South Granville Water and Sewer Authority

415 Central Ave, Suite B Butner, NC 27509

TO: SGWASA Board Members

FROM: Scott N. Schroyer, Executive Director *SNS*

TOPIC: Topics Update Report for April 2025

DATE: Report Issue Date 5/7/25

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

Section 1 – High Priority/High Impact Projects

1) PFAS Mitigation Strategies Program

a) **Background:** PFAS, commonly known as "forever chemicals," are a class of compounds that persist in the environment, particularly in water and land, without breaking down. These chemicals are found in various everyday products and materials, including lotion, wax paper, water bottles, cleaning products, non-stick cookware, dental floss, and more. For the latest information on PFAS, visit the US EPA website at https://www.epa.gov/pfas.

Water utilities like SGWASA are "passive receivers" of PFAS, meaning they do not produce or manufacture these chemicals. Instead, PFAS are present in the source waters that are treated to produce drinking water.

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

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

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 until April 26, 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.

Current PFAS Reduction Technologies

Current technologies for reducing PFAS in water include Granulated Activated Carbon (GAC), Reverse Osmosis (RO), and Ion Exchange (IX). The costs associated with these technologies range from $2.00 to $4.00 per gallon of finished water produced by a water treatment plant. SGWASA's water treatment plant is permitted to treat 7.5 Million Gallons per Day (MGD). Therefore, the cost of treating 7.5 MGD of water to reduce PFAS levels in compliance with EPA regulations would require an investment ranging from $15 million to $30 million, depending on the specific PFAS reduction technology employed.

In the fall of 2022, the Department of Environmental Quality (DEQ) collected water samples at SGWASA's water treatment plant to analyze PFAS levels. This testing and analysis were part of a statewide program aimed at assessing water utilities. For more information about this program, please visit the DEQ website: DEQ PFAS Sampling of Public Water Systems.

In July 2023, SGWASA engaged engineering consultant CDM-Smith to assist in meeting the PFAS regulations. CDM-Smith was tasked with two primary objectives:

1. Creating a PFAS Pilot Testing Program
2. Submitting two NCDEQ State Revolving Fund (SRF) financing/grant applications on behalf of SGWASA

The first NCDEQ SRF application was for the maximum grant amount of $500,000 to fund the PFAS pilot testing. The second application sought $22,000,000 for the engineering design and construction required for PFAS mitigation. Both applications were submitted in early October 2023.

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

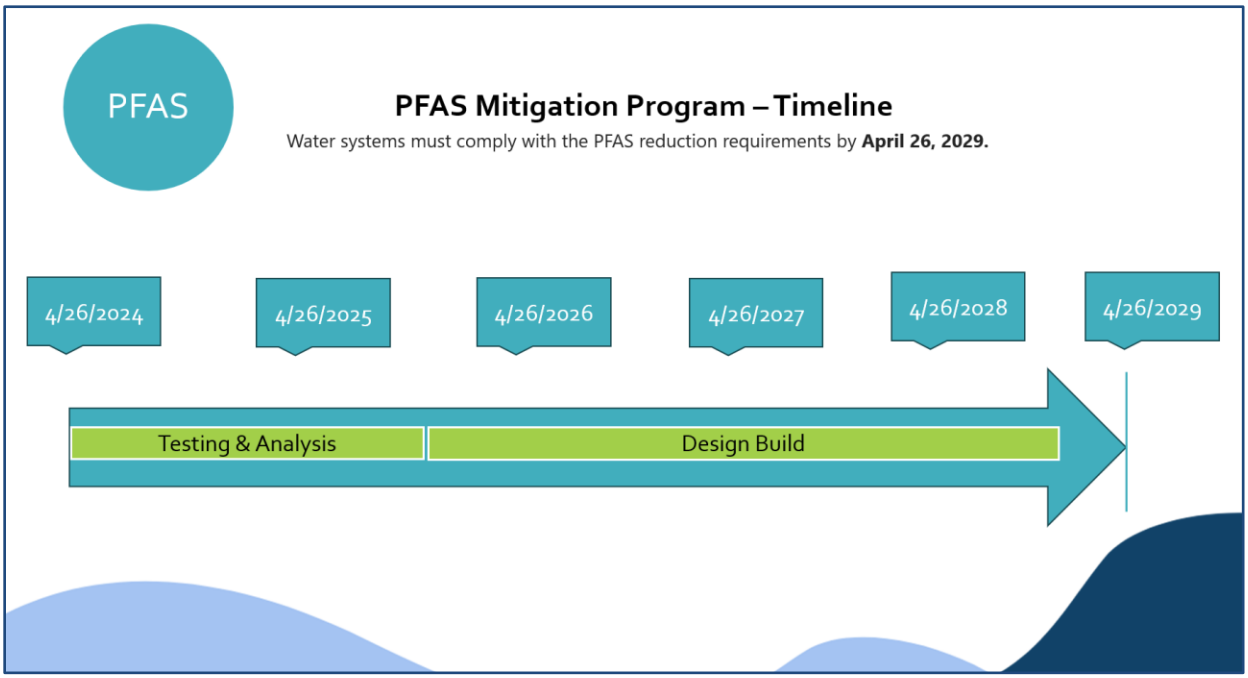
SGWASA has prepared the following approach to meet the April 26, 2029, deadline, as shown in the following steps:

Item #	Item	Status	Comments	Cost
1	**Design a PFAS Pilot Testing Program to determine the most cost-effective PFAS removal techniques for SGWASA's water system.**	The Pilot Testing design was initiated and completed in late 2023.	None.	SGWASA spent $45,485 on this task.
2	**In 2023 SGWASA applied for NCDEQ State Revolving Fund (SRF) financing/grant for the maximum grant amount of $500,000 for the PFAS pilot testing, and $22,000,000 for PFAS mitigation engineering design and construction.**	SGWASA received a $500,000 grant from the NCDEQ to perform the PFAS Pilot Testing program. SGWASA was not awarded funding for the design and construction.	SGWASA will continue to apply for NCDEQ grant funding for the $26M design and construction for PFAS removal.	SGWASA spent $15,985 on this task.

Item #	Item	Status	Comments	Cost
3	**In 2023, SGWASA received a $5M grant from the state budget for water/sewer. NCDEQ 1.5% grant administration fee = $4.925 M to spend.**	In January 2025, SGWASA and CDM Smith submitted to the NCDEQ a Request for Funding for the engineering design, bidding services, and construction for the PFAS removal project.	SGWASA received information from the NCDEQ in March 2025 regarding a Notice of Intent to Fund the work associated to the PFAS removal project.	SGWASA will pay $75,000 for 1.5% grant administration fee.
4	**Conduct PFAS Pilot Testing October 2024 to August 2025.**	In progress.	The results of the PFAS Pilot Testing program will be used to provide the criteria for engineering design and construction.	SGWASA received a $500,000 grant from the NCDEQ to perform the PFAS Pilot Testing program.
5	**Once NCDEQ provides official/final approval regarding the use of the $5M grant, SGWASA will seek authorization from the Board of Directors to enter a contract with CDM Smith for the engineering design of the PFAS removal at the SGWASA water plant.**	In March 2025, SGWASA received a Letter of Intent to Fund the PFAS reduction project. Staff is completing the required forms needed to secure the funding for the project.	SGWASA is evaluating a design-build process to shorten the construction time to meet the April 2029 compliance date.	
6	**Seek additional grant funding/SRF loan funding for estimated cost of PFAS removal**	Ongoing.	If grant(s) cannot be obtained, then SGWASA will determine what financing sources will be used to fund the project.	TBD

Item #	Item	Status	Comments	Cost
	construction of $26M.			
7	**Construct the PFAS removal process equipment.**	Planned.	Goal to complete the PFAS removal project: 1/1/2029.	TBD
8	**Place the new PFAS removal process equipment into operation prior to 4/26/29.**	Planned.	Additional annual operating costs will be associated with the new operation. These costs will be factored into the annual operating budgets.	TBD

c) **Status** (In Progress/On Schedule): CDM-Smith is currently performing the PFAS Pilot Testing Program. The PFAS Pilot Testing Program is scheduled to be completed by October 2025. The project timeline is shown below.



