



900 Magazine Rd.
Petersburg, VA 23803
Office: (804) 861-0111
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SOUTH CENTRAL WASTEWATER AUTHORITY Board of Directors Meeting

DATE: September 21, 2023

TIME: 2:00 pm

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

AGENDA

1. Call to Order/Roll Call
2. Approval of Minutes: Minutes of the Board Meeting held on May 18, 2023 (Exhibit A, Pages 2 to 5)
3. Public Comment (Exhibit B, Page 6)
4. Executive Director's Report:
 - Nutrient Reduction Project Update (Exhibit C, Page 7 to 24)
 - Service Agreement First Amendment (Exhibit D, Pages 25 to 36)
 - Wastewater General Permit and Nutrient Exchange Update (Exhibit E, Pages 37 to 38)
 - Status Report (Exhibit F, Pages 39 to 41)
 - Financials (Exhibit G, Pages 42 to 44)
5. Items from Counsel
6. Closed Meeting
7. Other items from Board Members/Staff Not on Agenda
8. Adjourn

Exhibit A

BOARD OF DIRECTORS MEETING

South Central Wastewater Authority

May 18, 2023, at 2:00 p.m.

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

MEMBERS PRESENT:

Doug Smith, Chairman (Colonial Heights)
Kevin Massengill, Vice-Chairman (Dinwiddie)
Joseph Casey, (Chesterfield)
March Altman, (Petersburg)

ALTERNATES PRESENT:

Frank Haltom, Secretary/Treasurer (Alternate, Prince George)
Eddie Pearson, (Alternate, Dinwiddie)
Matt Rembold, (Alternate, Chesterfield)

ABSENT:

Jeff Stoke, (Prince George)
George Hayes, (Alternate, Chesterfield)
Todd Flippen, (Alternate, Colonial Heights)

STAFF PRESENT:

Robert B. Wilson, Executive Director, (ARWA & SCWWA)
James C. Gordon, Asst. Executive Director (ARWA & SCWWA)
Arthur Anderson, (McGuireWoods)
Melissa Wilkins, Business Manager/FOIA (ARWA & SCWWA)
Kathy Summerson, Administrative Assistant (SCWWA)

OTHERS PRESENT:

The SCWWA meeting was called to order following the ARWA meeting by Mr. Smith, Chairman, at 3:37 p.m.

1. Call to Order/Roll Call

The roll was called:

Participating members at the table were:

Doug Smith	Present
Kevin Massengill	Present
Joseph Casey	Present
Frank Haltom	Present
March Altman	Present

Mr. Smith recognized and thanked Ms. Summerson for her twenty-one years with both ARWA and SCWWA. Ms. Summerson is retiring on July 1st.

2. Approval of Minutes: Minutes of the Regular Meeting of the Board on March 16, 2023

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

RESOLVED, that the Minutes of the Regular Meeting of the Board on March 16, 2023, are hereby approved:

For: 5 Against: 0 Abstain: 0

3. Public Comment

There were no public comments.

4. Executive Director's Report:

- FY23/24 Budget**

Mr. Gordon reported on the FY23/24 Budget, which was presented to the Board in January 2023. The Board did have some comments and those adjustments were made to the budget. A public hearing was held on March 16, 2023. He stated there have been no additional comments or questions received and requested the Board approve the budget as outlined in the Board package. Mr. Gordon reminded members to review the projected future rate increases in case they influence member retail rates. Mr. Anderson stated he had prepared a Resolution to evidence the approval.

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

RESOLVED, that the Board approves the Resolution included with the Board package of the South Central Wastewater Authority approving the Budget for FY 2023/24 and the related water rates:

For: 5 Against: 0 Abstain: 0

Vote:

Participating members at the table were:

Doug Smith	Aye
Kevin Massengill	Aye
Joseph Casey	Aye
Frank Haltom	Aye
March Altman	Aye

Absent During Vote: None

- **Nutrient Project Update**

Mr. Gordon reported on the nutrient project update. Mr. Smith asked if we had been reimbursed for any portions of costs to date. Mr. Gordon stated we requested and received approximately \$2.3 million from the original design. Mr. Gordon advised we are scheduling a discussion with DEQ to determine how to allocate the ARPA and WQIF grant funding. Mr. Smith asked if ARPA funding had the same timeframe for utilization as he has seen with other funding. Mr. Gordon stated the Authority had until the end of 2025. Mr. Wilson provided additional details for the grants. We are proposing to spend out ARPA and grant funds first, then do a true-up, agree on cost responsibility between DEQ and SCWWA then borrow the local share portion for the project.

Dr. Casey referred to the property that is part Chesterfield and Petersburg. He asked if we all have the same zoning or land use ordinances. Mr. Gordon stated Chesterfield said they were going to default to Petersburg on the environmental side. Mr. Wilson stated on the zoning side we already have wastewater structure within the same area. Mr. Wilson stated we will verify the zoning and will report back at the July meeting. Dr. Casey asked how project costs were being tracked. Mr. Wilson stated that Ms. Wilkins is tracking these costs very closely.

- **PFAS Update**

Mr. Gordon reported on the PFAS update. He stated this topic was brought up at the March 2023 board meeting and staff were asked to provide an update. Mr. Gordon stated that DEQ has not assigned limits for PFAS on the wastewater side but is monitoring and gathering data for evaluation. The Governor did sign a bill stating industrial facilities using products containing or reasonably suspected of containing PFAS and discharging to publicly owned treatment works will need to sample for PFAS and provide the results to the publicly owned treatment works. The SCWWA industrial pretreatment coordinator and other regional coordinators are discussing implementation. Mr. Gordon stated that another concern is biosolids disposal. Some states have limited disposal options for biosolids. If SCWWA is not allowed to land apply biosolids this could triple the cost of disposal.

- **Status Report**

Mr. Gordon reported on the status report.

- **Financials**

Ms. Wilkins reported on the Financials.

5. Items from Counsel

There were no items from Counsel.

6. Closed Session

There was no closed session.

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

There were no other items from Board Members/Staff not on the agenda.

8. Adjourn

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

Upon a motion by Mr. Haltom and seconded by Mr. Altman the meeting was adjourned at 4:01 p.m.

MINUTES APPROVED BY:

Frank Haltom/Secretary/Treasurer

RESOLUTION
OF THE SOUTH CENTRAL WASTEWATER AUTHORITY
APPROVING THE BUDGET FOR FISCAL YEAR 2024 AND
THE RELATED PAYMENT SCHEDULE

WHEREAS, during fall 2022 and winter 2023 the staff of the South Central Wastewater Authority (the “Authority”) developed the Authority’s proposed budget and payment schedule for Fiscal Year 2024 and at the meeting held on January 26, 2023, presented the proposed budget and payment schedule to the Board of the South Central Wastewater Authority (the “Authority Board”); and

WHEREAS, at the meeting of January 26, 2023, the Authority Board provided its preliminary approval of the proposed budget and the proposed payment schedule for Fiscal Year 2024 and scheduled a public hearing to be held at its meeting held on March 16, 2023, in accordance with Virginia Code Section 15.2-5136(G); and

WHEREAS, the Authority Board held the public hearing on the proposed Fiscal Year 2023 budget and payment schedule at its meeting on March 16, 2023; and

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

NOW, THEREFORE, BE IT RESOLVED that the Authority Board hereby approves (a) the Fiscal Year 2024 budget submitted as an attachment to this resolution and (b) the payment schedule for Fiscal Year 2024 as set forth below:

	FY2024 PAYMENTS
City of Petersburg	\$5,654,256.67
City of Colonial Heights	1,721,808.83
Chesterfield County	829,208.51
Prince George County	547,498.63
Dinwiddie County	828,624.86
TOTAL	\$ 9,581,397.50

BE IT FURTHER RESOLVED that the Authority Board acknowledges that pursuant to the wastewater service agreement in effect between the Authority and each of its five member jurisdictions, the payment schedule is subject to change during or after Fiscal Year 2024 based on, among other things, each member jurisdiction's actual use of the Authority's wastewater treatment facilities and the actual amount of revenues received and expenses incurred by the Authority during Fiscal Year 2024.



