined Contribution Component:</u>** The benefit is based on contributions made by the member and any matching contributions made by the employer, plus net investment earnings on those contributions.
Average Final Compensation A member's average final compensation is the average of the 36 consecutive months of highest compensation as a covered employee.	**Average Final Compensation** A member's average final compensation is the average of their 60 consecutive months of highest compensation as a covered employee.	**Average Final Compensation** Same as Plan 2. It is used in the retirement formula for the defined benefit component of the plan.
Service Retirement Multiplier **VRS:** The retirement multiplier is a factor used in the formula to determine a final retirement benefit. The retirement multiplier for non-hazardous duty members is 1.70%. **Sheriffs and regional jail superintendents:** The retirement multiplier for sheriffs and regional jail superintendents is 1.85%. **Political subdivision hazardous duty employees:** The retirement multiplier of eligible political subdivision hazardous duty employees other than sheriffs and regional jail superintendents is 1.70% or 1.85% as elected by the employer.	**Service Retirement Multiplier** **VRS:** Same as Plan 1 for service earned, purchased or granted prior to January 1, 2013. For non-hazardous duty members the retirement multiplier is 1.65% for creditable service earned, purchased or granted on or after January 1, 2013. **Sheriffs and regional jail superintendents:** Same as Plan 1. **Political subdivision hazardous duty employees:** Same as Plan 1.	**Service Retirement Multiplier** **<u>Defined Benefit Component:</u>** **VRS:** The retirement multiplier for the defined benefit component is 1.00%. For members who opted into the Hybrid Retirement Plan from Plan 1 or Plan 2, the applicable multipliers for those plans will be used to calculate the retirement benefit for service credited in those plans. **Sheriffs and regional jail superintendents:** Not applicable. **Political subdivision hazardous duty employees:** Not applicable. **<u>Defined Contribution Component:</u>** Not applicable.

NOTE 5 – PENSION PLAN: (CONTINUED)

Plan Description (Continued)

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
Normal Retirement Age **VRS:** Age 65. **Political subdivisions hazardous duty employees:** Age 60.	**Normal Retirement Age** **VRS:** Normal Social Security retirement age. **Political subdivisions hazardous duty employees:** Same as Plan 1.	**Normal Retirement Age** **Defined Benefit Component:** **VRS:** Same as Plan 2. **Political subdivisions hazardous duty employees:** Not applicable. **Defined Contribution Component:** Members are eligible to receive distributions upon leaving employment, subject to restrictions.
Earliest Unreduced Retirement Eligibility **VRS:** Age 65 with at least five years (60 months) of creditable service or at age 50 with at least 30 years of creditable service. **Political subdivisions hazardous duty employees:** Age 60 with at least five years of creditable service or age 50 with at least 25 years of creditable service.	**Earliest Unreduced Retirement Eligibility** **VRS:** Normal Social Security retirement age with at least five years (60 months) of creditable service or when their age and service equal 90. **Political subdivisions hazardous duty employees:** Same as Plan 1.	**Earliest Unreduced Retirement Eligibility** **Defined Benefit Component:** **VRS:** Normal Social Security retirement age and have at least five years (60 months) of creditable service or when their age and service equal 90. **Political subdivisions hazardous duty employees:** Not applicable. **Defined Contribution Component:** Members are eligible to receive distributions upon leaving employment, subject to restrictions.
Earliest Reduced Retirement Eligibility **VRS:** Age 55 with at least five years (60 months) of creditable service or age 50 with at least 10 years of creditable service.	**Earliest Reduced Retirement Eligibility** **VRS:** Age 60 with at least five years (60 months) of creditable service.	**Earliest Reduced Retirement Eligibility** **Defined Benefit Component:** **VRS:** Age 60 with at least five years (60 months) of creditable service.

NOTE 5 – PENSION PLAN: (CONTINUED)

Plan Description (Continued)

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
Earliest Reduced Retirement Eligibility (Cont.) **Political subdivisions hazardous duty employees:** 50 with at least five years of creditable service.	**Earliest Reduced Retirement Eligibility (Cont.)** **Political subdivisions hazardous duty employees:** Same as Plan 1.	**Earliest Reduced Retirement Eligibility (Cont.)** **Political subdivisions hazardous duty employees:** Not applicable. **Defined Contribution Component:** Members are eligible to receive distributions upon leaving employment, subject to restrictions.
Cost-of-Living Adjustment (COLA) in Retirement The Cost-of-Living Adjustment (COLA) matches the first 3% increase in the Consumer Price Index for all Urban Consumers (CPI-U) and half of any additional increase (up to 4%) up to a maximum COLA of 5%. **Eligibility:** For members who retire with an unreduced benefit or with a reduced benefit with at least 20 years of creditable service, the COLA will go into effect on July 1 after one full calendar year from the retirement date. For members who retire with a reduced benefit and who have less than 20 years of creditable service, the COLA will go into effect on July 1 after one calendar year following the unreduced retirement eligibility date.	**Cost-of-Living Adjustment (COLA) in Retirement** The Cost-of-Living Adjustment (COLA) matches the first 2% increase in the CPI-U and half of any additional increase (up to 2%), for a maximum COLA of 3%. **Eligibility:** Same as Plan 1.	**Cost-of-Living Adjustment (COLA) in Retirement** **Defined Benefit Component:** Same as Plan 2. **Defined Contribution Component:** Not applicable. **Eligibility:** Same as Plan 1 and Plan 2.

NOTE 5 – PENSION PLAN: (CONTINUED)

Plan Description (Continued)

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
Cost-of-Living Adjustment (COLA) in Retirement (Cont.) **Exceptions to COLA Effective Dates:** The COLA is effective July 1 following one full calendar year (January 1 to December 31) under any of the following circumstances: • The member is within five years of qualifying for an unreduced retirement benefit as of January 1, 2013. • The member retires on disability. • The member retires directly from short-term or long-term disability under the Virginia Sickness and Disability Program (VSDP). • The member is involuntarily separated from employment for causes other than job performance or misconduct and is eligible to retire under the Workforce Transition Act or the Transitional Benefits Program. • The member dies in service and the member's survivor or beneficiary is eligible for a monthly death-in-service benefit. The COLA will go into effect on July 1 following one full calendar year (January 1 to December 31) from the date the monthly benefit begins.	**Cost-of-Living Adjustment (COLA) in Retirement (Cont.)** **Exceptions to COLA Effective Dates:** Same as Plan 1.	**Cost-of-Living Adjustment (COLA) in Retirement (Cont.)** **Exceptions to COLA Effective Dates:** Same as Plan 1 and Plan 2.

NOTE 5 – PENSION PLAN: (CONTINUED)

Plan Description (Continued)

RETIREMENT PLAN PROVISIONS (CONTINUED)		
PLAN 1	**PLAN 2**	**HYBRID RETIREMENT PLAN**
Disability Coverage Members who are eligible to be considered for disability retirement and retire on disability, the retirement multiplier is 1.7% on all service, regardless of when it was earned, purchased or granted.	**Disability Coverage** Members who are eligible to be considered for disability retirement and retire on disability, the retirement multiplier is 1.65% on all service, regardless of when it was earned, purchased or granted.	**Disability Coverage** Employees of political subdivisions (including Plan 1 and Plan 2 opt-ins) participate in the Virginia Local Disability Program (VLDP) unless their local governing body provides an employer-paid comparable program for its members. Hybrid members (including Plan 1 and Plan 2 opt-ins) covered under VLDP are subject to a one-year waiting period before becoming eligible for non-work-related disability benefits.
Purchase of Prior Service Members may be eligible to purchase service from previous public employment, active duty military service, an eligible period of leave or VRS refunded service as creditable service in their plan. Prior creditable service counts toward vesting, eligibility for retirement and the health insurance credit. Only active members are eligible to purchase prior service. When buying service, members must purchase their most recent period of service first. Members also may be eligible to purchase periods of leave without pay.	**Purchase of Prior Service** Same as Plan 1.	**Purchase of Prior Service** **Defined Benefit Component:** Same as Plan 1, with the following exceptions: • Hybrid Retirement Plan members are ineligible for ported service. **Defined Contribution Component:** Not applicable.

Pension Plan Data

Information about the VRS Political Subdivision Retirement Plan is also available in the separately issued VRS 2017 Comprehensive Annual Financial Report (CAFR). A copy of the 2017 VRS CAFR may be downloaded from the VRS website at http://www.varetire.org/Pdf/Publications/2017-annual-report.pdf, or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA 23218-2500.

NOTE 5 – PENSION PLAN: (CONTINUED)

Employees Covered by Benefit Terms

As of the June 30, 2016 actuarial valuation, the following employees were covered by the benefit terms of the pension plan:

	Number
Inactive members or their beneficiaries currently receiving benefits	18
Inactive members:	
Vested inactive members	3
Non-vested inactive members	14
Inactive members active elsewhere in VRS	9
Total inactive members	26
Active members	32
Total covered employees	76

Contributions

The contribution requirement for active employees is governed by §51.1-145 of the Code of Virginia, as amended, but may be impacted as a result of funding options provided to political subdivisions by the Virginia General Assembly. Employees are required to contribute 5.00% of their compensation toward their retirement. Prior to July 1, 2012, all or part of the 5.00% member contribution may have been assumed by the employer. Beginning July 1, 2012 new employees were required to pay the 5% member contribution. In addition, for existing employees, employers were required to begin making the employee pay the 5.00% member contribution. This could be phased in over a period of up to 5 years and the employer is required to provide a salary increase equal to the amount of the increase in the employee-paid member contribution.

