



South Granville Water and Sewer Authority

415 CENTRAL AVE, SUITE B BUTNER, NC 27509

Please find below updates on the projects that appeared in the previous Topics Update Report. I will be happy to respond to any questions you may have following your review of the information found below.

Section 1 – High Priority/High Impact Projects

1) PFAS Testing and Mitigation Strategies Program

- a) **Background:** The term PFAS describes a class of compounds commonly referred to as “forever chemicals” as they do not break down and remain constant in the environment through the water and land. PFAS can be found in products and materials used regularly by most citizens, such as lotion, wax paper, water bottles, cleaning products, non-stick cookware, floss, and more. See the latest information about PFAS from the US EPA at <https://www.epa.gov/pfas>

On June 15, 2022, the US EPA announced the new Interim Health Advisory Levels (HAL’s) for PFOA and PFOS. Water utilities, such as SGWASA, are “passive receivers” of PFAS. SGWASA does not produce nor manufacture PFAS. Instead, the PFAS chemicals are present in source waters that are treated to produce drinking water.

Following the June 15, 2022 announcement by the US EPA regarding the HAL’s for PFOA and PFOS, SGWASA hired engineering consultant Hazen & Sawyer (“Hazen”) to assist SGWASA on its journey with PFAS/PFOS compliance, communications, testing, and mitigation strategies. At the September 13, 2022 Board of Directors meeting, representatives David Briley, PE and Alex Domrzalski, PE from Hazen provided a presentation entitled: PFAS, What is it? The presentation provided the Board members and the public the opportunity to learn more about PFAS. The presentation is available at the following link: <https://www.youtube.com/watch?v=PvAOCzimPIU>

Section 1 – High Priority/High Impact Projects (cont.)

PFAS reduction technologies include Granulated Activated Carbon (GAC), Reverse Osmosis (RO), and Ion Exchange (IX). One of these technologies, or a combination of technologies are used to reduce PFAS in the drinking water.

Cost estimates for the PFAS reduction program at SGWASA range from \$1.50-\$2.00 per Million Gallons Per Day (MGD) of finished water from a water plant. SGWASA's water plant is currently permitted to treat 7.5 MGD yet produces around 3 MGD. The cost for treating 7.5 MGD equals an investment range of \$11.25M-\$20M depending on the type(s) of technology used.

In the fall of 2022, the Department of Environmental Quality (DEQ) collected water samples at SGWASA's water treatment plant to analyze PFAS levels. The testing and analysis effort by the DEQ was part of a state-wide program to test water utilities.

In early March, 2023, SGWASA received the fall 2022 DEQ PFAS test results. At the 3/14/23 Board of Directors meeting, the Board of Directors approved a unit price contract with ECS Southeast, LLP., for the PFAS Sampling and Analysis Project, for the not-to-exceed amount of \$41,300.00. From April 2023 thru June 2023, ECS Southeast, LLP., performed PFAS water quality testing at Lake Holt (SGWASA's drinking water source) to determine the upstream sources of PFAS coming into Lake Holt. The results of the testing determined that no further testing was cost effective. The Technical Report of findings from this study are found on SGWASA's website at: <https://www.sgwasa.org/media/Reports/SGWASA%20PFAS%20Technical%20Memo%20from%20Hazen%20and%20Sawyer.pdf>

In July 2023, SGWASA hired engineering consultant CDM-Smith to assist SGWASA on its journey with PFAS/PFOS compliance. CDM-Smith was tasked with two items: 1.) creating a PFAS Pilot Testing Program, and 2.) submitting on SGWASA's behalf, two (2) NCDEQ State Revolving Fund (SRF) financing/grant applications. One NCDEQ SRF application was for the maximum grant amount of \$500,000 for the PFAS pilot testing, and the second NCDEQ grant was in the amount of \$22,000,000 for PFAS mitigation engineering design and construction. The two NCDEQ applications were submitted in early October. It normally takes six (6) months for NCDEQ to review/approve applications. Therefore, at best, SGWASA will know the application status in April 2024. The Pilot Testing project is associated to the SGWASA FY23-33 CIP ID# 101-07 at an estimated cost of \$500,000 for design work.

Section 1 – High Priority/High Impact Projects (cont.)