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

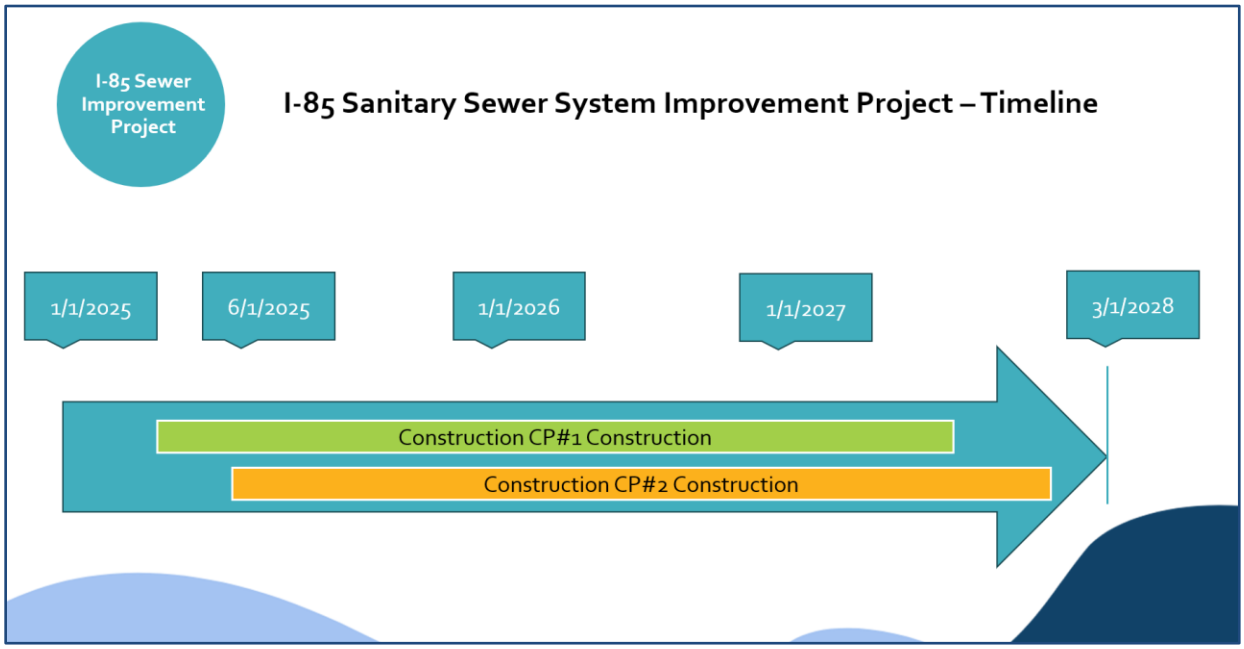
2) I-85 Sanitary Sewer System Improvement Project

a) **Background:** SGWASA serves the southern portions of Granville County North Carolina, including the City of Creedmoor, and the Towns of Butner, and Stem. Currently, portions of the existing wastewater collection system is at its maximum capacity to reliably convey the flow to the SGWASA Wastewater Treatment Plant (WWTP). Due to this issue, in 2018, SGWASA instituted a moratorium on additional development in the area surrounding the City of Creedmoor and portions of the Town of Butner, until additional collection system capacity is provided.

Between 2019 and 2025, SGWASA worked with many partners to design and fund a solution to resolve the problems identified in earlier studies regarding sanitary sewer capacity problems throughout certain SGWASA service areas.
To date, CDM-Smith has completed the engineering design plans for the project and divided the project into two separate construction packages to better align with the various construction activities and funding packages associated with the project. The two construction packages are identified as Construction Package #1 (CP#1) and Construction Package #2 (CP#2). The total estimated cost of the project is $75,036,000.

CP#1 was publicly bid in late July 2024, and the bids were opened in October 2024. At the December 10, 2024, Board of Directors meeting, the Board of Directors approved a construction contract with Haren Construction for $34,823.000. CP#2 is scheduled for public bidding in the first half of 2025, with a tentative construction start date in the summer of 2025.

Status: (■ In Progress/On Schedule): CP#1: Heron Construction started construction on 4/1/25. CP#1 includes two new pump stations being constructed along with the installation of new pipes. CP#2: The project is currently advertised for public bid. Bids are scheduled to be opened on 5/22/25. Following the bid opening, an award of contract will be scheduled as soon as possible (June/July) so that the project can start. The entire sanitary sewer improvement project is scheduled for completion by March 1, 2028. The project timeline is shown below.



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

Status (In Progress/On Schedule): Since 2022, SGWASA has been working with Hazen & Sawyer on the management of the program.

Note: On 10/8/24, Hazen & Sawyer provided the SGWASA Board of Directors with a Lead and Copper Program status update presentation. The presentation begins around the 7-minute mark in the meeting video. The YouTube video link is found below.
https://www.youtube.com/watch?v=F1aXlKAAebQ

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

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

a) **Background:** SGWASA oversees approximately 6,600 water meters across its service area. In recent years, SGWASA has undertaken a project to replace outdated water meters with new ones throughout its service regions, including parts of the City of Creedmoor.