APPOMATTOX RIVER WATER AUTHORITY
21300 Chesdin Road
Petersburg, VA 23803



SOUTH CENTRAL WASTEWATER AUTHORITY
900 Magazine Road
Petersburg, VA 23803

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

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

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

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

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

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

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



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Exhibit C

TO: South Central Wastewater Authority Board of Directors

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

DATE: September 21, 2023

SUBJECT: Nutrient Reduction Project Update

The following tasks have been performed since the July 20 update:

- At the March 16th meeting, the board authorized an additional \$500,000 for design task orders identified through the cost/benefit analysis. Task order #3 has been authorized in the amount of \$495,000. Attachment C1 is a copy of the executed task order and Attachment C2 is a summary of all task orders executed to date. Scope of task order 3 is to reconfigure the plant design to a 5-stage Bardenpho process using the tankage in the current design. Modeling was performed to verify the Bardenpho process can meet the permit requirements. The Bardenpho process will be an easier process to maintain and is a more robust process than the current design. The board did request a summary of funds used toward the NRP. Attachment C3 is a spreadsheet outlining funds used to this point toward the NRP. This does not include WQIF reimbursements for engineering.
- The access road across the EDA property was advertised, pre-bid conference held, and bids were opened on June 22nd. We are still waiting for comment and direction from the City of Petersburg.
- Engineers are coordinating with Dominion Energy for the design to provide two new services onsite. One service location will be at the Headworks building and one in back for the new electrical building. The existing Dominion service will remain active as well. Both of the new services will include generator backup.
- As part of HB1839 and SB963, the South Central Wastewater Authority was to submit a phased construction program to the Department of Environmental Quality (DEQ) by August 1st. The letter was sent to DEQ staff on July 31, 2023. Attachment C4 is a copy of the letter submitted to DEQ. On August 24th the SCWWA received a letter from DEQ approving the proposed phased construction plan. Attachment C5 is a copy of the letter received from DEQ.
- On 9/5/2023, Staff, Mr. Anderson, and VRA staff had a conference call to discuss the VRA borrowing. Topics of discussion were if a debt service reserve was necessary, when the Authority should borrow the funds for the local share, and how/when the Authority intended to

deploy funds from each of the funding sources (Two ARPA grants, WQIF grant, and local share).

- The Sludge Conditioning Improvements Project was advertised Sunday July 9, 2023 in the newspaper, website, and eVA. This project included the construction and installation of owner furnished Belt Filter Presses (BFPs), Gravity Belt Thickeners (GBTs), lime stabilization equipment, sludge and polymer feed equipment, and associated control panels. The project also includes lime silo improvements, temporary sludge services, building improvements, and upgrading electrical equipment and services. A well-attended pre-bid meeting was held on August 2, 2023 at 10:00 am.
 - Bid were opened on September 11, 2023. The Authority received 3 bids:

▪ MEB Contractors	\$10,183,700
▪ English Construction	\$10,498,000
▪ Clark Water	\$12,925,000

The Sludge Conditioning Improvements Project is Phase 1 of our approved phased construction plan. This project will be funded from WQIF, ARPA, and Capital Reserve Account Funds. This project is approved for 40% reimbursement from the WQIF grant.

The bid tabulation and engineer's letter of recommendation is included as Attachment C6 and Attachment C7. Staff is in agreement with the engineer's recommendation and recommend award to MEB Contractors in the amount of \$10,183,700. Staff also requests that a 5% contingency in the amount of \$509,185 be authorized for potential change orders.

The engineers' estimate for this project was \$9,900,000.

Board Action Requested:

Staff requests the Board award the Sludge Conditioning Improvements Project to the low bidder, MEB Contractors, in the amount of \$10,183,700 and authorize the executive director to execute the necessary documents. Staff also requests the Board authorize a contingency of 5%, an additional \$509,185, for this project. The executive director will be responsible for reporting back to the Board at project completion with a summary of total construction costs.



August 11, 2023

Mr. Robert B. Wilson, P.E.
Executive Director
South Central Wastewater
Authority 700 Magazine Road
Petersburg, VA 23803

Ref: SCWWA Nutrient Reduction Project, Task Order No. 3 - Bardenpho Tank Design
(North and South Tanks), Stormwater and Site Utilities

Dear Mr. Wilson:

We are pleased to provide this fee proposal for the design of the referenced facilities. The following is a description of these design elements:

Bardenpho Design (NRP Phase 5)

The North and South tanks will be reconfigured to a traditional 5-stage Bardenpho design regime (3 trains). This design will be in general accord with the enclosed concept drawings dated June 2, 2023.

The five stages are defined as follows:

- Anaerobic Zone
- Pre Anoxic Zone
- Aeration Zone
- Post Anoxic Zone
- Reaeration Zone

A swing zone will be provided between the Anaerobic Zone and the Pre Anoxic Zone for process flexibility. The NRCY pumps will be located in the rear of the Aeration Zone in the North Tank and will convey this flow to the Anoxic Swing Zone/Anoxic Zone. The NRCY pumps will be sized for 69 MGD with a 60-inch diameter force main. An inlet box will be provided for the South tank to allow for mixing of the RAS with the primary effluent flow.

The existing effluent trough in the North tank will be reused to convey wastewater to the secondary clarifiers. New aeration piping will be added to the existing effluent trough to ensure mixing for alum injection. A new outfall box will be provided for Clarifier No. 5.

P.O. Box 4119 ■ Lynchburg, VA 24502 ■ (434) 316-6080
968 Olympia Drive, Suite 1 ■ Charlottesville, VA 22911 ■ (434) 984-2700
Lynchburg ■ Charlottesville

Tank design will include baffle walls, mixers, aeration piping and aeration diffusers for the respective zones. Bardenpho process design includes electrical power and controls for these processes. The electrical power design has already been funded with the NRP Phase 2 electrical design fee.

A new motor control center will be provided for the proposed aeration blowers. The new motor control center will replace MCC 306. Electrical loads from the chlorine tank that are currently supplied electrical power from Pump Building No. 5 will be relocated in MCC 306. The new MCC 306 will be located in the existing plenum room. A new enclosure with HVAC will be included to support this electrical service. Again, the electrical power design has already been funded with the NRP Phase 2 electrical design fee.

A new electrical power supply will be provided on the roof of the existing caustic building at the primary clarifiers. This electrical power supply will provide power to the caustic building, as well as the new South Tank. Electrical power will be provided from the new electrical service being design under the NRP Phase 2 project. A new enclosure will be designed for the new South Tank MCC facility with HVAC for a conditioned space. Again, the electrical power design has already been funded with the NRP Phase 2 electrical design fee.

Site and utility plans

Site and utility plans will be updated to include revisions to:

- NRCY piping
- RAS piping
- Elimination of Clarifier No. 6 piping
- Modifications to alum piping
- Modifications to Micro "C" piping
- Elimination of Electrical Building No. 1
- Modification to Electrical Building No. 2
- Elimination to new switchgear building adjacent to existing generator facilities
- Piping revisions between Primary Clarifier and South Tank
- NPW piping revisions
- Other utilities as identified during design

Site and utility plan updates will be submitted for each phase of the 7- phase project to Chesterfield County and the City of Petersburg, depending on which jurisdiction applies.

Stormwater Management and Erosion and Sediment Control

Stormwater Management and Erosion and Sediment Control will be addressed for each phase of the 7-phase project to Chesterfield County and the City of Petersburg, depending

WW Associates, Inc.

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Page 2 of 3

on which jurisdiction the land disturbance resides.

Design phase services include civil, mechanical, structural, electrical (previously funded), and controls plans and specifications suitable for bidding.

We propose to provide these engineering services in accordance with the following lump sum fee schedule:

<u>Task</u>	<u>Lump Sum Fee</u>
Bardenpho Design	\$ 375,000
Site and Utility Plan Update	\$ 45,000
Stormwater/E&SC	<u>\$ 75,000</u>
Design Phase Services	\$ 495,000

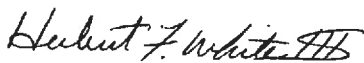
Invoicing for lump sum fee services will be on a monthly basis based on our estimate of percent completion. Payment for these services will be within 30 calendar days from the time the bill is issued by WW Associates.

We appreciate the opportunity to be of continued service to SCWWA and look forward to working with you on this project. Should you agree with this proposal, please sign, date and return to my attention. Your signature will be considered our Notice to Proceed.

Should you have any questions, please feel free to call.

Sincerely,

WW Associates, Inc.



Herbert F. White III, P.E.
President



Robert B. Wilson, P.E.
Executive Director

8/22/2023

Enclosure

WW Associates, Inc.