On April 10, 2024, the U.S. Environmental Protection Agency (EPA) announced the final National Primary Drinking Water Regulation (NPDWR) for six PFAS. The NPDWR establishes legally enforceable PFAS levels, called Maximum Contaminant Levels (MCLs), for six PFAS in drinking water. PFOA, PFOS, PFHxS, PFNA, and HFPO-DA as contaminants with individual MCLs, and PFAS mixtures containing at least two or more of PFHxS, PFNA, HFPO-DA, and PFBS using a Hazard Index MCL to account for the combined and co-occurring levels of these PFAS in drinking water. The EPA also finalized health-based, non-enforceable Maximum Contaminant Level Goals (MCLGs) for these PFAS.

Compound	Final MCLG	Final MCL (enforceable levels)
PFOA	Zero	4.0 parts per trillion (ppt) (also expressed as ng/L)
PFOS	Zero	4.0 ppt
PFHxS	10 ppt	10 ppt
PFNA	10 ppt	10 ppt
HFPO-DA (commonly known as GenX Chemicals)	10 ppt	10 ppt
Mixtures containing two or more of PFHxS, PFNA, HFPO-DA, and PFBS	1 (unitless) Hazard Index	1 (unitless) Hazard Index

The final rule requires:

- Public water systems must monitor for these PFAS and they have three years to complete initial monitoring (by 2027), followed by ongoing compliance monitoring. Water systems must also provide the public with information on the levels of these PFAS in their drinking water beginning in 2027.
- Public water systems have five years (by 2029) to implement solutions that reduce these PFAS if monitoring shows that drinking water levels exceed the MCLs.
- Beginning in five years (2029), public water systems that have PFAS in drinking water which violates one or more of these MCLs must take action to reduce levels of these PFAS in their drinking water and must provide notification to the public of the violation.

Section 1 – High Priority/High Impact Projects (cont.)

b) What are SGWASA's next steps in moving to compliance with the new NPDWR Rule?

SGWASA has prepared the following approach to meet the 5-year compliance deadline, as shown in the following steps:

- Design a PFAS Pilot Testing Program to test determine the most cost-effective PFAS removal techniques for SGWASA's water system.
 - This item was initiated and completed in late 2023.
- Conduct PFAS Pilot Testing beginning in mid-2004 thru early 2025.
 - The results of the PFAS Pilot Testing program will evaluate PFAS removal technologies. The results of these tests will provide the criteria for the engineering design.
 - SGWASA was recently notified by NCDEQ that SGWASA will receive a \$500,000 grant to perform the PFAS Pilot Testing program.
- Design the PFAS removal process equipment to coincide with the existing piping/systems within the SGWASA water treatment plant.
- Construct the PFAS removal process equipment.
- Start up the new PFAS removal process equipment.

- c) **Status** (■ In Progress/On Schedule): CDM-Smith completed the PFAS Pilot Testing Program Report in December 2023. In March 2024, the NCDEQ notified SGWASA regarding the status of the two (2) State Revolving Fund (SRF) PFAS funding applications that were submitted in October 2023. In summary, the NCDEQ approved the \$500K grant for the PFAS pilot testing program, yet, the NCDEQ did not approve funding for the \$22M grant request.

In the Fall of 2023, SGWASA received a \$5M appropriation (grant) from the state budget for infrastructure upgrades. The grant is being administered by the NCDEQ. Based on the recent information presented by the USEPA regarding the PFAS compliance deadlines, I recommend the \$5M grant be allocated to the PFAS compliance program (engineering/construction), thus allowing SGWASA to keep the PFAS removal project compliance schedule on track with the USEPA requirements. The topic of dedicating this grant to the PFAS reduction project will be discussed by the Board of Directors at a future Board meeting. Similar to other NCDEQ grants, NCDEQ will require certain documents to be completed prior to SGWASA moving forward with this project funding.

SGWASA is presently working with CDM-Smith to complete the NCDEQ required forms to move forward with the PFAS Pilot Testing Program project and project funding. Securing the \$500K NCDEQ grant will require SGWASA's Board of Directors to approve a Resolution accepting the terms and conditions of the grant. Furthermore, the SGWASA Board of Directors will also need to approve a contract with CDM-Smith for the PFAS pilot program. The Board of Directors will see these documents at an upcoming Board meeting, possibly as soon as June 2024.