The Authority's contractually required employer contribution rate for the year ended June 30, 2018 was 7.10% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2015.

This rate, when combined with employee contributions, was expected to finance the costs of benefits earned by employees during the year, with an additional amount to finance any unfunded accrued liability. Contributions to the pension plan from the Authority were $119,474 and $113,903 for the years ended June 30, 2018 and June 30, 2017, respectively.

Net Pension (Asset) Liability

The Authority's net pension (asset) liability was measured as of June 30, 2017. The total pension liability used to calculate the net pension (asset) liability was determined by an actuarial valuation performed as of June 30, 2016, using updated actuarial assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2017.

NOTE 5 – PENSION PLAN: (CONTINUED)

Actuarial Assumptions – General Employees

The total pension liability for General Employees in the Authority's Retirement Plan was based on an actuarial valuation as of June 30, 2016, using the Entry Age Normal actuarial cost method and the following assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2017.

Inflation	2.5%
Salary increases, including inflation	3.5% – 5.35%
Investment rate of return	7.0%, net of pension plan investment expenses, including inflation*

* Administrative expenses as a percent of the market value of assets for the last experience study were found to be approximately 0.06% of the market assets for all of the VRS plans. This would provide an assumed investment return rate for GASB purposes of slightly more than the assumed 7.0%. However, since the difference was minimal, and a more conservative 7.0% investment return assumption provided a projected plan net position that exceeded the projected benefit payments, the long-term expected rate of return on investments was assumed to be 7.0% to simplify preparation of pension liabilities.

Mortality rates:

Largest 10 – Non-Hazardous Duty: 20% of deaths are assumed to be service related

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates at ages 81 and older projected with scale BB to 2020; males 95% of rates; females 105% of rates.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with scale BB to 2020; males set forward 3 years; females 1.0% increase compounded from ages 70 to 90.

Post-Disablement:

RP-2014 Disability Mortality Rates projected with scale BB to 2020; males set forward 2 years, 110% of rates; females 125% of rates.

All Others (Non 10 Largest) – Non-Hazardous Duty: 15% of deaths are assumed to be service related

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates at ages 81 and older projected with scale BB to 2020; males 95% of rates; females 105% of rates.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with scale BB to 2020; males set forward 3 years; females 1.0% increase compounded from ages 70 to 90.

Post-Disablement:

RP-2014 Disability Mortality Rates projected with scale BB to 2020; males set forward 2 years, 110% of rates; females 125% of rates.

NOTE 5 – PENSION PLAN: (CONTINUED)

Actuarial Assumptions – General Employees (Continued)

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

Largest 10 – Non-Hazardous Duty:

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement from 70 to 75
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	Lowered rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 14% to 20%

All Others (Non 10 Largest) – Non-Hazardous Duty:

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement from 70 to 75
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	Lowered rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 14% to 15%

NOTE 5 – PENSION PLAN: (CONTINUED)

Long-Term Expected Rate of Return

The long-term expected rate of return on pension System investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of pension System investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimate of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Class (Strategy)	Target Allocation	Arithmetic Long-term Expected Rate of Return	Weighted Average Long-term Expected Rate of Return
Public Equity	40.00%	4.54%	1.82%
Fixed Income	15.00%	0.69%	0.10%
Credit Strategies	15.00%	3.96%	0.59%
Real Assets	15.00%	5.76%	0.86%
Private Equity	15.00%	9.53%	1.43%
Total	100.00%		4.80%
		Inflation	2.50%
		*Expected arithmetic nominal return	7.30%

* The above allocation provides a one-year return of 7.30%. However, one-year returns do not take into account the volatility present in each of the asset classes. In setting the long-term expected return for the system, stochastic projections are employed to model future returns under various economic conditions. The results provide a range of returns over various time periods that ultimately provide a median return of 6.83%, including expected inflation of 2.50%.

Discount Rate

The discount rate used to measure the total pension liability was 7.00%. The projection of cash flows used to determine the discount rate assumed that System member contributions will be made per the VRS Statutes and the employer contributions will be made in accordance with the VRS funding policy at rates equal to the difference between actuarially determined contribution rates adopted by the VRS Board of Trustees and the member rate. Through the fiscal year ending June 30, 2019, the rate contributed by the employer for the South Central Wastewater Authority Retirement Plan will be subject to the portion of the VRS Board-certified rates that are funded by the Virginia General Assembly. From July 1, 2019 on, participating employers are assumed to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore the long-term expected rate of return was applied to all periods of projected benefit payments to determine the total pension liability.

NOTE 5 – PENSION PLAN: (CONTINUED)

Changes in Net Pension Liability (Asset)

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (Asset) (a) - (b)
Balances at June 30, 2016	$ 4,020,249	$ 3,524,954	$ 495,295
Changes for the year:			
Service cost	$ 162,869	$ -	$ 162,869
Interest	276,711	-	276,711
Changes in assumptions	(108,626)	-	(108,626)
Differences between expected and actual experience	(91,312)	-	(91,312)
Contributions - employer	-	116,205	(116,205)
Contributions - employee	-	80,016	(80,016)
Net investment income	-	436,493	(436,493)
Benefit payments, including refunds of employee contributions	(134,457)	(134,457)	-
Administrative expenses	-	(2,415)	2,415
Other changes	-	(393)	393
Net changes	$ 105,185	$ 495,449	$ (390,264)
Balances at June 30, 2017	$ 4,125,434	$ 4,020,403	$ 105,031

Sensitivity of the Net Pension Liability (Asset) to Changes in the Discount Rate

The following presents the net pension liability (asset) of the Authority using the discount rate of 7.00%, as well as what the Authority's net pension liability (asset) would be if it were calculated using a discount rate that is one percentage point lower (6.00%) or one percentage point higher (8.00%) than the current rate:

	Rate		
	(6.00%)	(7.00%)	(8.00%)
South Central Wastewater Authority Net Pension Liability (Asset)	$ 646,731	$ 105,031	$ (344,274)

NOTE 5 – PENSION PLAN: (CONTINUED)

Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

For the year ended June 30, 2018, the Authority recognized pension expense of ($70,571). At June 30, 2018, the Authority reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ -	$ 166,457
Change of assumptions	-	76,200
Net difference between projected and actual earnings on pension plan investments	-	61,277
Employer contributions subsequent to the measurement date	119,474	-
Total	$ 119,474	$ 303,934

$119,474 reported as deferred outflows of resources related to pensions resulting from the Authority's contributions subsequent to the measurement date will be recognized as a reduction of the Net Pension Liability (Asset) in the year ended June 30, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense in future periods as follows:

Year ended June 30	
2019	$ (161,865)
2020	(81,586)
2021	(22,948)
2022	(37,535)
2023	-
Thereafter	-

NOTE 6 – OTHER POSTEMPLOYMENT BENEFITS:

Health Insurance

The Authority implemented GASB Statement Number 75 *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* for the fiscal year ending June 30, 2018. This Statement replaces the requirements of Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*.

A. Plan Description

In addition to the pension benefits described in Note 5, the Authority administers a single-employer defined benefit healthcare plan. The plan provides postemployment health care benefits to all eligible permanent employees who meet the requirements under the Authority's pension plans. The plan does not issue a publicly available financial report.

B. Benefits Provided

Participants who are eligible to retire from the VRS pension plan are allowed access to the plan until they reach age 65. Retirees pay the blended (employees and retirees) published rate, however as they are older than the typical employee (and thus more expensive) there is a cost to this right to purchase insurance at the blended rate.

VRS retirement eligibility is age 50 with 10 years of service or age 55 with 5 years of service for employees hired prior to July 1, 2010 who were vested in the plan prior to July 1, 2013. VRS retirement eligibility is the earlier of age 60 with 5 years of service or 90 combined age and service points for other employees.

C. Plan Membership

At June 30, 2017 (measurement date), the following employees were covered by the benefit terms:

Total active employees with coverage	34
Total retirees without coverage	12
Total	46

Contributions

The Authority does not pre-fund benefits; therefore, no assets are accumulated in a trust fund. The current funding policy is to pay benefits directly from general assets on a pay-as-you-go basis. The funding requirements are established and may be amended by the Authority. The amount paid by the Authority for OPEB as the benefits came due during the year ended June 30, 2018 was $2,600.

Net/Total OPEB Liability

The Authority's total OPEB liability was measured as of June 30, 2017. The total OPEB liability was determined by an actuarial valuation as of July 1, 2017.

NOTE 6 – OTHER POSTEMPLOYMENT BENEFITS: (CONTINUED)

Health Insurance: (Continued)

Actuarial Assumptions

The total OPEB liability in the July 1, 2017 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement, unless otherwise specified:

Inflation	2.50% per year as of June 30, 2017
Salary Increases	3.5% -5.35% including inflation
Discount Rate	2.85% for accounting and funding disclosures as of July 1, 2016
	3.58% for accounting and funding disclosures as of June 30, 2017
Investment Rate of Return	7.0% as of June 30, 2017

Discount Rate

The discount rate used to determine the liabilities under GASB 75 is based on an index rate for 20-year tax exempt general obligation municipal bonds with an average rating of AA/Aa or higher. This rate was 2.85% as of June 30, 2016 and 3.58% as of June 30, 2017.