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Attachment C2

NRP Task Order Tracking Spreadsheet
 Limit \$500,000 (approved January 26, 2023)
 Additional \$500,000 (Approved March 16, 2023)
 Total Approved Funds \$1,000,000

Task Order Number	Purchase Order Date	Vendor	Description	Cost	Comments
1	2/23/2023	WW Associates	Verify electrical on solids conditioning. Move controls from lime silo #1 to solids MCC room. Overall Power distribution for entire site, generators, removal of duct banks, coordination with VEPCO, new stamped drawings and specs, elimination of EB1. NPW pump process design. Project management and coordination	\$ 205,000.00	Estimate \$10 million in construction savings from original design
2	3/7/2023	WW Associates	Intermediate pump station and disk filter design phase services. Replace archemedes screw pumps with verticla turbine pumps equipped with variable frequency drives to allow for level based control. Allowance will be made to discharge to a flocculation tank if needed int he future. Filtration tank design to allow for personnel access for maintenance move the backwash pumps above grade. Weirs provided for NPW water pumps. Bypass lift station/filter facility bypass piping provided. Junction box 2 wil be designed as a pipe junction without overflow weirs.	\$ 275,000.00	Lift station has less footprint and pumps are easier to acess and maintain. Improved filter access for maintenance, and NPW and bypass improvements were needed for operational concerns.
3	8/22/2023	WW Associates	The North and South tanks will be reconfigured to a traditional 5-stage Bardenpho design regime (3 trains). The NRCY pumps will be located in the rear of the Aeration Zone in the North Tank and will convey this flow to the Anoxic Swing Zone/Anoxic Zone. The NRCY pumps will be sized for 69 MGD with a 60-inch diameter force main. Bardenpho process design includes electrical power and controls for these processes. The electrical power design has already been funded with the NRP Phase 2 electrical design fee. Site and utility plan updates will be submitted for each phase of the 7- phase project to Chesterfield County and the City of Petersburg, depending on which jurisdiction applies. Stormwater Management and Erosion and Sediment Control will be addressed for each phase of the 7-phase project to Chesterfield County and the City of Petersburg, depending on which jurisdiction the land disturbance resides.	\$ 495,000.00	Bardenpho design will meet the permit requirments and provide a more operable and robust plant
				\$ 975,000.00	A/E Basic Fees

Attachment C3

Vendor	PO #	Original Amount	YTD Expenditures	Remaining
WW Associates	5975	\$ 3,650,000.00	\$ 404,000.00	\$ 3,246,000.00
WW Associates	6095	\$ 495,000.00	\$ -	\$ 495,000.00
Hazen & Sawyer	5376	\$ 3,316,735.00	\$ 3,304,369.00	\$ 12,366.00
Hazen & Sawyer	5845	\$ 656,420.46	\$ 656,420.46	\$ -
Endress+Hauser	5679	\$ 3,086.38	\$ 3,037.77	\$ 48.61
Endress+Hauser	5914	\$ 52,697.77	\$ 51,802.03	\$ 895.74
Schwing Bioiset	5723	\$ 999,004.00	\$ 409,564.00	\$ 589,440.00
Alfa Laval	5734	\$ 946,714.00	\$ 94,671.40	\$ 852,042.60
Electric Power Systems	5947	\$ 3,600.00	\$ 2,400.00	\$ 1,200.00
McGuireWoods Consulting	5906	\$ 20,000.00	\$ 20,000.00	\$ -
Sherwood Logan	5725	\$ 83,683.00	\$ 83,683.00	\$ -
WW Associates	5997	\$ 275,000.00	\$ 123,750.00	\$ 151,250.00
WW Associates	5987	\$ 205,000.00	\$ 65,500.00	\$ 139,500.00
A&R Electric	5718	\$ 138,189.00	\$ -	\$ 138,189.00
EAT-N	5793	\$ 143,711.00	\$ -	\$ 143,711.00
		\$ 10,988,840.61	\$ 5,219,197.66	\$ 5,769,642.95
Aqualaw PLC	Aqua	\$ -	\$ 18,844.50	\$ -
City of Petersburg	City	\$ -	\$ 2,250.00	\$ -
Comcast Cable	Cable	\$ -	\$ 2,194.64	\$ -
Hazen & Sawyer	Rebid	\$ -	\$ 179,241.68	\$ -
McGuireWoods	Legal	\$ -	\$ 45,862.25	\$ -
WW Associates	ENR	\$ -	\$ 11,485.00	\$ -
WW Associates	WW Eng	\$ -	\$ 450.00	\$ -
		\$ -	\$ 260,328.07	\$ -
		\$ 10,988,840.61	\$ 5,479,525.73	\$ 5,769,642.95



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Petersburg, VA 23803
Office: (804) 861-0111
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August 1, 2023

Virginia Department of Environmental Quality
CWFAP
P.O. Box 1105
Richmond, VA 23218
ATTN: WQIF Program Manager

Re: VPDES No. VA0025437
Proposed Phased Construction Program

To the WQIF Program Manager:

On March 23, 2023, HB1839 and SB963, were signed into law. Both bills require the South Central Wastewater Authority (SCWWA) meet the nitrogen effluent limit of 4.0 mg/l and phosphorous effluent limit of 0.3 mg/l by January 1, 2030. The legislation and the VDPES permit (Part 1.C.14.) require SCWWA and the Department of Environmental Quality (the "Department") to meet the following milestones:

- SCWWA submit a phased construction program to the Department by August 1, 2023.
- The Department review and approve the phased construction program by September 1, 2023, or as soon as possible thereafter.
- SCWWA begin construction of the initial phase of the construction by December 31, 2023, or 150 days of approval by the Department of the phased construction program, whichever is later.
- SCWWA complete the phased construction program as soon as possible but no later than January 1, 2030.

The purpose of this letter is to provide the phased construction program to the Department by August 1st for review and approval.

Background:

The SCWWA completed the Preliminary Engineering Report (PER) and Value Engineering Report (VE) in 2019. Both reports were submitted to the Department and the Water Quality Improvement Fund (WQIF) grant was executed on November 4, 2021, in the amount of \$85.37 million, 95% of grant eligible costs.

Construction bids were received on August 5, 2022, with the low bid being \$214,272,650. The low bid exceeded the engineer's estimate by 56% and funds available. The SCWWA Board rejected the bids. Staff reduced the scope of work by an estimated \$25 million and rebid the project. The second round of bidding was opened on October 17, 2022, with the low bid in the amount of \$234,285,140. Again, the SCWWA Board rejected the bid.

After receiving bids in October 2022, SCWWA approached the Department and recommended looking at a phasing plan to systematically reduce the size of the large project into smaller, more manageable projects and utilize local contractors in an effort to reduce the overall construction cost. SCWWA staff met with the Department on December 1, 2022 to discuss phasing the project. The results of this meeting discussion led to HB1839 and SB963.

Without awaiting the approval of these two bills, SCWWA staff followed the Request for Proposal (RFP) procurement process to select an engineer to complete the project. In addition to construction and administration services, the RFP also included performing cost/benefit analysis, design improvements, formally determining a phasing plan with an up-to-date estimate for construction and process optimization. At the January 26, 2023 Board meeting the SCWWA Board took action and selected an engineer to complete the project.

For the last seven months SCWWA staff and the engineer have been reviewing the design to date, performing cost/ benefit analysis, making economical design improvements, identifying structures and processes that can be deleted, developing a phasing plan, and refining the cost estimate.

Proposed Phasing Plan:

SCWWA proposes to complete the phased construction program in seven phases:

- **Phase 1 – Solids**

This project installs two gravity belt thickeners (GBT's), two belt filter presses (BFP's), and lime conveyance and mixing equipment pre-purchased and supplied by SCWWA. The electrical feed to the solids building will continue to come from the existing power feed that currently serves the plant. There will be temporary dewatering facilities while the old gravity belt thickeners and belt filter presses are being removed and the new equipment set in the existing solids building.

- **Phase 2 – Electrical Switch Gear**

As part of the cost/benefit analysis it was determined that the site could be split into three individual power services, the existing power service and two new power services, one at the entrance to the plant (Headworks) that would serve the new South Tank and one at the rear of the plant that would supply the new intermediate pump station, filters, new RAS pump station and new clarifier. The two new power services would each have a generator. The PER included two new generators to replace the existing generators. Staff had the existing generators inspected and determined there is at least twenty years of useful life remaining. The

existing plant electrical service and generators will remain to supply the existing blower building with new blowers, administration building, laboratory and solids handling building.

- Phase 3 – Intermediate Pump Station, Tertiary Filters, RAS Pump Station, New Clarifier, Supporting site piping.

This phase is located at the eastern end of the plant site and includes:

- Intermediate Pump Station to lift the plant flow from the end of the North Tank to the new tertiary filters.
- A new 160-foot diameter clarifier (Clarifier #5) and corresponding site piping to assist with the additional solids added for the removal of phosphorous.
- A new RAS Pump Station and appurtenances support the new clarifier.
- Tertiary disk filters to assist with phosphorous removal.
- Existing clarifier rehabilitation
- New NPW pump station

- Phase 4 – Headworks

This phase makes structural improvements to the headworks facility around the grit collection equipment and replaces the primary clarifier scrapers; drives, sprockets, chains and flights.

- Phase 5 – New South Tank, New Blowers, and Improvements to South Tank

- Construction of the new South Tank and appurtenances including piping, valving, air piping, and electrical.
- Rehabilitation of the existing blower building and installation of new blowers.
- Rehabilitation of the North Tank and repartitioning for additional nitrogen and phosphorous control with NRCY pumps and piping back to South Tank.
- New motor control centers to support the new South Tank.
- New Headworks motor control centers and building rehabilitation

- Phase 6 – Chemical Feeds

- Alum
- Caustic Soda - new feed facility in back of plant
- Sodium Hypochlorite – new horizontal Tanks
- MicroC – new carbon feed system in sodium hypochlorite facility
- Chlorine Tank Aeration – chlorine tank improvements for increased dissolved oxygen

- Phase 7 – Architectural Improvements

- Administrative/Control Building
- Laboratory addition
- Maintenance Building addition

- Blower Building improvements for operations

Sequence of Construction:

Phase 1 – Solids is first project because the existing solids handling equipment has reached the end of its useful life. SCWWA has pre-purchased the GBT's, BFP's and lime conveyance equipment. This project was advertised on July 16th and bids will be opened on August 30th. This is a stand-alone project that does not affect the sequence of construction for any of the other phases.