Section 1 – High Priority/High Impact Projects (cont.)

The PFAS pilot program will commence once NCDEQ approves all of the required documents. Based on previous NCDEQ document approval schedules, the goal will be to start the PFAS pilot program in August 2024. The PFAS pilot program could take

2) I-85 Sanitary Sewer System Improvement Project

- a) **Background:** SGWASA serves the southern portions of Granville County North Carolina, including the towns of Creedmoor, Butner, and Stem. As development continues to expand north of the Raleigh- Durham area, SGWASA is continuing to receive significant developer interest in the area. Currently, the existing wastewater collection system is at its maximum capacity to reliably convey flow to the SGWASA Wastewater Treatment Plant (WWTP). SGWASA has initiated a moratorium on any additional development in the area surrounding Creedmoor and portions of Butner until additional collection system capacity is achieved.

In 2019 SGWASA received a comprehensive sanitary sewer system evaluation, commonly referred to as the I-85 Study. The I-85 Study evaluated the major sanitary sewer trunk lines and pump stations throughout the study area to determine the needed improvements to meet both short-term and long-term needs. The I-85 Study concluded by identifying 4 priority project areas, with an estimated design and construction cost of \$50+ million.

Beginning in 2000 SGWASA started working with professional engineering design consultant CDM-Smith on the I-85 Sanitary Sewer System Improvement Project. CDM-Smith is providing engineering design, financial application assistance, and bidding services for the I-85 Sanitary Sewer System Improvement Project. The current approved contract with CDM-Smith is \$5,896,600.

In the fall of 2021, the State of North Carolina granted \$35 million in American Rescue and Recovery Act (ARPA) funds to the South Granville Water and Sewer Authority for water and wastewater infrastructure improvements. In early 2022, the SGWASA Board of Directors agreed to dedicate the money toward the I-85 Sanitary Sewer System Improvement Project.

In 2022, the Board of Directors authorized the Executive Director to apply for a \$35 million low-interest loan with the United States Department of Agriculture (USDA). Since 2022, CDM-Smith and SGWASA staff have been providing all of the necessary forms and supporting documents to the USDA for the loan application. The loan application requires extensive information and studies.

- b) **Status of Engineering Design Work:** (■ In Progress/On Schedule): CDM-Smith continues to make great progress on this project. CDM-Smith recently completed the engineering design plans. CDM-Smith is now focused on completing the engineering specifications in preparation for the construction project public bidding that will occur in the summer of 2024. The estimated cost of the project is \$70 million.

Section 1 – High Priority/High Impact Projects (cont.)

CDM-Smith provided the SGWASA Board of Directors with a project update at the March 12, 2024 Board meeting. The presentation was well received and provided the Board of Directors and the public with the opportunity to learn more about the complex sanitary sewer improvement project.

On April 18, 2024, CDM-Smith & SGWASA held a public information open house to allow the public an opportunity to review the project in more detail. The public open house was a great success.

- c) **Status of USDA Loan:** (■ In Progress/On Schedule): CDM-Smith and SGWASA worked with the USDA on a \$35M loan package for 2 years. At the 2/13/24 SGWASA Board of Directors regular monthly meeting, Julia Johnson, Water/Environmental Programs Specialist with the USDA provided the Board of Directors with an overview of the Letter of Conditions for the \$35M loan. Following the presentation, the Board of Directors approved (by Motion) to accept the conditions set forth in a Letter of Conditions dated 2/13/2024; the associated Loan Resolution; and authorized the Chairman and Secretary to the Board to execute all forms necessary to obtain a loan and grant from the USDA.

Following the 2/13/24 Board of Directors regular monthly meeting, all required USDA loan documents were signed and then sent to Julia Johnson, Water/Environmental Programs Specialist with the USDA on 2/14/24 for additional signatures from the USDA.

During the next 3 years, all participating funding partners associated with this project will work collaboratively to ensure the project's success.

3) USEPA Lead & Copper Program Update Creates Mandatory Compliance Activities for All Water Service Providers.