The SGWASA/City of Creedmoor service area specifically contains 2,200 water meters. Due to the aging infrastructure, most of these meters require replacement. To address this need efficiently, SGWASA decided that hiring a contractor specializing in water meter replacements and upgrades would be the most cost-effective solution. This initiative is listed in the SGWASA Capital Improvement Plan (CIP) as PID# 102-05, at a cost of $1,000,000.

b) **Status** (■ In Progress/On Schedule): At the November 12, 2024, Board of Directors meeting, the Board of Directors approved three legislative items to advance this project to completion. The three legislative items approved by the Board of Directors included: an award of contract with Vanguard Utility Services for the installation of the new water meters; approval to purchase new water meters from the Core & Main Company; and approval to purchase new water meter hardware from the Miller Supply Company. All new water meters and associated water meter hardware are in stock at SGWASA and ready for installation.

At the Board of Directors meeting on November 12, 2024, three legislative items were approved to expedite the completion of this project. These items included:

- Awarding a contract to Vanguard Utility Services for the installation of new water meters.
- Approving the purchase of new water meters from Core & Main Company.
- Approving the purchase of new water meter hardware from Miller Supply Company.

All new water meters and associated hardware are currently in stock at SGWASA and ready for installation.

Since December 2024, SGWASA staff have engaged in multiple discussions with Vanguard Utility Services to refine the schedule for installing the new water meters. Due to a financial software upgrade project planned for spring 2025, SGWASA staff decided to commence the water meter replacement program after the software upgrade. This approach prevents the meter upgrade database from being split between two software systems. Consequently, the water meter replacement project is scheduled to begin after July 1, 2025.

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

5) SGWASA – Financial Software Upgrade

a) **Background:** Since 2006, SGWASA has relied on Harris Computer's ICS software as its primary system for financial, billing, and customer service operations. Despite periodic upgrades and enhancements, it was determined in 2022 that the Harris ICS platform no longer met SGWASA's evolving needs. Consequently, SGWASA's executive management team decided to seek proposals for new financial software.

In August 2023, SGWASA staff issued a Request for Proposals (RFP) for new financial software and implementation services. At the January 9, 2024, Board of Directors meeting, the Board approved a contract with Tyler Technologies for the new financial software and implementation services.

b) **Status** (■ In Progress/On Schedule)**:** The implementation process for the new financial software is expected to take up to 18 months, with a scheduled completion date of June 30, 2025. After several months of implementation activities, SGWASA's finance team and Tyler Technologies launched several modules of the new utility billing software in mid-April 2025. As a result, customers received their final bill from the old utility billing system in April and will receive their first utility bill from the new Tyler Technology system in May. The new software will introduce many enhanced customer service features for SGWASA utility customers.

6) Water Treatment Plant Filter Analysis: Filter Media Replacement Needed

a) **Background:** According to the National Centers for Environmental Information (NCEI), North Carolina experienced its second warmest year on record in 2024, just behind the warmest year in 2019. Remarkably, all twelve months in 2024 were warmer than the historical average statewide. This prolonged warm weather led to increased water demand throughout the SGWASA service area. Particularly between May and September, SGWASA encountered water production issues related to the water filtering process. The five water filters struggled to maintain their normal production levels, unable to keep up with the heightened demand.

To investigate the issues with the water filter system, SGWASA contracted Hazen, one of its on-call professional engineering firms, to conduct a detailed examination. Hazen began their work in mid-July 2024 and completed their investigation, along with a final technical memo, in December 2024. Based on their observations and data analyses, Hazen recommended the following improvements and optimizations for the filter operations at the SGWASA Water Treatment Plant (WTP):

- **Filter media replacement:** The existing filter media is 22 years old, which exceeds the industry standard for media life of 10-15 years and should be replaced immediately.
- **Rehabilitation of SGWASA Filters:** The underdrain nozzles in the filter vessels should be further inspected and any failed or broken nozzles should be replaced.
- **Consider Replacing Backwash Supply Pump:** The existing backwash pump is not capable of achieving the needed filter media expansion of 30% to provide proper removal of solids
- **Monitor Media Depths**. Plant Operations should plan to monitor media depths annually to track media loss.
- **Source Water Algae Monitoring Program**. Since algae enumerations indicated the presence of known filter clogging species, a routine algal monitoring program beginning in 2025 is recommended.
- **Modify the backwash procedure.** To combat solids retention, it is recommended that the backwash procedure be modified to increase the duration of the high-rate portion of the water backwash.