Changes in Total OPEB Liability

		Total OPEB Liability
Balances at June 30, 2017	$	128,387
Changes for the year:		
Service cost		12,090
Interest		3,622
Difference between expected and actual experience		-
Changes in assumptions		(6,890)
Contributions - employer		-
Net investment income		-
Benefit payments		(2,600)
Net changes		6,222
Balances at June 30, 2018	$	134,609

Sensitivity of the Total OPEB Liability to Changes in the Discount Rate

The following amounts present the total OPEB liability of the Authority, as well as what the total OPEB liability would be if it were calculated using a discount rate that is one percentage point lower (2.58%) or one percentage point higher (4.58%) than the current discount rate:

1% Decrease (2.58%)	Current Discount Rate (3.58%)	1% Increase (4.58%)
$ 146,821	$ 134,609	$ 123,202

NOTE 6 – OTHER POSTEMPLOYMENT BENEFITS PLAN: (CONTINUED)

Health Insurance: (Continued)

Sensitivity of the Total OPEB Liability to Changes in the Healthcare Cost Trend Rates

The following presents the total OPEB liability of the Authority, as well as what the total OPEB liability would be if it were calculated using healthcare cost trend rates that are one percentage point lower (3.20%) or one percentage point higher (5.20%) than the current healthcare cost trend rates:

1% Decrease (3.20%)	Healthcare Cost Trend Rates (4.20%)	1% Increase (5.20%)
$ 117,157	$ 134,609	$ 155,253

OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources

For the year ended June 30, 2018, the Authority recognized OPEB expense in the amount of $14,334. At June 30, 2018, the Authority reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Changes in assumptions	$ -	$ 5,512
Total	$ -	$ 5,512

Amounts reported as deferred outflows of resources and deferred inflows of resources will be recognized in OPEB expense in future reporting periods as follows:

Year Ended June 30	
2019	$ (1,378)
2020	(1,378)
2021	(1,378)
2022	(1,378)
2023	-
Thereafter	-

Additional disclosures on changes in net OPEB liability, related ratios, and employer contributions can be found in the required supplementary information following the notes to the financial statements.

NOTE 6 – OTHER POSTEMPLOYMENT BENEFITS PLAN: (CONTINUED)

Group Life Insurance

Plan Description

All full-time, salaried permanent employees of the state agencies, teachers, and employees of participating political subdivisions are automatically covered by the VRS Group Life Insurance Program upon employment. This is a cost-sharing multiple-employer plan administered by the Virginia Retirement System (the System), along with pensions and other OPEB plans, for public employer groups in the Commonwealth of Virginia.

In addition to the Basic Group Life Insurance benefit, members are also eligible to elect additional coverage for themselves as well as a spouse or dependent children through the Optional Group Life Insurance Program. For members who elect the optional group life insurance coverage, the insurer bills employers directly for the premiums. Employers deduct these premiums from members' paychecks and pay the premiums to the insurer. Since this is a separate and fully insured program, it is not included as part of the Group Life Insurance Program OPEB.

The specific information for Group Life Insurance Program OPEB, including eligibility, coverage and benefits is set out in the table below:

GROUP LIFE INSURANCE PROGRAM PLAN PROVISIONS
Eligible Employees The Group Life Insurance Program was established July 1, 1960, for state employees, teachers and employees of political subdivisions that elect the program, including the following employers that do not participate in VRS for retirement: • City of Richmond • City of Portsmouth • City of Roanoke • City of Norfolk • Roanoke City School Board Basic group life insurance coverage is automatic upon employment. Coverage ends for employees who leave their position before retirement eligibility or who take a refund of their member contributions and accrued interest.

NOTE 6 – OTHER POSTEMPLOYMENT BENEFITS PLAN: (CONTINUED)

Group Life Insurance: (Continued)

Plan Description (Continued)

GROUP LIFE INSURANCE PROGRAM PLAN PROVISIONS (CONTINUED)
Benefit Amounts The benefits payable under the Group Life Insurance Program have several components. • **Natural Death Benefit** - The natural death benefit is equal to the employee's covered compensation rounded to the next highest thousand and then doubled. • **Accidental Death Benefit** – The accidental death benefit is double the natural death benefit. • **Other Benefit Provisions** – In addition to the basic natural and accidental death benefits, the program provides additional benefits provided under specific circumstances. These include: o Accidental dismemberment benefit o Safety belt benefit o Repatriation benefit o Felonious assault benefit o Accelerated death benefit option
Reduction in Benefit Amounts The benefit amounts provided to members covered under the Group Life Insurance Program are subject to a reduction factor. The benefit amount reduces by 25% on January 1 following one calendar year of separation. The benefit amount reduces by an additional 25% on each subsequent January 1 until it reaches 25% of its original value.
Minimum Benefit Amount and Cost-of-Living Adjustment (COLA) For covered members with at least 30 years of creditable service, there is a minimum benefit payable under the Group Life Insurance Program. The minimum benefit was set at $8,000 by statute. The amount is increased annually based on the VRS Plan 2 cost-of-living adjustment and is currently $8,111.

Contributions

The contribution requirements for the Group Life Insurance Program are governed by §51.1-506 and §51.1-508 of the Code of Virginia, as amended, but may be impacted as a result of funding provided to state agencies and school divisions by the Virginia General Assembly. The total rate for the Group Life Insurance Program was 1.31% of covered employee compensation. This was allocated into an employee and an employer component using a 60/40 split. The employee component was 0.79% (1.31% x 60%) and the employer component was 0.52% (1.31% x 40%). Employers may elect to pay all or part of the employee contribution; however, the employer must pay all of the employer contribution. Each employer's contractually required employer contribution rate for the year ended June 30, 2018 was 0.52% of covered employee compensation. This rate was based on an actuarially determined rate from an actuarial valuation as of June 30, 2015. The actuarially determined rate, when combined with employee contributions, was expected to finance the costs of benefits payable during the year, with an additional amount to finance any unfunded accrued liability. Contributions to the Group Life Insurance Program from the entity were $9,059 and $8,442 for the years ended June 30, 2018 and June 30, 2017, respectively.

NOTE 6 – OTHER POSTEMPLOYMENT BENEFITS PLAN: (CONTINUED)

Group Life Insurance: (Continued)

GLI OPEB Liabilities, GLI OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to the Group Life Insurance Program OPEB

At June 30, 2018, the entity reported a liability of $132,000 for its proportionate share of the Net GLI OPEB Liability. The Net GLI OPEB Liability was measured as of June 30, 2017 and the total GLI OPEB liability used to calculate the Net GLI OPEB Liability was determined by an actuarial valuation as of that date. The covered employer's proportion of the Net GLI OPEB Liability was based on the covered employer's actuarially determined employer contributions to the Group Life Insurance Program for the year ended June 30, 2017 relative to the total of the actuarially determined employer contributions for all participating employers. At June 30, 2017, the participating employer's proportion was .00880% as compared to .00862% at June 30, 2016.

For the year ended June 30, 2018, the participating employer recognized GLI OPEB expense of $4,000. Since there was a change in proportionate share between measurement dates, a portion of the GLI OPEB expense was related to deferred amounts from changes in proportion.

At June 30, 2018, the employer reported deferred outflows of resources and deferred inflows of resources related to the GLI OPEB from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ -	$ 3,000
Net difference between projected and actual earnings on GLI OPEB program investments	-	5,000
Change in assumptions	-	7,000
Employer contributions subsequent to the measurement date	9,059	-
Total	$ 9,059	$ 15,000

NOTE 6 – OTHER POSTEMPLOYMENT BENEFITS PLAN: (CONTINUED)

Group Life Insurance: (Continued)

GLI OPEB Liabilities, GLI OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to the Group Life Insurance Program OPEB (Continued)

$9,059 reported as deferred outflows of resources related to the GLI OPEB resulting from the employer's contributions subsequent to the measurement date will be recognized as a reduction of the Net GLI OPEB Liability in the fiscal year ending June 30, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to the GLI OPEB will be recognized in the GLI OPEB expense in future reporting periods as follows:

Year Ended June 30		
2019	$	3,090
2020		3,090
2021		3,090
2022		3,090
2023		1,822
Thereafter		819

Actuarial Assumptions

The total GLI OPEB liability was based on an actuarial valuation as of June 30, 2016, using the Entry Age Normal actuarial cost method and the following assumptions, applied to all periods included in the measurement and rolled forward to the measurement date of June 30, 2017.

Inflation	2.5%
Salary increases, including inflation:	
General state employees	3.5% – 5.35%
Teachers	3.5%-5.95%
SPORS employees	3.5%-4.75%
VaLORS employees	3.5%-4.75%
JRS employees	4.5%
Locality - General employees	3.5%-5.35%
Locality - Hazardous Duty employees	3.5%-4.75%
Investment rate of return	7.0%, net of investment expenses, including inflation*

*Administrative expenses as a percent of the market value of assets for the last experience study were found to be approximately 0.06% of the market assets for all of the VRS plans. This would provide an assumed investment return rate for GASB purposes of slightly more than the assumed 7.0%. However, since the difference was minimal, and a more conservative 7.0% investment return assumption provided a projected plan net position that exceeded the projected benefit payments, the long-term expected rate of return on investments was assumed to be 7.0% to simplify preparation of OPEB liabilities.

NOTE 6 – OTHER POSTEMPLOYMENT BENEFITS PLAN: (CONTINUED)

Group Life Insurance: (Continued)

Actuarial Assumptions: (Continued)

Mortality Rates – General State Employees

Pre-Retirement:
RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with scale BB to 2020; males set back 1 year, 85% of rates; females set back 1 year.