- a) **Background:** The U.S. Environmental Protection Agency's (EPA's) Lead and Copper [Rule Revisions](#) went into effect December 16, 2021. The EPA's new Lead and Copper Rule better protects children and communities from the risks of lead exposure by better protecting children at schools and childcare facilities, getting the lead out of our nation's drinking water, and empowering communities through information. Please read more about this program below by clicking on the Fact Sheet.

EPA Lead & Copper Program [Fact Sheet](#)

During the next 5 years, federal funding will be dedicated to identifying/replacing lead service lines. By the compliance date of October 16, 2024, all water systems must submit an inventory of service lines to their state review agency. All water systems with inventory that includes lead service lines, and galvanized lines that are or ever were downstream of a lead service line, or lead status unknown service lines, must also provide a lead service line replacement plan.

Section 1 – High Priority/High Impact Projects (cont.)

- b) **Status** (■ In Progress/On Schedule): Following the issuance in 2022 of a Request for Qualifications (RFQ) for professional engineering services for the lead & copper program management, SGWASA selected Hazen & Sawyer as the firm best qualified to assist SGWASA in the management of the Lead & Copper Program. Hazen & Sawyer was awarded a contract in the amount of \$336,133.00 for the program management to meet the compliance requirements. Staff continues to meet bi-monthly with the Hazen & Sawyer project team to ensure the project remains on schedule.

In April 2024, the Hazen & Sawyer team started random field testing throughout the SGWASA service area to identify service line material types. This work involves field teams investigating public side and private side water line materials in the right-of-way by opening and inspecting the water meter box that serves the customer. The identification process is relatively quick and it will not interfere with a customer's water meter or water service.

Overall, Hazen & Sawyer/SGWASA are making great progress toward completing this important program by the compliance deadline of 10/16/2024.

4) **City of Creedmoor Service Area - Water Distribution System Improvements: Lake Rogers Booster Pump Improvements - This project is identified in the SGWASA FY23-33 CIP as PID# 101-09**

- a) **Background:** During 2022, the SGWASA/City of Creedmoor service area was analyzed in the newly created water distribution system hydraulic model. At the conclusion of the hydraulic analysis performed on the SGWASA-City of Creedmoor service area several tasks were identified to improve water quality issues. One of the primary tasks identified included further analysis and the possible rehabilitation/replacement of critical infrastructure within the Lake Rogers booster pump station (see image below). In summary, the Lake Rogers booster pump station is also an injection point for chemicals, such as chlorine. The chlorine injection equipment is not working properly and a new system is being designed to replace the old equipment.



Section 1 – High Priority/High Impact Projects (cont.)

- c) **Status** (■ In Progress/On Schedule): McGill Associates, SGWASA’s on-call engineering services provider completed the design work and bidding specifications for this project. This project is identified in the SGWASA FY23-33 CIP as PID# 101-09. H. G. Reynolds Company, Inc., of Henderson, North Carolina, was the lowest responsive, responsible bidder with a total bid amount of \$261,650.00.

In February 2024, the Board of Directors approved the contract with H.G. Reynolds for the upgrade project. The H. G. Reynolds Company, Inc., team started this project and anticipates completion this summer.

5) System Development Fees Calculation Review

- a) **Background:** North Carolina law requires the local governmental unit to update the System Development Fee (SDF) analysis at least every five years. SGWASA last completed the SDF evaluation in 2018, thus, a review was required in 2023. Upon completion of the detailed SDF analysis, SGWASA will know how to proceed with the SDF’s. McGill Associates (professional engineering firm) has been assigned this project at a cost of \$19,700.00
- b) **Status** (■ In Progress/ On Schedule): McGill Associates is finished with this project and the draft report is completed. The remaining milestones to complete the process of adoption are as follows:
- Post draft report (analysis) on website for public viewing and to solicit comments.
 - 45-Day (minimum) Public Comment period required.
 - Following the 45-day Public Comment period, SGWASA must hold a Public Hearing on the analysis.
 - Public Comments received must be considered for possible revisions or modifications to the analysis prior to adoption.
 - Following the Public hearing, SGWASA may consider adoption of the SDF analysis.
 - Via Ordinance or Resolution
 - Following adoption of the SDF analysis, SGWASA may set the System Development Fees (SDF’s).
 - The SDF’s must be published in the annual budget or rate plan or by ordinance.