Electrical vendors have advised the switchgear, generators and motor control centers currently have a lead time of fifteen to eighteen months. That is the reason the next project is Phase 2 – Electrical Switchgear. Electrical service to Phase 3 will be provided from the new electrical service at the back of the plant (eastern most side of plant). Electrical service to Phase 5 will be provided by the new electrical service at Headworks. Work cannot begin on Phase 5 (the new South Tank) until the new electrical service has been installed and placed in service for Headworks. The existing electrical service to Headworks is through an existing duct bank that will be removed with the installation of the new South Tank.

After Phase 2 – Electrical Switchgear has been awarded and equipment ordered, Phase 3 will be advertised. The necessary piping, sitework, and concrete work for Phase 3 will take two to three years. The construction of these facilities will allow time for the switchgear and generator delivery and installation.

Phase 5 – New South Tank cannot be commenced until Phase 3 is complete. The improvements for Phase 3 must be tested and placed in service to maintain plant flow and compliance while building the South Tank and making improvements to the North Tank. The South Tank shall be constructed before improvements can start on the North Tank. One of the cells in the North Tank will serve as a “flow through” to get flow through the plant to the clarifiers, intermediate pump station and filters with the new South Tank being the treatment tank while construction improvements are being made on the North Tank. As one cell is completed in the North Tank, flow will be transferred to that cell and then improvements will be made on the next cell in the North Tank. This transfer of flow will take place three times.

There will be temporary chemical feed facilities throughout construction as necessary. Phase 6 – Chemical Feeds will be completed after Phase 3 and Phase 5 are complete.

Phase 4 – Headworks and Phase 7 – Architectural Improvements are necessary to support the new treatment process but do not affect the sequence of construction. The intent is to get the new treatment train and facilities in service as soon as possible then complete the auxiliary supporting structures and services.

A copy of the proposed phasing and estimated timeline is included as Attachment #1. The end date for our phased construction program is January 1, 2030; however, we are pursuing all efforts to accelerate construction. The estimated timeline reflects our internal goal with ideal construction conditions and does not represent a proposed regulatory schedule, which at this time must remain January 1, 2030.

The estimate will be updated from time to time by SCWWA to reflect progress as actual construction proceeds subject to January 1, 2030 but with the intent to accelerate as much as feasible. The SCWWA plant site is small and confined. There is the opportunity for construction phases to overlap. The proposed phases are positioned to try to keep contractors out of each other's way for an orderly, safe, and effective construction process.

Project Estimate:

To develop the revised construction estimate, we took the engineer's original estimate and compared it to the first as bid construction estimate to determine a base multiplier. That multiplier was applied to engineer's detailed estimate and used to establish an updated estimate to quantify additions and deletions. The results of this methodology are outlined in the revised cost estimate illustrated in Attachment #2.

After review and updating the construction estimate, the probable cost estimate for each phase of construction is as follows:

• Phase 1	\$ 9,922,558
• Phase 2	\$ 9,082,455
• Phase 3	\$ 75,213,692
• Phase 4	\$ 6,995,224
• Phase 5	\$ 72,232,483
• Phase 6	\$ 6,558,741
• Phase 7	\$ 8,323,388
Total Construction	\$188,328,541
A/E Basic Fees	\$ 4,300,000
Other A/E Fees	\$ 1,000,000
Construction/Inspection	\$ 4,000,000
Contingency	\$ 18,832,854
Total Project Cost	\$216,461,395
Nutrient Eligible Cost	\$162,497,024
95% Grant Eligible	\$154,372,172

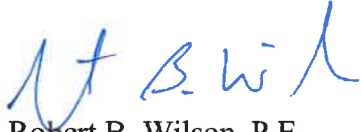
The new estimated WQIF grant total for WQIF Grant Agreement #440-S-20-03, using the same percent eligible for line items outlined in the Agreement including engineering and 10% contingency, then applying the 95% grant eligible cost is \$154,372,172.

We continue to progress to complete the phased construction projects as soon as possible to meet the nitrogen and phosphorous goals per the legislative timeline with a continued effort to reduce the cost to both the Commonwealth and the Authority members.

Thank you in advance for your assistance and review of the phased construction program. We look forward to the successful completion of this project and continued effort to reduce the nutrient impact on the Commonwealth's valuable resource, the Chesapeake Bay.

If you have any questions, need any additional information or would like to schedule a meeting to discuss further, please contact me at (804) 590-1145 ext. 101.

Sincerely,



Robert B. Wilson, P.E.
Executive Director

Cc: Mr. Scott Morris, DEQ
Ms. Karen Doran, DEQ
Mr. Michael Crocker, DEQ
Joy Abel, DEQ
SCWWA Board of Directors

Attachments

Phased Construction Schedule Estimate
Updated Project Cost Estimate

**South Central Wastewater Authority
NRP Phase Schedule
WWA Project No. 223004 and 223005**

rev 7/31/23

[illegible]

**SOUTH CENTRAL WASTEWATER AUTHORITY NUTRIENT REDUCTION PROJECT
100% DESIGN**

WQIF GRANT SUMMARY			
Project Component	Total Cost \$	% Eligible	Eligible Cost \$
Headworks	8,745,266	0%	0
Enhanced Nutrient Removal	63,399,265	96%	60,863,294
NRCY Pumps & Piping	7,146,726	100%	7,146,726
ENR Mixers	4,070,037	100%	4,070,037
P Removal Equipment	256,982	100%	256,982
New Secondary Clarifiers	39,292,703	50%	19,646,352
New RAS Pump Station	9,443,632	50%	4,721,816
Alum Feed System	683,622	100%	683,622
Tertiary Filters	21,539,442	100%	21,539,442
Intermediate Pump Station	11,219,452	100%	11,219,452
Hypo/Carbon Feed Facility	4,457,589	100%	4,457,589
Post Aeration	625,257	100%	625,257
Solids Handling	9,975,245	40%	3,990,098
NPW System	4,149,186	100%	4,149,186
Supplemental Alkalinity Feed System	1,027,099	100%	1,027,099
Secondary Clarifier Modifications	3,975,670	79.82%	3,173,380
Ancillary Buildings	8,367,584	79.82%	6,679,006
Truck Scale	432,102	79.82%	344,904
Clarifier 6	(13,200,000)	79.82%	(10,536,240)
Parshall Flume	(825,000)	79.82%	(658,515)
J B 2	(389,000)	79.82%	(310,500)
Mechanical Screen	(2,145,000)	0.00%	0
South Tank	(1,000,000)	79.82%	(798,200)
South Tank Inlet Box	500,000	79.82%	399,100
South Tank Serpentine Weir	(500,000)	79.82%	(399,100)
SWAS Pumps	(200,000)	96%	(192,000)
Reuse North Tank Effluent Trough	(1,000,000)	96%	(960,000)
C 1	(200,000)	79.82%	(159,640)
C 2	(200,000)	79.82%	(159,640)
South Tank MCC Building	200,000	79.82%	159,640
60-inch Pipe	(250,000)	79.82%	(199,550)
Flow Control	(750,000)	96%	(720,000)
Filter Tank	200,000	100%	200,000
Pump Station	(50,000)	100%	(50,000)
C 1 Tank Platform	(200,000)	79.82%	(159,640)
Bid Competition	(1,000,000)	79.82%	(798,200)
Construction Total	\$188,328,541		\$147,657,347
A/E Basic Fees	4,300,000	79.82%	3,432,260
Other A/E Fees	1,000,000	79.82%	798,200
Construction Inspection Fees	4,000,000	79.82%	3,192,800
Contingency	18,832,854	79.82%	7,416,417
Total Project Cost	\$216,461,395		\$162,497,024
		95% of Eligible	\$154,372,172

Phase 1	\$9,922,558
Phase 2	\$9,082,495
Phase 3	\$75,213,692
Phase 4	\$6,995,224
Phase 5	\$72,232,483
Phase 6	\$6,558,741
Phase 7	\$8,323,388
SCWWA NRP Construction Total	\$188,328,541

Note: Reflects construction estimates only. Does not include Engineering, Inspection, or contingency totals



Commonwealth of Virginia

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

PIEDMONT REGIONAL OFFICE
4949-A Cox Road, Glen Allen, Virginia 23060
804-527-5020
www.deq.virginia.gov

Travis A. Voyles
Secretary of Natural and Historic Resources

Michael S. Rolband, PE, PWD, PWS Emeritus
Director
(804) 698-4020

Jerome A. Brooks
Regional Director

August 24, 2023

Mr. Robert Wilson
SCWWA Executive Director
South Central Wastewater Authority
900 Magazine Road
Petersburg, Virginia 23803

Sent via email to: Robert Wilson rwilson@arwava.org

RE: VPDES Permit No. VA0025437, Proposed Phased Construction Program

Dear Mr. Wilson:

The Virginia Department of Environmental Quality (DEQ) has received the Phased Construction Program for South Central Wastewater Authority (SCWWA), dated August 1, 2023. The program was submitted in accordance with Part I.C.14 of the Virginia Pollutant Discharge Elimination System (VPDES) permit effective August 1, 2023 and § 62.1-44.19:14.G. of the Code of Virginia. DEQ has reviewed the Phased Construction Program for SCWWA and it is hereby approved.