Post-Retirement:
RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with scale BB to 2020; males set forward 1 year; females set back 1 year with 1.5% increase compounded from ages 70 to 85.

Post-Disablement:
RP-2014 Disability Mortality Rates projected with scale BB to 2020; males 115% of rates; females 130% of rates.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement from 70 to 75
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Increased rate from 14% to 25%

NOTE 6 – OTHER POSTEMPLOYMENT BENEFITS PLAN: (CONTINUED)

Group Life Insurance: (Continued)

Actuarial Assumptions: (Continued)

Mortality Rates – Teachers

Pre-Retirement:
RP-2014 White Collar Employee Rates to age 80, White Collar Healthy Annuitant Rates at ages 81 and older projected with scale BB to 2020.

Post-Retirement:
RP-2014 White Collar Employee Rates to age 49, White Collar Healthy Annuitant Rates at ages 50 and older projected with scale BB to 2020; males 1% increase compounded from ages 70 to 90; females set back 3 years with 1.5% increase compounded from ages 65 to 70 and 2.0% increase compounded from ages 75 to 90.

Post-Disablement:
RP-2014 Disability Mortality Rates projected with scale BB to 2020; 115% of rates for males and females.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement from 70 to 75
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change

NOTE 6 – OTHER POSTEMPLOYMENT BENEFITS PLAN: (CONTINUED)

Group Life Insurance: (Continued)

Actuarial Assumptions: (Continued)

Mortality Rates – SPORS Employees

Pre-Retirement:
RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with scale BB to 2020; males 90% of rates; females set forward 1 year.

Post-Retirement:
RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement:
RP-2014 Disability Mortality Rates projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience
Retirement Rates	Increased age 50 rates and lowered rates at older ages
Withdrawal Rates	Adjusted rates to better fit experience
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Increased rate from 60% to 85%

NOTE 6 – OTHER POSTEMPLOYMENT BENEFITS PLAN: (CONTINUED)

Group Life Insurance: (Continued)

Actuarial Assumptions: (Continued)

Mortality Rates – VaLORS Employees

Pre-Retirement:
RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with scale BB to 2020; males 90% of rates; females set forward 1 year.

Post-Retirement:
RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement:
RP-2014 Disability Mortality Rates projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience
Retirement Rates	Increased age 50 rates and lowered rates at older ages
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Decreased rate from 50% to 35%

NOTE 6 – OTHER POSTEMPLOYMENT BENEFITS PLAN: (CONTINUED)

Group Life Insurance: (Continued)

Actuarial Assumptions: (Continued)

Mortality Rates – JRS Employees

Pre-Retirement:
RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with scale BB to 2020; males set back 1 year, 85% of rates; females set back 1 year.

Post-Retirement:
RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with scale BB to 2020; males set forward 1 year; females set back 1 year with 1.5% compounding increase from ages 70 to 85.

Post-Disablement:
RP-2014 Disability Mortality Rates projected with scale BB to 2020; males 115% of rates; females 130% of rates.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Decreased rates at first retirement eligibility
Withdrawal Rates	No change
Disability Rates	Removed disability rates
Salary Scale	No change

NOTE 6 – OTHER POSTEMPLOYMENT BENEFITS PLAN: (CONTINUED)

Group Life Insurance: (Continued)

Actuarial Assumptions: (Continued)

Mortality Rates – Largest Ten Locality Employers – General Employees

Pre-Retirement:
RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with scale BB to 2020; males 95% of rates; females 105% of rates.

Post-Retirement:
RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with scale BB to 2020; males set forward 3 years; females 1.0% increase compounded from ages 70 to 90.

Post-Disablement:
RP-2014 Disability Mortality Rates projected with scale BB to 2020; males set forward 2 years, 110% of rates; females 125% of rates.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered retirement rates at older ages and extended final retirement age from 70 to 75
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Lowered disability rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 14% to 20%

NOTE 6 – OTHER POSTEMPLOYMENT BENEFITS PLAN: (CONTINUED)

Group Life Insurance: (Continued)

Actuarial Assumptions: (Continued)

Mortality Rates – Non-Largest Ten Locality Employers – General Employees

Pre-Retirement:
RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with scale BB to 2020; males 95% of rates; females 105% of rates.

Post-Retirement:
RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with scale BB to 2020; males set forward 3 years; females 1.0% increase compounded from ages 70 to 90.

Post-Disablement:
RP-2014 Disability Mortality Rates projected with scale BB to 2020; males set forward 2 years, 110% of rates; females 125% of rates.

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered retirement rates at older ages and extended final retirement age from 70 to 75
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Lowered disability rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 14% to 15%

Mortality Rates – Largest Ten Locality Employers – Hazardous Duty Employees

Pre-Retirement:
RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with scale BB to 2020; males 90% of rates; females set forward 1 year.

Post-Retirement:
RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement:
RP-2014 Disability Mortality Rates projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

NOTE 6 – OTHER POSTEMPLOYMENT BENEFITS PLAN: (CONTINUED)

Group Life Insurance: (Continued)

Actuarial Assumptions: (Continued)

Mortality Rates – Largest Ten Locality Employers – Hazardous Duty Employees: (Continued)

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered retirement rates at older ages
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Increased disability rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 60% to 70%

Mortality Rates – Non-Largest Ten Locality Employers – Hazardous Duty Employees

Pre-Retirement:

RP-2014 Employee Rates to age 80, Healthy Annuitant Rates to 81 and older projected with scale BB to 2020; males 90% of rates; females set forward 1 year.

Post-Retirement:

RP-2014 Employee Rates to age 49, Healthy Annuitant Rates at ages 50 and older projected with scale BB to 2020; males set forward 1 year with 1.0% increase compounded from ages 70 to 90; females set forward 3 years.

Post-Disablement:

RP-2014 Disability Mortality Rates projected with scale BB to 2020; males set forward 2 years; unisex using 100% male.

NOTE 6 – OTHER POSTEMPLOYMENT BENEFITS PLAN: (CONTINUED)

Group Life Insurance: (Continued)

Actuarial Assumptions: (Continued)

The actuarial assumptions used in the June 30, 2016 valuation were based on the results of an actuarial experience study for the period from July 1, 2012 through June 30, 2016. Changes to the actuarial assumptions as a result of the experience study are as follows:

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Increased age 50 rates and lowered rates at older ages
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Decreased rate from 60% to 45%

NET GLI OPEB Liability

The net OPEB liability (NOL) for the Group Life Insurance Program represents the program's total OPEB liability determined in accordance with GASB Statement No. 74, less the associated fiduciary net position. As of June 30, 2017, NOL amounts for the Group Life Insurance Program is as follows (amounts expressed in thousands):

		Group Life Insurance OPEB Program
Total GLI OPEB Liability	$	2,942,426
Plan Fiduciary Net Position		1,437,586
Employers' Net GLI OPEB Liability (Asset)	$	1,504,840
Plan Fiduciary Net Position as a Percentage of the Total GLI OPEB Liability		48.86%

The total GLI OPEB liability is calculated by the System's actuary, and each plan's fiduciary net position is reported in the System's financial statements. The net GLI OPEB liability is disclosed in accordance with the requirements of GASB Statement No. 74 in the System's notes to the financial statements and required supplementary information.

NOTE 6 – OTHER POSTEMPLOYMENT BENEFITS PLAN: (CONTINUED)

Group Life Insurance: (Continued)

Long-Term Expected Rate of Return

The long-term expected rate of return on the System's investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected returns, net of System's investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimate of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Class (Strategy)	Target Allocation	Arithmetic Long-term Expected Rate of Return	Weighted Average Long-term Expected Rate of Return
Public Equity	40.00%	4.54%	1.82%
Fixed Income	15.00%	0.69%	0.10%
Credit Strategies	15.00%	3.96%	0.59%
Real Assets	15.00%	5.76%	0.86%
Private Equity	15.00%	9.53%	1.43%
Total	100.00%		4.80%
		Inflation	2.50%
		*Expected arithmetic nominal return	7.30%

*The above allocation provides a one-year return of 7.30%. However, one-year returns do not take into account the volatility present in each of the asset classes. In setting the long-term expected return for the system, stochastic projections are employed to model future returns under various economic conditions. The results provide a range of returns over various time periods that ultimately provide a median return of 6.83%, including expected inflation of 2.50%.

Discount Rate

The discount rate used to measure the total GLI OPEB liability was 7.00%. The projection of cash flows used to determine the discount rate assumed that member contributions will be made per the VRS guidance and the employer contributions will be made in accordance with the VRS funding policy at rates equal to the difference between actuarially determined contribution rates adopted by the VRS Board of Trustees and the member rate. Through the fiscal year ending June 30, 2019, the rate contributed by the entity for the GLI OPEB will be subject to the portion of the VRS Board-certified rates that are funded by the Virginia General Assembly. From July 1, 2019 on, employers are assumed to contribute 100% of the actuarially determined contribution rates. Based on those assumptions, the GLI OPEB's fiduciary net position was projected to be available to make all projected future benefit payments of eligible employees. Therefore the long-term expected rate of return was applied to all periods of projected benefit payments to determine the total GLI OPEB liability.