SGWASA staff is developing the tentative schedule for the adoption of the SDF analysis report and SDF’s.

Section 1 – High Priority/High Impact Projects (cont.)

6) Wastewater Treatment Plant – Chemical Storage System Replacement - SGWASA FY23-33 CIP as PID# 107-02

- a) **Background:** The SGWASA Wastewater Treatment Plant (“Plant”) utilizes chemicals for the treatment process to meet North Carolina Department of Environmental Quality (NCDEQ) discharge requirements. The Plant currently has five alum and four caustic bulk chemical storage tanks. The existing tanks are made of fiberglass and have been in use for over twenty years. Over time, due to a combination of factors, all the tanks have deteriorated such that none are operating entirely as designed. Based on the current age and condition of the tanks and their associated components (plumbing, electrical, SCADA), SGWASA staff has determined the best course of action is to replace the chemical storage tanks with new tanks of modern materials and design.

In 2022, SGWASA’s on-call engineering consultant, McGill Associates was authorized to provide the necessary analysis, design, bidding and construction administration for the chemical storage tank replacement project. The proposed cost for these services is \$146,500. This project is identified in the SGWASA FY23-33 CIP as PID# 107-02 at an estimated cost of \$800,000.

- b) **Status** (■ In Progress/On Schedule): McGill Associates completed the design work for the project and advertised the project for public bidding in November and opened bids on December 7, 2023. A total of four (4) bids were received for the project.

WGK Construction, LLC, of Wake Forest, North Carolina, was the lowest responsive, responsible bidder with a total base bid amount of \$865,000. At the February 2024 Board of Directors meeting, the Board members approved a contract with WGK Construction, LLC. This project is in progress. Due to the length of time to obtain the custom chemical tanks for this project, the project is scheduled to be completed by Dec. 1, 2024.

9) SGWASA - City of Creedmoor Service Area Water Meter Replacement Program

- a) **Background:** SGWASA has approximately 6,600 water meters in its service area. The water meters are comprised of varying makes, models, ages, and read types (manual and automatic). The conglomeration of non-standardized water meters across the SGWASA service area places SGWASA in a demanding situation when it comes to reading meters, updating meters, replacing meters, etc. SGWASA has fallen short in reaching its goal (established in 2009) of replacing/upgrading all the water meters on a 10-year cycle.

During the past 24 months, SGWASA removed 500+ manual read water meters and replaced them with new SGWASA standard (dual AMR/AMI capable) water meter in various areas throughout the SGWASA service area – including Creedmoor. The meters were installed by SGWASA crews.

Section 1 – High Priority/High Impact Projects (cont.)

The upgraded meters provide SGWASA with the ability to collect the meter information via a radio receiver versus a manual reading. This upgrade has provided SGWASA with a more accurate and efficient way of reading water meters. This project cost SGWASA \$222,453.00 for the meters.

To further modernize SGWASA’s system-wide water meters, a water meter upgrade program is needed in the SGWASA/City of Creedmoor Service Area. The SGWASA/City of Creedmoor Service Area contains 2,200+ water meters. To date, only a few hundred water meters have been updated by SGWASA staff. With the remaining water meter change out count to be around 2,000 meters, staff is preparing a Request for Proposals (RFP) to collect proposals for water meter removal and installation. This project is identified in the SGWASA FY23-33 CIP as PID# 102-05 at an estimated cost of \$1,000,000.

- b) **Status** (■ In Progress): Staff has prepared the Request for Proposals and it is being reviewed by SGWASA’s attorney prior to issuance. The installation of the new water meters will occur in FY24-25.

10) SGWASA – Financial Software Upgrade

- a) **Background:** SGWASA has been using Harris Computer’s ICS (“Harris ICS”) brand software as its primary financial, billing, and customer service technology system since 2006. Since 2006, SGWASA has applied upgrades and enhancements to the software. Presently, the Harris ICS platform does not meet SGWASA’s current/future needs and it fails to provide important information to current utility customers. For example, inadequacies exist within the customer interface and payment portal, GPS capabilities, managed work order functionality, and reporting, just to name a few. Because of these issues, SGWASA’s executive management team decided to solicit proposals for new financial software.