In accordance with I.C.14 of your permit, SCWWA shall commence construction of the initial phase of construction within 150 days of approval by the Department of the phased construction program.

If you have any questions, please contact Sandra Poulos at (804) 754-6846 or sandra.poulos@deq.virginia.gov.

Sincerely,

A handwritten signature in blue ink that reads "Azra Bilalagic".

Azra Bilalagic
Water Permitting and Planning Manager

cc: James Gordon, SCWWA
Michael Crocker, DEQ
Joseph Battiatia, DEQ
Sandra Poulos, DEQ

Bid Tabulation

Client: South Central Wastewater Authority

Project Name: NRP - PH 1 SLUDGE CONDITIONING IMPROVEMENTS

WW Associates Project No. 223005.02

Bid Opening Date: Monday, September 11, 2023 at 2:00 PM (Date Changed by Addendum No. 4)



#	Contractor	Contractor License No.	Bid Bond	Add No. 1 7/25/23	Add No. 2 8/11/2023	Add No. 3 8/21/23	Add No. 4 8/23/23	Add No. 5 8/28/23	Add No. 6 9/1/23	Add No. 7 9/5/23	Base Bid
1.	CLARK WATER	2705085528	✓	✓	✓	✓	✓	✓	✓	✓	12,925,000
2.	English Construction	2701000873 A	✓	✓	✓	✓	✓	✓	✓	✓	10,498,000
3.	MEB	2701022066A	✓	✓	✓	✓	✓	✓	✓	✓	10,183,700
4.											
5.											
6.											
7.											
8.											
9.											
10.											
11.											
12.											
13.											
14.											
15.											



September 12, 2023

Mr. Robert B. Wilson, P.E.
Executive Director
South Central Wastewater Authority
900 Magazine Road
Petersburg, VA 23803

Re: South Central Wastewater Authority, Nutrient Reduction Project – Phase 1
WWA Project No. 223005.02

Dear Mr. Wilson:

We opened three bids on September 11, 2023 at 2:00 pm for the referenced project. A copy of the bid tabulation is enclosed for your records. MEB General Contractors was the low bidder with a base bid in the amount of \$10,183,700. We recommend the construction contract for the reference project be awarded to MEB General Contractors, Inc, in the amount of \$10,183,700, contingent upon funding availability. Also enclosed is MEB bid documentation.

Please feel free to contact us should you have any questions.

Sincerely,

WW Associates, Inc.

Herbert F. White III, P.E.
President

Enclosures



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

Exhibit D

TO: South Central Wastewater Authority Board of Directors

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

DATE: September 21, 2023

SUBJECT: SCWWA First Amendment Update

The 1996 SCWWA service agreement allocated the original design flow capacity of twenty mgd to each of the five Incorporating Subdivisions based on an established percent ownership in the plant. During the upgrade it was decided to move the hypochlorite feed line location to gain an additional three mgd of capacity by increasing the chlorine contact time. Each Incorporating Subdivision's governing body approved the First Amendment to the Service Agreement Among South Central Wastewater Authority, Dinwiddie County Water Authority and The Incorporating Subdivisions in 2001. Unfortunately, the signatures of the appropriate Incorporating Subdivision's official were not compiled, and the First Amendment was not formally executed. Attachment D1 is a copy of the email the executive director distributed to all incorporating subdivisions summarizing the events related to the allocation of the additional three mgd. Attachment D2 is the execution version of the First Amendment. The SCWWA, Incorporating Subdivisions, and DCWA minutes where actions were taken on the First Amendment by the Incorporating Subdivision's governing board/council were distributed previously under separate cover. Staff would be happy to present the First Amendment to the governing boards/councils of the Incorporating Subdivisions if needed. The Authority will provide a compiled First Amendment after it has been executed by all Incorporating Subdivisions.

The reason the Dinwiddie County Water Authority (DCWA) is included in the First Amendment is that DCWA is carrying the debt for Dinwiddie County for SCWWA and Dinwiddie County has a formal support agreement with DCWA in the event DCWA is unable to pay its wastewater bills.

Board Action Requested:

Staff requests each Board member execute the First Amendment to Service Agreement Among South Central Wastewater Authority, Dinwiddie County Water Authority And The Incorporating Subdivisions upon discussion and approval by their appropriate counsel and governing body.

From: Robert Wilson
Sent: Friday, August 18, 2023 2:25 PM
To: Dr. Casey; Frank Haltom (fhaltom@princegeorgecountyva.gov); Jeff Stoke; 'Kevin Massengill'; March Altman; smithd@colonialheightsva.gov
Cc: James Gordon; Melissa Wilkins; Arthur Anderson (aanderson@mcguirewoods.com); Eddie Pearson; 'George Hayes'; Matt Rembold; Todd Flippen
Subject: Prior Approved First Amendment to the Service Agreement - SCWWA
Attachments: Dinwiddie_County_action_08012001.pdf; Colonial_Heights_action_08142001.pdf; SCWA - First Amendment to Service Agreement - Execution Version(177836527.1).pdf; Prince_George_action_08222001.pdf; Chesterfield_County_action_07252001].pdf; september_2001_minutes_DCWA.pdf; Petersburg_council_action_09182001.pdf; Board_minutes_06132001_23_mgd.pdf; Board_minutes_09192001_23_mgd.pdf

REVIEW AND MEMBER ACTION REQUESTED

Background:

In May 2000 SCWWA operations and maintenance staff relocated the chlorination point for the final effluent to a point prior to the chlorine contact tank, and DEQ, in turn, increased the rated plant capacity from 20 mgd to 23 mgd. The Board discussed how to allocate the additional 3 mgd between the incorporating subdivisions and determined the additional 3 mgd would be distributed to the incorporating subdivisions per the original Service Agreement allocation as a percentage of total plant capacity.

Incorporating Subdivision	Plant Capacity (%)	Allocation @ 20 mgd	Allocation @23 mgd
City of Petersburg	52.5%	10.5	12.08
City of Colonial Heights	20.0%	4.0	4.60
Chesterfield County	10.0%	2.0	2.30
Dinwiddie County	10.0%	2.0	2.30
Prince George County	7.5%	1.5	1.72
	100.0%	20.0	23.00

At the June 13, 2001 Board meeting, the Board directed the executive director and counsel to prepare the “First Amendment to Service Agreement Among South Central Wastewater Authority, Dinwiddie County Water Authority And The Incorporating Subdivisions” and request the governing bodies of the members and the Dinwiddie County Water Authority (DCWA) to approve the amendment, [Board_minutes_06132001_23_mgd]. All five incorporating subdivisions and DCWA, by resolution, approved the first amendment and authorized their SCWWA Board representative at the time to execute the first amendment on the member’s governing bodies behalf.

For reference the approvals are attached:

- City of Petersburg [Petersburg_council_action_09182001]
- City of Colonial Heights [Colonial_Heights_action_08142001]
- Chesterfield County [Chesterfield_County_action_07252001]
- Dinwiddie County [Dinwiddie_County_action_08012001]

- Prince George County Prince_George_County_action_08222001]
- Dinwiddie County Water Authority [DCWA_action_09102001]

At the September 19, 2001, Board meeting, staff advised “All communities had adopted the amendment” and copies would be distributed when signatures are obtained, [Board_minute_09192001_23_mgd]. Unfortunately, we are unable to find an executed copy of the “First Amendment to Service Agreement Among South Central Wastewater Authority, Dinwiddie County Water Authority And The Incorporating Subdivisions”.

The Preliminary Engineering Report (PER) and Value Engineering Report (VE) for the Nutrient Project used to get the WQIF grant, and our nutrient loadings in our VPDES permit (effluent discharge permit for plant) are based on a plant rate flow of 23 mgd average. When SCWWA goes to borrow the local share portion for the Nutrient Project, staff will need to provide copies of the Service Agreement and First Amendment to Service Agreement Among South Central Wastewater Authority, Dinwiddie County Water Authority And The Incorporating Subdivisions to the Virginia Resource Authority.

Member Action Requested:

We request each incorporating subdivision and DCWA execute the First Amendment to Service Agreement Among South Central Wastewater Authority, Dinwiddie County Water Authority And The Incorporating Subdivisions which is attached.

If anyone has any questions, needs any additional information, or would like to meet and discuss further, please let me know.