NOTE 6 – OTHER POSTEMPLOYMENT BENEFITS PLAN: (CONTINUED)

Group Life Insurance: (Continued)

Sensitivity of the Employer's Proportionate Share of the Net GLI OPEB Liability to Changes in the Discount Rate

The follow presents the employer's proportionate share of the net GLI OPEB liability using the discount rate of 7.00%, as well as what the employer's proportionate share of the net GLI OPEB liability would be if it were calculated using a discount rate that is one percentage point lower (6.00%) or one percentage point higher (8.00%) than the current rate:

		Rate	
	1% Decrease (6.00%)	Current Discount (7.00%)	1% Increase (8.00%)
Authority's proportionate share of the Group Life Insurance Program Net OPEB Liability	$ 171,000	$ 132,000	$ 100,000

Group Life Insurance Program Fiduciary Net Position

Detailed information about the Group Life Insurance Program's Fiduciary Net Position is available in the separately issued VRS 2017 Comprehensive Annual Financial Report (CAFR). A copy of the 2017 VRS CAFR may be downloaded from the VRS website at http://www.varetire.org/Pdf/Publications/2017-annual-report.pdf, or by writing to the System's Chief Financial Officer at P.O. Box 2500, Richmond, VA, 23218-2500.

NOTE 7 – DEFERRED COMPENSATION PLAN:

Eligible employees of the Authority may participate in a deferred compensation plan in accordance with Internal Revenue Code section 457. The plan permits participants to defer a portion of their salary until future years. The deferred compensation is not available to employees until termination of employment, retirement, death or an unforeseen emergency. The Authority has no fiduciary responsibility for the plan, has no liability for losses incurred under the plan as the plan is administered by the U.S. Conference of Mayors and the plan is not accessible by the Authority's creditors; therefore, any related assets and liabilities are not reflected in the financial statements.

NOTE 8 – COMPENSATED ABSENCES:

Accumulated unpaid vacation, vested sick leave and other compensatory leave amounts are accrued when incurred. At June 30, 2018 and 2017 liabilities were as follows:

	2018	2017
Accumulated and compensatory leave	$ 223,256	$ 216,179

Sick leave is vested and payable, and accordingly recorded as a liability in the financial statements, upon eligible retirement from the Authority.

NOTE 9 – NUTRIENT CREDIT PURCHASES:

During the current year, the Authority was required to purchase nutrient credits in order to remain in compliance with environmental regulations. The total cost of the credits during fiscal year 2018 was $610,075. The Authority will be required to purchase credits in future years to comply with environmental regulations until the Authority completes the nutrient upgrade project to reduce the levels of nitrogen and phosphorus. The SCWWA Board committed to purchase credits from the Virginia Nutrient Credit Exchange Association and from Chesterfield County.

NOTE 10 – RELATED PARTY TRANSACTIONS:

The Authority is governed by a common Board of Directors with the Appomattox River Water Authority ("ARWA"). The Authority has an agreement with ARWA to share several key positions utilized by both the Authority and ARWA. Accordingly, the two Authorities share personnel costs necessary to fund the positions. During the current fiscal year the Authority paid reimbursements in the amount of $212,414 to ARWA including $110,202 reported as accounts payable at June 30, 2018 for reimbursement of salary and benefits paid to ARWA employees that allocate time and duties with SCWWA. Similarly, the Authority receives a reimbursement from ARWA for salary and benefits for SCWWA employees that allocate time and duties with ARWA. The Authority received a reimbursement of $234,084 from ARWA.

During 2013, the Authority entered into an agreement with Chesterfield County (the "County"), a member locality, to begin purchasing nitrogen and phosphorus credits from the County to remain in compliance with environmental regulations as disclosed in Note 9. The agreement was to commence with compliance year 2015 and for each year thereafter through and including compliance year 2018. During 2018, the Authority executed an agreement with the County to further extend this agreement for compliance years 2019 and 2020.

NOTE 11 – RISK MANAGEMENT:

The Authority is exposed to various risks of loss related to torts; theft of, damage to and destruction of assets; errors and omissions; injuries to employees; and natural disasters. The Authority joined together with other local governments in the State to form the Virginia Municipal Group Self Insurance Association, a public entity risk pool currently operating as a common risk management and insurance program for member governments. The Authority pays an annual premium to the pool for its workers compensation coverage and other liability insurance. The Agreement for Formation of the association provides that the association will be self-sustaining through member premiums. The Authority also participates in the VaRisk2, a group liability self insurance plan, administered by the Commonwealth of Virginia, Department of General Services, Division of Risk Management. The Authority pays an annual premium for its public officials general liability insurance to the public entity risk pool currently operating as a common risk management and insurance program for participating governments. Settled claims have not exceeded pool coverage in any of the past three fiscal years.

The Authority continues to carry commercial insurance for all other risks of loss, including employee health and accident insurance. Settled claims resulting from these risks have not exceeded commercial insurance coverage in any of the past three fiscal years.

NOTE 12 – UPCOMING PRONOUNCEMENTS:

Statement No. 83, *Certain Asset Retirement Obligations*, addresses accounting and financial reporting for certain asset retirement obligations (AROs). An ARO is a legally enforceable liability associated with the retirement of a tangible capital asset. A government that has legal obligations to perform future asset retirement activities related to its tangible capital assets should recognize a liability based on the guidance in this Statement. This Statement establishes criteria for determining the timing and pattern of recognition of a liability and a corresponding deferred outflow of resources for AROs. The requirements of this Statement are effective for reporting periods beginning after June 15, 2018.

Statement No. 84, *Fiduciary Activities*, establishes criteria for identifying fiduciary activities of all state and local governments. The focus of the criteria generally is on (1) whether a government is controlling the assets of the fiduciary activity and (2) the beneficiaries with whom a fiduciary relationship exists. Separate criteria are included to identify fiduciary component units and postemployment benefit arrangements that are fiduciary activities. This Statement describes four fiduciary funds that should be reported, if applicable: (1) pension (and other employee benefit) trust funds, (2) investment trust funds, (3) private-purpose trust funds, and (4) custodial funds. This Statement also provides for recognition of a liability to the beneficiaries in a fiduciary fund when an event has occurred that compels the government to disburse fiduciary resources. The requirements of this Statement are effective for reporting periods beginning after December 15, 2018.

Statement No. 87, *Leases*, increases the usefulness of governments' financial statements by requiring recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information about governments' leasing activities. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019.

Statement No. 88, *Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placements*, clarifies which liabilities governments should include when disclosing information related to debt. It defines debt for purposes of disclosure in notes to financial statements as a liability that arises from a contractual obligation to pay cash (or other assets that may be used in lieu of cash) in one or more payments to settle an amount that is fixed at the date the contractual obligation is established. The Statement requires that additional essential information related to debt be disclosed in notes to financial statements, including unused lines of credit; assets pledged as collateral for the debt; and terms specified in debt agreements related to significant events of default with finance-related consequences, significant termination events with finance-related consequences, and significant subjective acceleration clauses. For notes to financial statements related to debt, it requires that existing and additional information be provided for direct borrowings and direct placements of debt separately from other debt. The requirements of this Statement are effective for reporting periods beginning after June 15, 2018.

NOTE 12 – UPCOMING PRONOUNCEMENTS: (CONTINUED)

Statement No. 89, *Accounting for Interest Cost Incurred Before the End of a Construction Period*, enhances the relevance and comparability of information about capital assets and the cost of borrowing for a reporting period and simplifies accounting for interest cost incurred before the end of a construction period. Such interest cost includes all interest that previously was accounted for in accordance with the requirements of paragraphs 5-22 of Statement No. 62, *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements,* which are superseded by this Statement. This Statement requires that interest cost incurred before the end of a construction period be recognized as an expense in the period in which the cost is incurred for financial statements prepared using the economic resources measurement focus. As a result, interest cost incurred before the end of a construction period will not be included in the historical cost of a capital asset reported in a business-type activity or enterprise fund. This Statement also reiterates that in financial statements prepared using the current financial resources measurement focus, interest cost incurred before the end of a construction period should be recognized as an expenditure on a basis consistent with governmental fund accounting principles. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019.

Management is currently evaluating the impact these standards will have on the financial statements when adopted.

NOTE 13 – ADOPTION OF ACCOUNTING PRINCIPLES:

The Authority implemented the financial reporting provisions of Governmental Accounting Standards Board Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* during the fiscal year ended June 30, 2018. This Statement establishes standards for measuring and recognizing liabilities, deferred outflows of resources, deferred inflows of resources, and expense/expenditures related to postemployment benefits other than pensions (other postemployment benefits or OPEB). Note disclosure and required supplementary information requirements about OPEB are also addressed. The requirements of this Statement will improve accounting and financial reporting by state and local governments for OPEB. In addition, the Authority implemented Governmental Accounting Standards Board Statement No. 85, *Omnibus 2017* during the fiscal year ended June 30, 2018. This Statement addresses practice issues identified during implementation and application of certain GASB statements for a variety of topics including issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (pensions and other postemployment benefits (OPEB)). The implementation of these Statements resulted in the following restatement of net position as of July 1, 2017:

		Amount
Net Position as of July 1, 2017, previously reported	$	26,974,949
OPEB liabilities in accordance with GASB Statement No. 75		(199,587)
Net Position as of July 1, 2017, as restated	$	26,775,362

- Required Supplementary Information -

SOUTH CENTRAL WASTEWATER AUTHORITY

Schedule of Changes in Net Pension (Asset) Liability and Related Ratios
For the Years Ended June 30, 2015 through 2018