Based on the recommendations contained in the technical report, in December 2024, SGWASA staff asked Hazen to draft a scope of work (including fees) for further analysis, design, bidding, and construction project management for the water filter media replacement. In January 2025, SGWASA received the draft scope of work. The scope of work was estimated to take 6 months at a cost of $318,900. This cost did not include the actual cost for the filter replacement, which could range between $500,000-$750,000.

Based on the draft scope of work, primarily focusing on the amount of time to complete the work and the cost of the professional services, less the actual construction cost, SGWASA staff decided to seek cost estimates from several filter media replacement vendors to evaluate the total estimated cost for the entire project. Following this evaluation in February, SGWASA determined that scope modifications were needed, and returned to working with Hazen to modify their scope of work.

On March 11, 2025, SGWASA staff requested the Board of Directors review/approve the scope of work provided by Hazen for the project, at a total cost of $222,800. Furthermore, SGWASA staff requested a 10% contingency for the work, bringing the total project cost to $245,080. The Board of Directors approved the scope of work and the contingency.

b) **Status (■ In Progress/On Schedule)**: During the week of March 21, 2025, SGWASA staff provided Hazen with a notice to proceed on the work. The project schedule is as follows:

Submittal	Due Date
90% Design Submittal (drawings, specifications, and cost opinion.	3 months from Notice to Proceed – by July 1, 2025.
Bid-Ready Submittal	2 weeks following resolution of all permitting/submittal comments – By August 1, 2025.
Bid Project	TBD
Bid Award by Board of Directors	TBD
Construct Project	TBD

Section 2 –Board Meetings Topics Update - Past 90 days

Board Meeting Month/Year	Topic	Status
February 2025	Annual Meeting – Election of SGWASA Officers	The Board elected: Jimmy Gooch, Granville County Board Member as the SGWASA Board Chair; Georgana Kicinski, City of Creedmoor Commissioner as SGWASA Vice Chair
February 2025	FY24-25 2nd Quarter Financial Review – Presentation	No Board Action Required.
February 2025	Fiscal Year 2024-2025 Budget Amendment # 12	Approved by the Board of Directors.
March 2025	Water Treatment Plant Filter Media Replacement Project: Requesting approval for the Engineering Scope of Services Proposal from Hazen and Sawyer	Approved by the Board of Directors.
March 2025	Wastewater Collection System Upgrades: Capital Project Ordinance Amendment 2	Approved by the Board of Directors.
April 2025	Drinking Water State Revolving Fund-Resolution of Support Related to PFAS Water Treatment Improvements	Approved by the Board of Directors.
April 2025	FY24-25 Year-End Auditing Services – Award of Contract	Approved by the Board of Directors.
April 2025	Fiscal Year 2024-2025 Budget Amendment #15	Approved by the Board of Directors.

Section 3 - Utility Operations Highlights During the Reporting Period

Water Distribution System Topics

1. None

Wastewater Collection System Topics

1. Sanitary Sewer Overflows (SSO's): None
2. Other Topics: None

Water Treatment Plant Topics

1. No operating issues

Wastewater Treatment Plant Topics

1. No operating issues

Utility Customer Service/Administration Topics

1. No operating issues

Section 4 - Staffing Updates

The FY24-25 Budget authorized 49 full-time employees. The current staffing level is at 96%. The following is a breakdown of the status of several vacancies.

1) **Vacant Positions**
   a) Utility Engineer (1) – Vacant since 8/1/23.
      i) Due to the lack of success in filling this position since August 2023, staff will recommend changes to this position in the FY25-26 Budget.
2) **Vacant Positions – Currently Advertising and/or Interviewing**
   a) Wastewater Pump Station Mechanic (2)
   b) Utility Maintenance Mechanic (1)
3) **Vacant Positions – Final Candidate Selected/Pending Background Checks**
   a) Wastewater Treatment Plant Operator (1)
4) **Recent New Hires**
   a) None.
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) UNRBA meetings.
   b) Various customer relations meetings with SGWASA member communities.
   c) Lead and Copper Program.
   d) PFAS Reduction Program.
   e) I-85 Sanitary Sewer System Improvement Project.

Special Note(s) from the Executive Director

1) None.

Attachments

1) None.