Robert B. Wilson, P.E.
ARWA/SCWWA Executive Director
Appomattox River Water Authority
21300 Chesdin Road
South Chesterfield, VA 23803
(804) 590-1145 ext. 101 (o)
(804) 586-7420 (m)
rwilson@arwava.org

**First Amendment To Service Agreement Among
South Central Wastewater Authority, Dinwiddie County Water Authority And
The Incorporating Subdivisions**

THIS AGREEMENT, dated as of September 1, 2001 is by and among the South Central Wastewater Authority (the "Authority"), the County of Chesterfield, Virginia ("Chesterfield"), the City of Colonial Heights, Virginia ("Colonial Heights"), the County of Dinwiddie, Virginia ("Dinwiddie"), the City of Petersburg, Virginia ("Petersburg") and the County of Prince George, Virginia ("Prince George") (collectively, the "Incorporating Subdivisions") and Dinwiddie County Water Authority (the "DCWA"), and is the First Amendment to the Service Agreement dated July 2, 1996 between the Authority, the Incorporating Subdivisions and DCWA (the "Service Agreement");

WHEREAS, the Authority is a public body politic and corporate created upon agreement of the governing bodies of the Incorporating Subdivisions, and in accordance with the Virginia Water and Waste Authorities Act, Virginia Code §15.2-5100, et seq. (the "Act"); for the purposes of providing wastewater treatment services to the Incorporating Subdivisions;

WHEREAS, the purposes of the Authority include the acquisition, expansion, improvement, operation and maintenance of wastewater treatment facilities formerly owned by the City of Petersburg, located on Pocahontas Island in the City of Petersburg and the County of Chesterfield (the "Facilities");

WHEREAS, the Service Agreement provides for an equitable basis for apportioning among the Incorporating Subdivisions the costs of operating, maintaining, financing, improving and expanding the Facilities;

WHEREAS, the Incorporating Subdivisions desire to amend the Service Agreement to reflect additional capacity gained by the re-rating of the Facilities from 20 million gallons per day to 23 million gallons per day;

NOW, THEREFORE, in consideration of the mutual promises set forth below, the parties hereto agree as follows:

1. Reaffirmation of Service Agreement. The Authority, the Incorporating Subdivisions and DCWA hereby reaffirm and acknowledge the binding effect, as modified by this Agreement, of the Service Agreement, which shall govern all matters covered thereby to the extent not inconsistent with this Agreement.

2. Amendment to Section 6 of the Service Agreement. Section 6 of the Service Agreement is deleted in its entirety and is amended as follows:

SECTION 6 – INITIAL ALLOCATION OF CAPACITY; INITIAL CAPACITY PAYMENTS; ALLOCATION OF RE-RATED CAPACITY; ASSIGNMENT OF ALLOCATED CAPACITY.

A. INITIAL ALLOCATION OF CAPACITY; INITIAL CAPACITY PAYMENTS

In conjunction with the establishment of the Authority, Petersburg has transferred title to the Facilities set forth in Schedule A to the Authority and the Authority has agreed to pay Petersburg good and valuable consideration for the Facilities and to assume the RLF Bond, all pursuant to the Facilities Transfer Agreement. Each Incorporating Subdivision other than Petersburg shall pay to the Authority the sum of \$1,000,000 for each million gallons per day ("MGD") of capacity initially allocated to the respective subdivisions, as described below. The sums shall reimburse the Authority for the cost of acquiring from Petersburg that proportional

interest in the Facilities, notwithstanding costs of capital improvements to the Facilities that have been or will be incurred.

The Authority shall initially allocate its capacity among the Incorporating Subdivisions as follows:

<u>Incorporating Subdivision</u>	<u>Initial Allocation (Million Gallons Per Day ("MGD"))</u>	<u>Initial Allocation as a Percentage of Total Capacity</u>
Petersburg	10.5	52.5%
Colonial Heights	4.0	20.0
Chesterfield	2.0	10.0
Dinwiddie	2.0	10.0
Prince George	<u>1.5</u>	<u>7.5</u>
TOTAL	<u>20.0</u>	<u>100.0%</u>

Consequently, the Incorporating Subdivisions (excluding Petersburg) shall pay to the Authority on the date of the execution of this Agreement the following initial capacity payments.

<u>Incorporating Subdivision</u>	<u>Capacity Payment</u>
Colonial Heights	\$4,000,000
Chesterfield	2,000,000
Dinwiddie	2,000,000
Prince George	1,500,000

The Authority shall credit to Colonial Heights the amount of its \$4,000,000 capacity payment in return for which the Authority shall increase by \$4,000,000 the total amount of principal payments on the RLF Bond allocated to Colonial Heights under Section 11. Except as expressly provided in this Agreement, the initial capacity for each Incorporating Subdivision set forth above shall not be subject to change.

B. ALLOCATION OF RE-RATED CAPACITY

Effective May 5, 2000, the rated capacity of the Facilities has been increased from 20 million gallons per day to 23 million gallons per day (the "Re-rated Capacity") pursuant to the approval of the Commonwealth of Virginia Department of Environmental Quality. This

approval came in the form of revisions to the Authority's VPDES permit. The Authority shall allocate the Re-rated Capacity among the Incorporating Subdivisions as follows:

<u>Incorporating Subdivision</u>	<u>Allocation of Re-rated Capacity (Million Gallons Per Day ("MGD"))</u>	<u>Allocation as a Percentage of Total Capacity</u>
Petersburg	12.08	52.5%
Colonial Heights	4.60	20.0
Chesterfield	2.30	10.0
Dinwiddie	2.30	10.0
Prince George	<u>1.72</u>	<u>7.5</u>
TOTAL	<u>23.00</u>	<u>100.0%</u>

C. ASSIGNMENT OF ALLOCATED CAPACITY

Nothing herein shall prevent or restrict any Incorporating Subdivision from entering into separate agreements with any other Incorporating Subdivision for the purpose of assigning all or a portion of its allocated capacity; provided that no such assignment shall release the assigning Incorporating Subdivision from any obligation or liability under this Agreement. If an Incorporating Subdivision wishes to assign all or a portion of its allocated capacity to another Incorporating Subdivision, it shall be reimbursed by the other Incorporating Subdivision at a rate of not more than \$1,000,000 per MGD of capacity permanently assigned plus the accumulated debt paid on the excess capacity assigned by the transferring Incorporating Subdivision, or not more than \$100,000 per year per MGD of capacity temporarily assigned plus the accumulated debt paid on the excess capacity assigned by the transferring Incorporating Subdivision.

4. Amendment to Section 7 of the Service Agreement. Section 7A.1 of the Service Agreement is deleted in its entirety and is amended as follows:

A. Quantity Limitations

1. Except as otherwise expressly provided in this Agreement, the Authority's obligation to accept, treat and discharge Wastewater from the Incorporating Subdivisions is subject to the following limitations:

FLOW ALLOCATION

<u>Incorporating Subdivision</u>	<u>Average Daily Wastewater Flow (MGD)</u>	<u>Peak Daily Flow Rate (MGD)</u>
Petersburg	12.08	27.6
Colonial Heights	4.60	10.5
Chesterfield	2.30	5.3
Dinwiddie	2.30	5.3
Prince George	<u>1.72</u>	<u>3.9</u>
TOTAL	23.00	52.6

DAILY POLLUTANT LOADING ALLOCATION

<u>Incorporating Subdivision</u>	<u>BOD5</u>	<u>SS</u> (Pounds)	<u>Ammonia</u>	<u>Phosphorous</u>
Petersburg	21,148	4,804	1,571	483
Colonial Heights	8,056	5,640	598	184
Chesterfield	4,028	2,820	299	92
Dinwiddie	4,028	2,820	299	92
Prince George	<u>3,021</u>	<u>2,115</u>	<u>224</u>	<u>69</u>
TOTAL	40,281	28,199	2,991	920

No Incorporating Subdivision's flow shall (a) exceed the flow rates or pollutant loadings provided in this subsection or (b) at any time exceed a rate that, if maintained for a 24-hour period, would exceed the Peak Daily Flow Rate set forth above for such Incorporating Subdivision. If the total Wastewater flows or loadings introduced at all of an Incorporating Subdivision's points of connection exceed 95% of its limitations for each month of any three consecutive months, then the Incorporating Subdivision shall, within 45 days from the end of the

third consecutive month for which the flows or loadings exceeded 95% of the respective limitations, submit to the Authority a report setting forth the Incorporating Subdivision's plans for preventing the introduction by it of Wastewater in excess of the flow or loadings limitations provided for herein.

5. Entire Agreement. The parties acknowledge having fully read, understood and voluntarily accepted the terms of this Agreement. This Agreement states the entire agreement among the parties relating to the matters covered herein. There is no promise, agreement or understanding, verbal or written, for any additional consideration whatever.

6. Severability. If any provision of this Agreement shall be held invalid or unenforceable by any court of competent jurisdiction, such holding shall not affect any other provision of this Amendment.

7. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be of the same force and effect as any other executed counterpart.

8. Headings. The underlined headings herein are for convenience only and shall not affect the interpretation of this Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed and attested by their duly authorized officers as of the dates indicated below.

**SOUTH CENTRAL WASTEWATER
AUTHORITY**

By: _____
Its: _____

ATTEST:

By: _____

Dated: _____

COUNTY OF CHESTERFIELD, VIRGINIA

By: _____
Its: _____

ATTEST:

By: _____

Dated: _____

CITY OF COLONIAL HEIGHTS, VIRGINIA

By: _____
Its: _____

ATTEST:

By: _____

Dated: _____

COUNTY OF DINWIDDIE, VIRGINIA

By: _____
Its: _____

ATTEST:

By: _____

Dated: _____

DINWIDDIE COUNTY WATER AUTHORITY

By: _____
Its: _____

ATTEST:

By: _____

Dated: _____

CITY OF PETERSBURG, VIRGINIA

By: _____
Its: _____

ATTEST:

By: _____

Dated: _____

COUNTY OF PRINCE GEORGE, VIRGINIA

By: _____
Its: _____

ATTEST:

By: _____

Dated: _____



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

Exhibit E

TO: South Central Wastewater Authority Board of Directors

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

DATE: September 21, 2023

SUBJECT: Wastewater General Permit and Nutrient Waste Load Allocation Update

In January 2023 the Wastewater General Permit Registration list was updated and several facilities throughout the Commonwealth saw reductions in their waste load allocations (WLA). South Central Wastewater Authority was one of the facilities that saw a significant reduction in the Phosphorus waste load allocation.

In 2017 the SCWWA's total phosphorus (TP) WLA decreased from 35,024 lbs/year to 28,404 lbs/year. In 2026, the WLA will be further reduced to 14,011 lbs/yr. In November 2022, working through the Virginia Nutrient Exchange, SCWWA submitted a compliance statement for TP informing the Commonwealth that we were in the process of a Nutrient Reduction Project (NRP) that would meet 0.3 mg/L TP, but this WLA calculates to 0.2 mg/L and to meet the additional reduction we would need additional funding (estimated at \$10 million). We also informed DEQ that if we received this funding, the design could be completed in 2026. We were also asked if we could meet the new WLA during our Virginia Pollution Discharge Elimination System (VPDES) permit renewal process this year and provided DEQ with the same response we provided in our compliance statement.

The only other option outside of adding additional treatment facilities is to purchase nutrient credits for the SCWWA's needs until new facilities are in place to meet the new TP requirements. Once the NRP is complete we should be able to meet the WLA until annual average flows are greater than 15.33 mgd. Based on linear trend flow projections, this is beyond 2080. If flows increased by 1.25% per year (as a worst-case scenario), we would not reach this limit until 2050.

Each year we must submit to the Nutrient Exchange our nutrient needs for five years out and commit to any purchases to meet shortfalls. The expectation was to meet the original 2026 deadline for the NRP, so we anticipated meeting the WLA in 2026. With the current construction market we are unable to meet the 2026 deadline. Therefore, we were successful with the new legislation to receive a time extension through 2030. This does not release SCWWA from meeting the General Permit TP WLA so we will need to purchase TP credits. The SCWWA submitted our TP needs for 2028 and requested a modification for 2026 and 2027. SCWWA needs approximately 13,000 lbs of TP credits

for each year until the nutrient reduction project is complete. The Nutrient Exchange has an estimated 17,000+ lbs of credits available for trading. The cost to SCWWA per year will be approximately \$85,000 in 2026 and increase to approximately \$96,000 in 2028. This additional expense was not shown in the projections provided to our members last fall/winter during the budget development and we wanted to bring this to your attention. The purchase of these additional credits will be in the operating budget.

Board Action Requested:

No Board Action Requested



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

Exhibit F

TO: South Central Wastewater Authority Board of Directors

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

DATE: September 21, 2023

SUBJECT: Operating Status Report

This report hits the highlights and does not cover the day-to-day maintenance or preventive maintenance summaries.

The following is an update for May/June/July/August plant operations due to the cancellation of the July 2023 Board meeting. A lot of the information was emailed to members throughout the period to keep them informed.

➤ General

- The next scheduled Board of Directors Meeting is Thursday, November 16, 2023, at the South Central Wastewater Authority at 2:00 pm.
- Received our new Virginia Pollution Discharge Elimination System (VPDES) Permit. The effective date is August 1, 2023 with a expiration date of July 31, 2028.
- Septage revenues were:

Month	Septage
May	\$15,328.53
June	\$14,183.01
July	\$12,131.08
August	\$12,059.48

- SCWWA's annual total nitrogen (TN) waste load allocation (WLA) is 350,239 lbs. TN discharged through August 2023 was 245,577 lbs. We have a contract with Chesterfield to purchase 50,000 credits to cover any WLA overage.
- SCWWA's annual total phosphorus (TP) WLA is 28,404 lbs. TP discharged through August 2023 was 16,376 lbs.
- Audit field work is completed. Report and presentation scheduled for the November meeting.
- The Petersburg Fire Department toured the site. All shifts were scheduled to come onsite for tours over 3 days.
- David Morris (Class I Senior Operator) retired September 1, 2023 after more that twenty-five years of service to the Authority.
- The executive director and assistant executive director will be attending WaterJam on September 13th and 14th.

➤ Operations

- Plant effluent met all permit requirements for May, June, July, and August 2023.
- Average daily effluent flows were:

Month	Average Effluent Flow (mgd)	Total Monthly Precipitation (inches)
May	10.73	1.49
June	10.31	6.72
July	10.24	4.08
August	9.473	2.17

- Members of the laboratory / Maintenance / Operations attended the Operations and Maintenance Workshop at Henrico County Water Reclamation Facility.
- Continue implementing review / retraining on SCWWA's SOPs.
- Three Operators are scheduled to attend WaterJam on September 13th.
- All operators completed 2 weeks of training for Hand / Manual operation of RAS pump / system.
- The Operations Chief completed the Preventive Maintenance Management Class.
- Ron Major obtained his Class II license
- Cerrone Rainey obtained his Class I license.
- Allan Bilicki obtained his Class IV license.
- Advertising for three open operator trainee/operator positions.

➤ Maintenance

- Return Activated Sludge (RAS) pump station rebuild complete. All 5 pumps have been replaced. This work was performed in house.
- All primary tanks have been fully inspected and all wear parts replaced that were required.
- Preparation/planning ongoing for filtrate pump station rebuild.
- Crane has been repaired, calibrated, and is ready for service.
- Blower 1 motor was repaired. Staff installed the motor and upgraded the safety monitoring system. Blowers 1, 3, and 4 have all been repaired and are in service.
- Bar screens were inspected, and maintenance was performed on the equipment.
- Work continues to update the COGZ system. COGZ is the Centralized Maintenance Management System (CMMS) used for the plant.
- Developed a path to install a new fiber ring to the headworks to move it out of the field where the South Tank will be installed in the Nutrient Reduction Project. Our electrical contractor will be installing the conduit and pulling the new fiber.
- Two maintenance personnel are scheduled to attend Corning Fiber Installation Training.
- Two Maintenance personnel are scheduled to attend WaterJam on September 13th.
- The vacant Instrumentation/IE position was filled.

➤ IT

- New security camera server installed.
- Completed conversion from hosted email exchange to Office 365.
- Transitioned from old IT contractor to new IT contractor. New tools and software have been installed on all Authority pcs and servers monitored by Archer Integration.
- RAS PLC4 was successfully installed by Autologic.
- Replacement truck scale kiosk system has been ordered. It should be ready for installation in September.

- Laboratory/Industrial Pretreatment
 - Semi-annual whole effluent toxicity (WET) testing was completed on August 25th. Awaiting results.
 - Members of the laboratory / Operation attended the Good Laboratory Practice Conference in Richmond, VA at the end of July.
 - Final proficiency test report issued in June with 100% pass rate.
 - New permit issued to Civica Rx.
 - Permit renewals for Southside Medical Center and International Paper are in progress.
 - Biosolids sampling and testing will be completed in July.
 - Industrial Pretreatment Program (IPP) Coordinator is working with septage haulers to ensure we receive accurate descriptions of origination sites for septage.
 - The Laboratory Supervisor/IPP Coordinator was accepted into the VA AWWA/VWEA 2023-24 Leadership Academy. This is scheduled to begin at WaterJam on September 13th.

- PB3 and PB5 MCC Replacement
 - Variable Frequency Drives (VFDs) have been received.
 - Waiting for delivery of Motor Control Centers (MCCs) from Eaton. Estimated delivery is near the end of 2023.