	2017	2016	2015	2014
Total pension liability				
Service cost	$ 162,869	$ 172,484	$ 171,384	$ 164,219
Interest	276,711	269,159	257,015	238,485
Changes of benefit terms	-	-	-	-
Differences between expected and actual experience	(91,312)	(199,473)	(116,926)	-
Changes of assumptions	(108,626)	-	-	-
Benefit payments, including refunds of employee contributions	(134,457)	(134,098)	(141,873)	(134,116)
Net change in total pension liability	$ 105,185	$ 108,072	$ 169,600	$ 268,588
Total pension liability - beginning	4,020,249	3,912,177	3,742,577	3,473,989
Total pension liability - ending (a)	$ 4,125,434	$ 4,020,249	$ 3,912,177	$ 3,742,577
Plan fiduciary net position				
Contributions - employer	$ 116,205	$ 136,390	$ 134,611	$ 136,218
Contributions - employee	80,016	76,911	76,008	73,798
Net investment income	436,493	62,297	148,134	429,411
Benefit payments, including refunds of employee contributions	(134,457)	(134,098)	(141,873)	(134,116)
Administrative expense	(2,415)	(2,045)	(1,930)	(2,224)
Other	(393)	(26)	(31)	22
Net change in plan fiduciary net position	$ 495,449	$ 139,429	$ 214,919	$ 503,109
Plan fiduciary net position - beginning	3,524,954	3,385,525	3,170,606	2,667,497
Plan fiduciary net position - ending (b)	$ 4,020,403	$ 3,524,954	$ 3,385,525	$ 3,170,606
Authority's net pension (asset) liability - ending (a) - (b)	$ 105,031	$ 495,295	$ 526,652	$ 571,971
Plan fiduciary net position as a percentage of the total pension (asset) liability	97.45%	87.68%	86.54%	84.72%
Covered payroll	$ 1,623,382	$ 1,548,944	$ 1,525,607	$ 1,478,344
Authority's net pension (asset) liability as a percentage of covered payroll	6%	32%	35%	39%

This schedule is intended to report information for 10 years. Information prior to the 2014 valuation is not available. Additional years will be included when available.

SOUTH CENTRAL WASTEWATER AUTHORITY

Schedule of Employer Contributions
For the Years Ended June 30, 2009 through June 30, 2018

Fiscal Year	Contractually Required Contribution (1)	Contributions in Relation to Contractually Required Contribution (2)	Contribution Deficiency (Excess) (3)	Employer's Covered Employee Payroll (4)	Contributions as a % of Covered Payroll (5)
2009	$ 91,520	$ 91,520	$ -	$ 1,376,242	6.65%
2010	89,943	89,943	-	1,352,533	6.65%
2011	100,996	100,996	-	1,381,616	7.31%
2012	101,125	101,125	-	1,383,382	7.31%
2013	135,056	135,056	-	1,464,815	9.22%
2014	136,303	136,303	-	1,478,344	9.22%
2015	136,218	136,218	-	1,525,607	8.93%
2016	136,390	136,390	-	1,548,944	8.81%
2017	113,903	113,903	-	1,623,382	7.02%
2018	119,474	119,474	-	1,742,066	6.86%

Changes of benefit terms – There have been no actuarially material changes to the System benefit provisions since the prior actuarial valuation. The 2014 valuation includes Hybrid Retirement Plan members for the first time. The hybrid plan applies to most new employees hired on or after January 1, 2014 and not covered by enhanced hazardous duty benefits. Because this is a fairly new benefit and the number of participants was relatively small, the impact on the liabilities as of the measurement date of June 30, 2017 are not material.

Changes of assumptions – The following changes in actuarial assumptions were made effective June 30, 2016 based on the most recent experience study of the System for the four-year period ending June 30, 2016:

Largest 10 – Non-Hazardous Duty:

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement from 70 to 75
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	Lowered rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 14% to 20%

All Others (Non 10 Largest) – Non-Hazardous Duty:

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement from 70 to 75
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	Lowered rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 14% to 15%

SOUTH CENTRAL WASTEWATER AUTHORITY

Schedule of Changes in Total OPEB Liability (Asset) and Related Ratios - Health Insurance
For the Year Ended June 30, 2018

		2018
Total OPEB liability		
Service cost	$	12,090
Interest		3,622
Changes in assumptions		(6,890)
Differences between expected and actual experience		-
Benefit payments		(2,600)
Net change in total OPEB liability	$	6,222
Total OPEB liability - beginning		128,387
Total OPEB liability - ending	$	134,609
Covered payroll	$	N/A
Authority's total OPEB liability (asset) as a percentage of covered payroll		N/A

Notes to Required Supplementary Information - OPEB - Health Insurance
For the Year Ended June 30, 2018

Valuation Date: July 1, 2017
Measurement Date: June 30, 2017

No assets are accumulated in a trust that meets the criteria in GASB 75 to pay related benefits.

Methods and assumptions used to determine OPEB liability:

Actuarial Cost Method	Entry Age Normal cost method
Discount Rate	2.85% as of June 30, 2016; 3.58% as of June 30, 2017
Inflation	2.50% per year as of June 30, 2017; 2.50% per year as of June 30, 2018
Healthcare Trend Rate	Healthcare trend rate of 4.20%. Rates are selected based on an economic model developed by a healthcare economist for the Society of Actuaries.
Salary Increase Rates	Salary increase rates of 3.5% - 5.35% including inflation
Demographic Assumptions	Assumed that 50% of employees with medical coverage would elect to retain the coverage at retirement.

SOUTH CENTRAL WASTEWATER AUTHORITY

Schedule of Authority's Share of Net OPEB Liability
Group Life Insurance Program
For the Year Ended June 30, 2018

Date (1)	Employer's Proportion of the Net GLI OPEB Liability (Asset) (2)	Employer's Proportionate Share of the Net GLI OPEB Liability (Asset) (3)	Employer's Covered Payroll (4)	Employer's Proportionate Share of the Net GLI OPEB Liability (Asset) as a Percentage of Covered Payroll (3)/(4) (5)	Plan Fiduciary Net Position as a Percentage of Total GLI OPEB Liability (6)
2017	0.00880%	$ 132,000	$ 1,623,382	8.13%	48.86%

Schedule is intended to show information for 10 years. Information prior to the 2017 valuation is not available. However, additional years will be included as they become available.

SOUTH CENTRAL WASTEWATER AUTHORITY

Schedule of Employer Contributions
Group Life Insurance Program
For the Years Ended June 30, 2017 through June 30, 2018

Date	Contractually Required Contribution (1)	Contributions in Relation to Contractually Required Contribution (2)	Contribution Deficiency (Excess) (3)	Employer's Covered Payroll (4)	Contributions as a % of Covered Payroll (5)
2018	$ 9,059	$ 9,059	$ -	$ 1,742,066	1%
2017	8,442	8,442	-	1,623,382	1%

Schedule is intended to show information for 10 years. Information prior to the 2017 valuation is not available. However, additional years will be included as they become available.

Changes of benefit terms – There have been no actuarially material changes to the System benefit provisions since the prior actuarial valuation.

Changes of assumptions – The following changes in actuarial assumptions were made effective June 30, 2016 based on the most recent experience study of the System for the four-year period ending June 30, 2016:

General State Employees

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement from 70 to 75
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Increased rate from 14% to 25%

Teachers

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered rates at older ages and changed final retirement from 70 to 75
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change

SPORS Employees

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience
Retirement Rates	Increased age 50 rates and lowered rates at older ages
Withdrawal Rates	Adjusted rates to better fit experience
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Increased rate from 60% to 85%

VaLORS Employees

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020 and reduced margin for future improvement in accordance with experience
Retirement Rates	Increased age 50 rates and lowered rates at older ages
Withdrawal Rates	Adjusted rates to better fit experience at each year age and service through 9 years of service
Disability Rates	Adjusted rates to better fit experience
Salary Scale	No change
Line of Duty Disability	Decreased rate from 50% to 35%

JRS Employees

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Decreased rates at first retirement eligibility
Withdrawal Rates	No change
Disability Rates	Removed disability rates
Salary Scale	No change

Largest Ten Locality Employers - General Employees

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered retirement rates at older ages and extended final retirement age from 70 to 75
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Lowered disability rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 14% to 20%

Non-Largest Ten Locality Employers - General Employees

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered retirement rates at older ages and extended final retirement age from 70 to 75
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Lowered disability rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 14% to 15%

Largest Ten Locality Employers - Hazardous Duty Employees

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Lowered retirement rates at older ages
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Increased disability rates
Salary Scale	No change
Line of Duty Disability	Increased rate from 60% to 70%

Non-Largest Ten Locality Employers - Hazardous Duty Employees

Mortality Rates (pre-retirement, post-retirement healthy, and disabled)	Updated to a more current mortality table - RP-2014 projected to 2020
Retirement Rates	Increased age 50 rates and lowered rates at older ages
Withdrawal Rates	Adjusted termination rates to better fit experience at each age and service year
Disability Rates	Adjusted rates to better match experience
Salary Scale	No change
Line of Duty Disability	Decreased rate from 60% to 45%

- Compliance -

Independent Auditors' Report on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*

To the Honorable Board of Directors
South Central Wastewater Authority
Petersburg, Virginia

We have audited, in accordance with the auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards,* issued by the Comptroller General of the United States; and the *Specifications for Audits of Authorities, Boards, and Commissions,* issued by the Auditor of Public Accounts of the Commonwealth of Virginia, the financial statements of the business-type activities of South Central Wastewater Authority as of and for the year ended June 30, 2018, and the related notes to the financial statements, which collectively comprise South Central Wastewater Authority's basic financial statements and have issued our report thereon dated September 20, 2018.

Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered South Central Wastewater Authority's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of South Central Wastewater Authority's internal control. Accordingly, we do not express an opinion on the effectiveness of South Central Wastewater Authority's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether South Central Wastewater Authority's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the entity's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Robinson, Farmer, Cox Associates

Charlottesville, Virginia
September 20, 2018

- True-Up Discussion for Financial Year Ending June 30, 2018

- Status Report: Ongoing Projects/Operations/Financials/I&I

  Following are status reports concerning the Ongoing Project, Operations, Financials, and Inflow and Infiltration for the SCWWA.

900 Magazine Rd.
Petersburg, VA 23803
Office: (804) 861-0111
Fax: (804) 861-3254

MEMORANDUM

TO: SOUTH CENTRAL WASTEWATER AUTHORITY BOARD OF DIRECTORS

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

SUBJECT: STATUS REPORT – ON-GOING PROJECTS

DATE: NOVEMBER 15, 2018

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

Wastewater Treatment Plant Improvements, Phase 2

- Both grit collectors are in operation.
- The clarifier has had the grout removed.
- The Contractor is working on lowering the water table to allow the installation of new grout.
- Anticipate completion in November, 2018.

Warehouse Project

- Contractor is installing reinforcing steel and anticipates pouring the slab concrete in November.
- First submission of the building shop drawings is complete and awaiting final submission.
- Seismic monitoring and crack monitoring during pile driving operations indicated no issues.
- Project completion date is May 26, 2019.

900 Magazine Rd.
Petersburg, VA 23803
Office: (804) 861-0111
Fax: (804) 861-3254

MEMORANDUM

TO: SOUTH CENTRAL WASTEWATER AUTHORITY BOARD OF DIRECTORS

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

SUBJECT: OPERATING & FINANCIAL STATUS REPORT

DATE: NOVEMBER 15, 2018

Operating Status Report:

General:

- The next scheduled Board of Directors meeting is January 17, 2018 at the Appomattox River Water Authority at 2:00 pm.
- The Authority Trust Engineer has been onsite to perform his inspection for the Annual Maintenance Inspection and staff has reviewed and commented of the draft.
- Staff will be meeting with the member utility managers/engineers on Friday November 16, 2018 at the annual budget work session.

Status of Nutrient Waste-load

- Total Phosphorus (TP)
  - Waste-load allocation Total Phosphorus: 28,404 lbs. on a calendar basis.
  - Proportional waste-load through October 2018 = 23,670 lbs. Total actual waste-load through October 2018 was 18,959 lbs. (At this time, the SCWWA is 4,711 lbs. of TP under our expected waste-load allocation for this point in the year)
- Total Nitrogen (TN)
  - Waste-load allocation Total Nitrogen: 350,239 lbs. on a calendar basis
  - Proportional waste-load through October 2018 = 291,866 lbs. Total actual waste-load through October 2018 was 359,143 lbs. (At this time, the SCWWA is 62,277 lbs. of TN over our expected waste-load allocation for this point in the year.)
  - Note: The SCWWA is locked-in to purchasing an additional 167,685 credits for 2018.

Operations:

- Plant effluent met all discharge permit requirements for the month of October. Copies of the discharge monitoring reports (DMR's) for the VPDES permit and the general permit are available.
- Nutriblend and staff have worked together to remove solids in a timely basis.
- Staff will be monitoring the bar screens due to a bypass installed around the Petersburg Main Pump Station for maintenance on the station.

Maintenance:

- The replacement of the primary sludge pump valves is ongoing.

- The replacement of the last of the aeration basin diffusers on the 3rd aeration basin has been rescheduled due to wet weather. Replacements in the last section of aeration basins will be scheduled and completed as weather conditions allow.
- Dump trucks are being repaired.

Instrumentation

- Evaluation of replacements for obsolete motor monitors on the SCWWA blowers is ongoing.
- A demo Phosphorus inline monitor is being evaluated.
- PLC construction and installation for Pump Buildings 1-3 is ongoing. This is being handle in house.

Laboratory

- Pre-treatment inspections are ongoing.

Financial Status Report:

Following is the Executive Summary of the Monthly Financial Statement that includes the YTD Budget Performance and the Financial Statement for October 2018.

South Central Wastewater Authority
For Month Ending October 31, 2018

Assets				
Current Assets				
		Petty Cash	$	250
		Wells Fargo Operating Account	$	3,206,391
		Total Unrestricted Cash	**$**	**3,206,641**
		Wells Fargo Reserve	$	3,916,414
		Wells Fargo Capital Improvement Reserve	$	1,989,616
		ERRF	$	2,905,841
		Total Restricted Cash	**$**	**8,811,872**
		Total Checking/Savings	**$**	**12,018,513**
		Accounts Receivable	**$**	**6,244**
		Long Term Receivable (Petgs/Legal)	**$**	**-**
Total Current Assets			**$**	**12,024,757**
Fixed Assets				
		Sewer System Plant	$	33,609,033
		Equipment & Vehicles	$	3,037,357
		Plant Machinery	$	7,920,877
		Construction in Progress	$	2,590,722
		Land	$	92,968
		Accumulated Depreciation	$	(28,490,891)
Total Fixed Assets			**$**	**18,760,066**
Other Assets				
		Inventory	$	664,334
		Def Out Res-Post ER Pension Con	$	119,474
		Deferred Outflows-GLI OPEB	$	9,059
Total Other Assets			**$**	**792,867**
Total Assets			**$**	**31,577,690**
Liabilities & Equity				
Current Liabilities				
		Accounts Payable	$	62,369
Total Current Liabilities			**$**	**62,369**
Other Current Liabilities				
		Payroll Accruals	$	223,265
		Retainage Payable	$	29,450
		Suspense-Clearing Account	$	205,667
		Refunds Due Member Localities	$	-
Total Other Current Liabilities			**$**	**458,382**
Long Term Liabilities				
		Net OPEB Obligation	$	134,609
		Net OPEB Liability-GLI	$	132,000
		Def Infl-OPEB-Chg of Assumption	$	5,512
		Deferred Inflows-GLI OPEB	$	15,000
		Def Inf Res-Net Dif Pension Inv	$	166,457
		Def Inf Res-Pens Chg Assumption	$	76,200
		Def Inf Res-Pens Dif Proj/Act E	$	61,277
		Net Pension Liability	$	105,031
Total Long-Term Liabilities			**$**	**696,086**
Total Liabilities			**$**	**1,216,837**
Equity				
		Retained Earnings	$	15,442,788
		Initial Locality Contribution Cap.	$	14,166,822
		Net Income	$	751,243
Total Equity			$	30,360,852
Total Liabilities & Equity			**$**	**31,577,690**

South Central Wastewater Authority
YTD Income Statement for the period ending October 31, 2018

	Budget FY 18/19	Budget Year-to-Date	Actual Year-to-Date	YTD Budget vs. Actual	Variance Percentage
Wastewater Rate Center					
Revenues and Expenses Summary					
Operating Budget vs. Actual					
Revenues					
Septage/Misc Revenue	$ -	$ -	$ 207,503	$ 207,503	#DIV/0!
O&M Revenue	$ 8,199,100	$ 2,733,033	$ 2,733,033	$ -	0.00%
Reserve Policy	$ -	$ -	$ -	$ -	#DIV/0!
ER&RF Revenue	$ -	$ -	$ -	$ -	#DIV/0!
Total Operating Revenues	**$ 8,199,100**	**$ 2,733,033**	**$ 2,940,537**	**$ 207,503**	**7.59%**
Expenses					
Personnel Cost	$ 2,700,000	$ 901,167	$ 897,334	$ (3,833)	-0.43%
Contractual/Professional Services	$ 350,000	$ 151,584	$ 102,089	$ (49,494)	-32.65%
Utilities	$ 462,500	$ 154,167	$ 137,219	$ (16,947)	-10.99%
Communication/Postage/Freight	$ 31,500	$ 10,500	$ 8,633	$ (1,867)	-17.78%
Office/Lab/Purification Supplies	$ 74,000	$ 25,122	$ 20,035	$ (5,086)	-20.25%
Insurance	$ 65,000	$ 21,667	$ 35,011	$ 13,344	61.59%
Lease/Rental Equipment	$ 11,000	$ 3,667	$ 3,936	$ 270	7.35%
Travel/Training/Dues	$ 61,100	$ 26,379	$ 25,672	$ (707)	-2.68%
Safety/Uniforms	$ 44,500	$ 14,833	$ 12,430	$ (2,403)	-16.20%
Chemicals/Sludge Disposal	$ 910,000	$ 303,333	$ 212,836	$ (90,498)	-29.83%
Repair/Maintenance Parts & Supplies	$ 501,500	$ 168,773	$ 95,534	$ (73,239)	-43.39%
Total Operating Expenses	**$ 5,211,100**	**$ 1,781,191**	**$ 1,550,730**	**$ (230,461)**	**-12.94%**
Operating Suplus/(Deficit)	**$ 2,988,000**	**$ 951,843**	**$ 1,389,807**	**$ 437,964**	**46.01%**
Replacement Outlay Budget vs. Actual					
Machinery & Equipment	$ 210,000	$ 70,000	$ 50,237	$ (19,763)	-28.23%
Instrumentation	$ 80,000	$ 26,667	$ 8,250	$ (18,417)	-69.06%
SCADA	$ 15,000	$ 5,000	$ -	$ (5,000)	-100.00%
Computer Equipment	$ 15,000	$ 5,000	$ -	$ (5,000)	-100.00%
Motor Vehicles	$ 6,000	$ 2,000	$ 6,326	$ 4,326	216.30%
Construction	$ 295,000	$ 98,333	$ 369,115	$ 270,781	275.37%
Special Studies	$ -	$ -	$ -	$ -	#DIV/0!
Total Replacement Outlay	**$ 621,000**	**$ 207,000**	**$ 433,927**	**$ 226,927**	**109.63%**
Other Income/Expense Budget vs. Actual					
Nutrient Credit Purchases (Expense)	**$ 617,000**	**$ 205,667**	**$ 205,667**	**$ -**	**0.00%**
Nutrient Reduction	**$ -**	**$ -**	**$ 1,030**	**$ 1,030**	**#DIV/0!**
Interest-Jurisdictions (Income)	**$ -**	**$ -**	**$ -**	**$ -**	**#DIV/0!**