Staff issued a Request for Proposals (RFP) in August 2023. During November 2023, SGWASA staff performed an extensive 2-day evaluation of the selected vendor’s software to ensure it meets SGWASA’s requirements. The Board of Directors approved an award of contract to Tyler Technologies at the January 9, 2004 Board of Directors meeting.

- b) **Status** (■ In Progress/On Schedule): SGWASA’s staff and Tyler Technologies implementation team have started the implementation process.

Section 2 –Board Meetings Topics Update - Past 90 days

Board Meeting Month/Year	Topic	Status
January 2024	Draft SDF Policy – Updated policy.	30-day comment period 1/10/24 – 2/9/24. Will bring item back to Board of Directors in Feb/March.
January 2024	FY23-24 Financial Software – Award of Contract	Draft Contract being developed.
January 2024	Joe Peed Lift Station Pump Maintenance – Sole Source Vendor Repairs	Pump station repairs made and the pumps were placed back into service on 1/19/24.
February 2024	USDA Letter of Commitment for a \$35M Loan for the I-85 Sanitary Sewer System Improvement Project	Approved by the Board of Directors.
February 2024	Amended System Development Fee Policy	Approved by the Board of Directors.
February 2024	FY23-24 Year-End Auditing Services – Award of Contract	Approved by the Board of Directors.
February 2024	Lake Road Water Booster Station Improvement Project - Contract Award	Approved by the Board of Directors.
February 2024	Wastewater Treatment Plant Chemical Storage System Improvement Project - Contract Award	Approved by the Board of Directors.
February 2024	Wastewater Treatment Plant Chemical Storage System Replacement Project- Amend Existing Engineering Services Task Order 22-1 for Construction Administration Services	Approved by the Board of Directors.
February 2024	FY23-24 Budget Amendments- #7 & #8	Approved by the Board of Directors.
March 2024	I-85 Sanitary Sewer System Improvement Project Update – Presentation	No action required.
March 2024	Annual Surplus Property Auction – Information Only	No action required.
March 2024	FY 2023-2024 Budget Amendment # 9	Approved by the Board of Directors.
March 2024	Annual Water Supply Plan Approval Resolution	Approved by the Board of Directors.
March 2024	SGWASA Website Upgrade - Presentation	New SGWASA website launched successfully on 4/27/24

Section 3 - Utility Operations Highlights During the Reporting Period

- a) **Water Distribution System Topics**
 - i) None.
- b) **Wastewater Collection System Topics**
 - i) **Sanitary Sewer Overflows (SSO's): None.**
 - ii) **Other Topics:**
 - (1) None.
- c) **Water Treatment Plant Topics**
 - i) None.
- d) **Wastewater Treatment Plant Topics**
 - i) None.
- e) **Utility Customer Service/Administration Topics**
 - i) Worked through a customer service complaint regarding high meter reads and leak adjustments.

Section 4 - Staffing Updates

The FY23-24 Budget authorized 47 full-time employees. Current staffing levels are hovering around 90%.

Following is a breakdown of the status of several vacancies.

- 1) **Vacant Positions**
 - a) **Asst. Director (1)** – This position was authorized by the Board of Directors to replace the vacant Engineering Director's position. Staff is being assisted by a consultant for this job search.
 - b) **Utility Engineer (1)** – Vacant on 8/1/23. This position is advertised.
- 2) **Vacant Positions – Currently Advertising and/or Interviewing**
 - a) Utility Pump Station Mechanic
 - b) Utility Maintenance Mechanic
- 3) **Vacant Positions – Final Candidate Selected/Pending Background Checks**
 - a) Water Treatment Operator (1)
- 4) **Recent New Hires**
 - a) Utility Pump Station Mechanic
 - b) Wastewater Treatment Operator
- 5) **Recent Internal Promotions**
 - a) None.

Section 5 - Executive Director – Activities Recently Completed

Activities Recently Completed

- 1) **Project-Related Meetings:** I attended the following project-related meetings during the reporting period to ensure forward progress and schedule adherence.
 - a) Lead and Copper Program.
 - b) PFAS Testing Program.
 - c) I-85 Sanitary Sewer System Improvement Project.

Special Note(s) from the Executive Director

None.

Attachments

- 1) None.