Exhibit G

South Central Wastewater Authority For Month Ending August 31, 2023

Assets

Current Assets

Petty Cash	\$	500
Wells Fargo Operating Account	\$	3,946,035
Payments In-Transit To LGIP Fund	\$	(67,878)
Total Unrestricted Cash	\$	3,878,657

Wells Fargo Reserve	\$	3,916,414
LGIP-ERRF	\$	2,710,468
LGIP_Capital Improvements Reserve	\$	11,795,005
Total Restricted Cash	\$	18,421,887

Total Checking/Savings	\$	22,300,544
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Accounts Receivable	\$	297,356
Accounts Receivable-DEQ	\$	2,764,887
Prepaid Expenses	\$	56,909

Total Current Assets	\$	25,419,696
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Fixed Assets

Sewer System Plant	\$	33,836,540
Equipment & Vehicles	\$	2,569,833
Plant Machinery	\$	7,406,821
Construction in Progress	\$	5,363,339
Land	\$	92,968
Accumulated Depreciation	\$	(30,033,313)
Total Fixed Assets	\$	19,236,188

Other Assets

Inventory	\$	882,309
Def Out Res-Post ER Pension Con	\$	115,472
Deferred Outflows-GLI OPEB	\$	23,647
Deferred Outflows-Pension related	\$	129,927
Def Out Res-OPEB Assumptions	\$	5,145
Def Out Res-OPEB Experience	\$	27,867
Def Out Res-OPEB Contributions	\$	6,681
Right of Use Lease Assets	\$	10,643
Accum amort-right of use lease	\$	(5,940)
Total Other Assets	\$	1,195,751

Total Assets	\$	45,851,635
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Liabilities & Equity

Current Liabilities

Accounts Payable	\$	25,213
Total Current Liabilities	\$	25,213

Other Current Liabilities

Payroll Accruals	\$	245,383
Health Ins-ARWA	\$	46,284
Retainage Payable	\$	(47,878)
Accrued interest-GASB87	\$	11
Accrue for Nutrient Credit Purchases	\$	31,250
Lease Liability-Current	\$	3,020
Lease Liability- non-current	\$	1,799
Refunds Due Member Localities	\$	256,690
Total Other Current Liabilities	\$	536,559

Long Term Liabilities

Net OPEB Obligation	\$	110,561
Net OPEB Liability-GLI	\$	100,301
Def Infl-OPEB-Chg of Assumption	\$	-
Deferred Inflows-GLI OPEB	\$	26,636
Def Inf-Chg in Ex and Act	\$	42,089
Def Inf Res-Net Dif Pension Inv	\$	13,471
Def Inf Res-Pens Chg Assumption	\$	-
Def Inf Res-Pens Dif Proj/Act E	\$	173,852
Net Pension Liability	\$	119,429
Total Long-Term Liabilities	\$	586,339

Total Liabilities	\$	1,148,111
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Equity

Retained Earnings	\$	29,002,148
Initial Locality Contribution Cap.	\$	14,166,822

Net Income	\$	1,534,554
Total Equity	\$	44,703,525

Total Liabilities & Equity	\$	45,851,635
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South Central Wastewater Authority
YTD Income Statement for the period ending August 31, 2023

Wastewater Rate Center

Revenues and Expenses Summary

<i>Budget</i>	<i>Budget</i>	<i>Actual</i>	<i>YTD Budget</i>	<i>Variance</i>
<i>FY 22/23</i>	<i>Year-to-Date</i>	<i>Year-to-Date</i>	<i>vs. Actual</i>	<i>Percentage</i>

Operating Budget vs. Actual

Revenues

Septage/Misc Revenue	\$ -	\$ -	\$ 24,191	\$ 24,191	#DIV/0!
O&M Revenue	\$ 7,081,398	\$ 1,180,233	\$ 1,180,233	\$ 0	0.00%
Capitol Improvements Reserve	\$ 2,500,000	\$ 416,667	\$ 416,667	\$ (0)	0.00%
ER&RF Revenue	\$ -	\$ -	\$ -	\$ -	#DIV/0!
Total Operating Revenues	\$ 9,581,398	\$ 1,596,900	\$ 1,621,090	\$ 24,191	1.51%

Expenses

Personnel Cost	\$ 3,356,198	\$ 559,366	\$ 527,720	\$ (31,647)	-5.66%
Contractual/Professional Services	\$ 331,200	\$ 57,700	\$ 43,458	\$ (14,242)	-24.68%
Utilities	\$ 526,500	\$ 87,750	\$ 94,058	\$ 6,308	7.19%
Communication/Postage/Freight	\$ 37,500	\$ 6,250	\$ 6,657	\$ 407	6.52%
Office/Lab/Janitorial Supplies	\$ 80,500	\$ 13,417	\$ 16,562	\$ 3,146	23.45%
Insurance	\$ 70,000	\$ 70,000	\$ 74,413	\$ 4,413	6.30%
Lease/Rental Equipment	\$ 11,000	\$ 1,833	\$ 884	\$ (949)	-51.78%
Travel/Training/Dues	\$ 57,000	\$ 9,500	\$ 8,111	\$ (1,389)	-14.62%
Safety/Uniforms	\$ 49,000	\$ 8,167	\$ 7,713	\$ (454)	-5.56%
Chemicals/Sludge Disposal	\$ 1,650,000	\$ 275,000	\$ 238,846	\$ (36,154)	-13.15%
Repair/Maintenance Parts & Supplies/Purchases	\$ 550,000	\$ 91,667	\$ 61,322	\$ (30,345)	-33.10%
Total Operating Expenses	\$ 6,718,898	\$ 1,180,650	\$ 1,079,743	\$ (100,907)	-8.55%
Operating Suplus/(Deficit)	\$ 2,862,500	\$ 416,250	\$ 541,347	\$ 125,097	30.05%

Replacement Outlay Budget vs. Actual

Machinery & Equipment	\$ 65,000	\$ 65,000	\$ 10,462	\$ (54,538)	-83.91%
Instrumentation	\$ 10,000	\$ 10,000	\$ 26,070	\$ 16,070	160.70%
SCADA	\$ 85,000	\$ 85,000	\$ -	\$ (85,000)	-100.00%
Computer Equipment	\$ 15,000	\$ 15,000	\$ 2,892	\$ (12,108)	-80.72%
Motor Vehicles	\$ -	\$ -	\$ -	\$ -	#DIV/0!
Plant Equipment	\$ -	\$ -	\$ -	\$ -	#DIV/0!
Roof Repairs	\$ -	\$ -	\$ -	\$ -	#DIV/0!
Fixtures/Furniture	\$ -	\$ -	\$ -	\$ -	#DIV/0!
Total Replacement Outlay	\$ 175,000	\$ 175,000	\$ 39,424	\$ (135,576)	-77.47%

Nutrient Upgrade Budget vs. Actual

Nutrient Upgrade-Engineering	\$ -	\$ -	\$ 160,423	\$ 160,423	#DIV/0!
Nutrient Upgrade-Equipment	\$ -	\$ -	\$ -	\$ -	#DIV/0!
Nutrient Upgrade-Solids Handling	\$ -	\$ -	\$ 16,604	\$ 16,604	#DIV/0!

Other Income/Expense Budget vs. Actual

Nutrient Credit Purchases (Expense)	\$ 187,500	\$ 31,250	\$ 31,250	\$ -	0.00%
Nutrient Reduction	\$ -	\$ -	\$ -	\$ -	#DIV/0!
Interest-Income	\$ -	\$ -	\$ 143,151	\$ 143,151	#DIV/0!
Gain/Loss on Disposal	\$ -	\$ -	\$ -	\$ -	#DIV/0!
Other Income-Other	\$ -	\$ -	\$ -	\$ -	#DIV/0!
WQIF Reimbursement	\$ -	\$ -	\$ 1,097,756	\$ 1,097,756	#DIV/0!

**South Central Wastewater Authority
Executive Review
Cash and Debt Highlights
As of August 31, 2023**

	Highlights: SCWWA Cash Positions				30-Jun-23	31-Aug-23	Change	Explanation	
	Unrestricted Cash & Investments:								
		Petty Cash			\$ 500.00	\$ 500.00	\$ -	On-Hand Petty Cash for incidental expenses	
		Wells Fargo Operating Account			\$ 3,495,567.76	\$ 3,946,034.60	\$ 450,466.84	Financial Policy: All incoming O & M charges under service agreement	
		Wells Fargo Reserve Account			\$ 3,916,414.45	\$ 3,916,414.45	\$ -	Financial Policy: 50% of Authority's Annual O & M Budget	
		Payments In-Transit to LGIP Fund (Performed Quarterly)			\$ (117,979.42)	\$ (67,877.95)	\$ 50,101.47	Incoming Leachate Revenues-Moved Quarterly to LGIP Account	
	Restricted Cash and Investments:								
		LGIP-ERRF			\$ 2,710,467.97	\$ 2,710,467.97	\$ -	Resolution adopted by BOD, January 2018	
		LGIP-Capital Improvement Reserve			\$ 11,865,739.42	\$ 11,795,005.07	\$ (70,734.35)	Resolution adopted by BOD, January 2018	
	Total Cash and Investments				\$ 21,870,710.18	\$ 22,300,544.14	\$ 429,833.96		