900 Magazine Rd.
Petersburg, VA 23803
Office: (804) 861-0111
Fax: (804) 861-3254

MEMORANDUM

TO: SOUTH CENTRAL WASTEWATER AUTHORITY BOARD OF DIRECTORS

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

SUBJECT: INFLOW AND INFILTRATION

DATE: NOVEMBER 15, 2018

October 2018 continues the trend for a very wet year. On October 11, 2018 the most significant rain event for the month occurred at 3.36". On October 12, 2018 the SCWWA experienced it max flow of 30.272 mgd. Prior to the rain event the plant flows were <10 mgd. Based on this information the plant continues to experience substantial wet weather flows.

Month	Rainfall (inches)	Average Flow (mgd)
October 2017	3.64	8.988
November 2017	1.52	9.464
December 2017	1.43	9.487
January 2018	3.69	11.842
February 2018	2.64	13.606
March 2018	2.94	12.093
April 2018	4.73	11.974
May 2018	8.46	15.221
June 2018	6.28	14.629
July 2018	9.44	12.785
August 2018	4.53	12.973
September 2018	4.43	11.572
October 2018	6.05	14.568

PRIMARY FLOW DATA

October	2018	2017	2016	2015	2014	2013	2012
Minimum (mgd)	9.376	8.246	8.130	8.854	7.329	8.876	9.438
Maximum (mgd)	30.272	13.546	10.663	22.241	13.982	19.356	19.863
Average (mgd)	14.568	8.988	14.198	10.908	9.242	10.773	10.913
Rainfall (inches)	6.05	3.64	3.65	3.43	2.6	5.22	3.99

South Central Wastewater Authority
Leachate Truck Log

Current Max # of WM Trucks Allowed per agreement	16

	Origination Site		
Date	# from Amelia	# from Charles City	**Total Combined Trucks per day**
10/1/2018	6	3	**9**
10/2/2018	6	3	**9**
10/3/2018	6	3	**9**
10/4/2018	6	3	**9**
10/5/2018	6	3	**9**
10/6/2018			
10/7/2018			
10/8/2018	6	3	**9**
10/9/2018	6	3	**9**
10/10/2018	6	3	**9**
10/11/2018	6	3	**9**
10/12/2018		3	
10/13/2018			
10/14/2018			
10/15/2018	6	3	**9**
10/16/2018	3	3	**6**
10/17/2018	6	4	**10**
10/18/2018	6	4	**10**
10/19/2018	6	4	**10**
10/20/2018			
10/21/2018			
10/22/2018	6	4	**10**
10/23/2018	6	4	**10**
10/24/2018	6	4	**10**
10/25/2018	5	4	**9**
10/26/2018	6	4	**10**
10/27/2018			
10/28/2018			
10/29/2018	5	4	**9**
10/30/2018	6	4	**10**
10/31/2018	6	4	**10**
Total	127	80	**204**

Notes:

1) On average each truck offloaded 6,665 gallons of leachate

2) The agreement with Waste Management is for $0.095/gallon; on average the charge to offload a truck is $633

3) Total leachate revenue for October 2018 is $129,340.41

5. Approval of Solids Building Concept Evaluation/Basis of Design Development

Following is a memo regarding approval of the Solids Building Concept Evaluation/Basis of Design Development

900 Magazine Rd.
Petersburg, VA 23803
Office: (804) 861-0111
Fax: (804) 861-3254

MEMORANDUM

TO: SOUTH CENTRAL WASTEWATER AUTHORITY
BOARD OF DIRECTORS

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

SUBJECT: APPROVAL OF SOLID BUILDING CONCEPT EVALUATION/BASIS OF DESIGN DEVELOPMENT

DATE: NOVEMBER 15, 2018

The FY 2017/2018 South Central Wastewater Authority's (SCWWA) Annual Maintenance Inspection noted that the facility solids handling equipment is nearing the end of its useful life and needs to be scheduled for a capital upgrade. The current solids handling processes include:

- Secondary sludge thickening with gravity belt thickeners
- Belt filter presses for solids dewatering
- Class B Alkaline Stabilization with storage on a sludge holding pad with ultimate land application of Class B sludge

SCWWA Trust Engineers Hazen & Sawyer prepared a Technical Memorandum (TM) on these processes in March 2011. The recommendations from this TM were to continue to generate Class B sludge for the future due to Class B facilities being less costly than the construction of anaerobic digesters and other necessary equipment. Both SCWWA Trust Engineers Hazen & Sawyer and WW Associates developed a scope of work to address SCWWA needs for scheduling replacement of the solid equipment by developing a Solids Handling Concept Evaluation and project Basis of Design that would focus on sludge thickening, dewatering, and lime stabilization facility improvements. This evaluation will assess the installation of solids centrifuges that can achieve long-term operational and financial efficiencies.

The Concept Evaluation/Basis of Design will include:

1. Data gathering will include SCWWA plant operating records, influent data (flow, BOD and TSS), sludge production data (primary sludge flow, TSS and waste activated sludge flow TSS), dewatering data (feed flow, feed TSS, product TSS and solids capture efficiency) and available information related to polymer dosage, lime feed rates, sludge loading rates, wet cake mass and solids concentrations, as well as unit costs for electricity, polymer, and labor rates for facility staff.

2. The data collected from existing plant operations, in conjunction with sludge production projections based on the envisioned nutrient reduction project, will be evaluated to determine average influent mass loading rates for design purposes. The required operating time (hours per week) at average and peak loadings (monthly, bi- weekly, and weekly maximum timeframes) will be determined. The basis of design will document criteria for redundancy, operating schedule, design life, cost of capital and inflation rates. Unit cost for cake disposal and management will be established. A review of the existing sludge feed pumps and polymer feed pump hydraulics will be performed to determine the adequacy of existing equipment.

3. An evaluation of thickening/dewatering centrifuge technologies for thickening and dewatering will be provided in conjunction with the basis of design. Economic evaluations will be performed to include determination of capital cost and annual O&M costs. A comparison of required utilities (water, polymer, and electrical power consumption) will be performed to identify potential significant impacts. Additionally, a comparison of solids concentration, solids capture, and nature of filtrate relative to ammonia, TN, and TP will also be evaluated for the dewatering alternative.

4. A Condition Assessment will be provided relative to the physical condition of the existing solids handling building and whether it is practical to install and use this building for centrifuge support facilities.

5. The evaluation will be based on installing thickening and dewatering equipment in a building addition adjacent to the existing sludge conditioning building. The existing building will be used for support facilities including polymer feed and electrical power supply. This alternative eliminates issues associated with maintaining dewatering operations during construction.

6. When the electrical power supply was constructed in the Phase 2 Electrical Project, it was envisioned at that time that two centrifuges would be installed in the solids handling building. The Trust Engineers propose to evaluate the electrical power supply to ascertain whether it is adequate to support thickening/dewatering equipment.

7. Lime stabilization equipment is nearing the end of its useful life. Simplifying sludge blending and conveyance will be a key element to this evaluation. Future lime feed rates will be established based on projected solids loading rates. Temporary stabilization facilities will also be considered in this alternative. The fate of the MCC in the operator's room will also be addressed.

8. Construction cost estimates will be provided for recommended solids handling facility alternatives. Cost savings associated with minimizing the amount of man-hours dedicated to solids handling based on current versus upgraded capacities will be evaluated and presented. Current operations include six days per week, twenty hours per day. Operations personnel have requested a design that allows for 4-5 days per week, eight hours per day.

9. A Technical Memorandum will be prepared based on the results of these concept evaluations. Design loading and basis of design criteria development, and thickening and dewatering technologies evaluation will be documented. Additionally, HVAC, electrical and water requirements associated with the new facility will be documented. Lime loading rates, lime blending equipment, and lime/sludge conveyance will be documented for sludge stabilization.

The Trust Engineers will provide project team meetings and a presentation to the Board for this proposed upcoming capital project.

BOARD ACTION REQUESTED:

Staff requests that the Board approve moving forward with the Trust Engineer's Solids Building Concept and Basis of Design evaluation to enable the SCWWA to prepare for a scheduled Solids Building equipment replacement capital project beginning in 2020. Staff is requesting approval to use $95,000 from excess landfill leachate funds to complete this technical evaluation by the SCWWA Trust Engineers.

6. Election of Board Officers

7. Items from Counsel

8. Closed Session

9. Other Items from Board Members/Staff Not on Agenda

10. Adjourn