



South Granville Water and Sewer Authority

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TO: SGWASA Board Members
FROM: Scott N. Schroyer, Executive Director *SNS*
TOPIC: Topics Update Report for February 2025
DATE: Report Date: March 4, 2025

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 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, dental 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 or 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 with PFAS/PFOS compliance, communications, testing, and mitigation strategies. At 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 gain experience 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.)

Traditional PFAS reduction technologies include Granulated Activated Carbon (GAC), Reverse Osmosis (RO), and Ion Exchange (IX). Both public and private entities are developing new PFAS removal/reduction technologies. Costs associated with the traditional PFAS reduction technologies range from \$1.50-\$3.50 per gallon of finished water from a water plant. SGWASA's water plant is permitted to treat 7.5 Million Gallons per Day (MGD) yet currently produces an average of 3.5 MGD. The cost for treating 7.5 MGD of water for PFAS reduction equals an investment range of \$11.25M-\$26.M 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 assess 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 through 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 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, following the work with Hazen & Sawyer, SGWASA hired engineering consultant CDM-Smith to assist SGWASA with its PFAS 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 2023. The Pilot Testing project is associated to the SGWASA FY23-33 CIP ID# 101-07 at an estimated cost of \$500,000.

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. These 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.

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

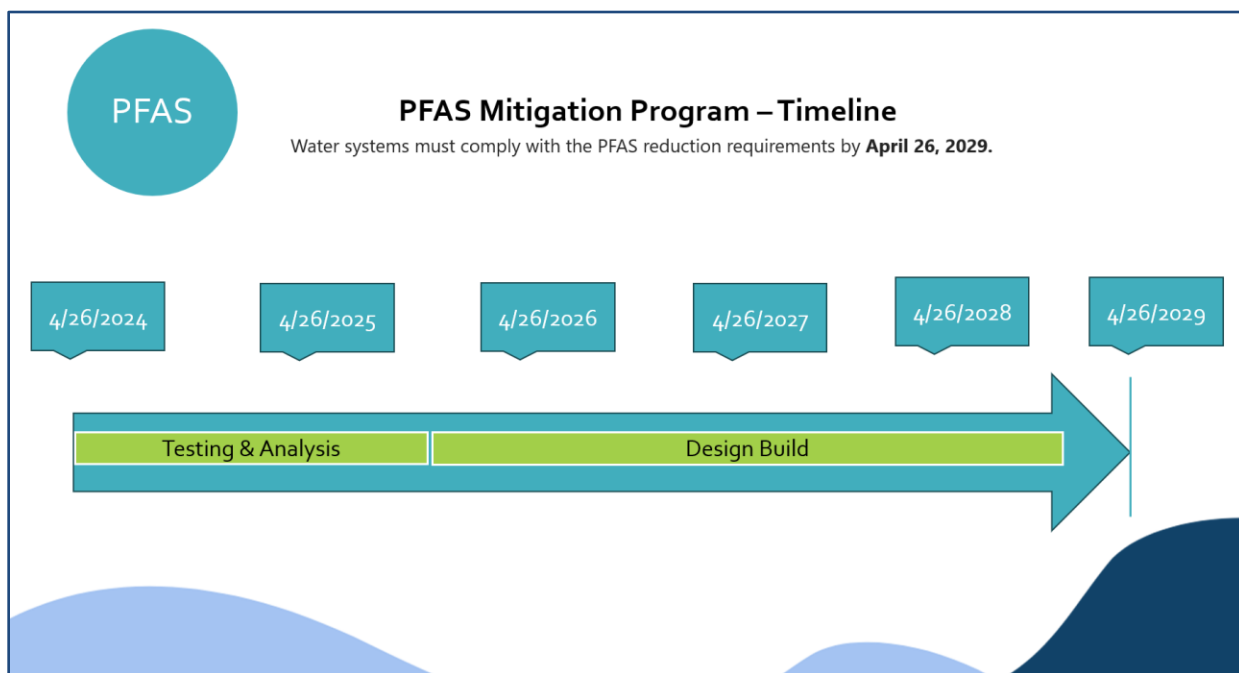
SGWASA has prepared the following approach to meet the April 26, 2029, deadline, as shown in the following steps:

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.	This work was started in mid- 2023.	\$45,485 spent 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 \$20m-\$26M design and construction for PFAS removal. SGWASA applied in the Fall of 2024 for funding. The NCDEQ will announce funded projects in the 1 st quarter of 2025.	\$15,985 spent on this task.
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 expects to receive information from the NCDEQ in March 2025 regarding the Notice of Intent to Fund the work associated to the PFAS removal project.	\$75,000 for 1.5% grant administration fee.
4	Conduct PFAS Pilot Testing beginning in mid-2024 to run through 2025.	In progress.	The results of the PFAS Pilot Testing program will evaluate PFAS removal technologies. The results of these tests will provide	SGWASA received a \$500,000 grant from the NCDEQ to perform the

Item #	Item	Status	Comments	Cost
			the criteria for engineering design.	PFAS Pilot Testing program.
5	Once approval is received from NCDEQ 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.	SGWASA is awaiting information from the NCDEQ regarding SGWASA's Request for Funding. This contract will be provided to the Board of Directors in FY24-25 once information is received from the NCDEQ.	Evaluating a design-build process to shorten the construction time.	
6	Seek additional grant funding/SRF loan funding for estimated cost of PFAS removal construction of \$26M.	Ongoing.	If grant(s) cannot be obtained, then SGWASA will determine what financing sources will be used to fund the project.	\$26M
7	Construct the PFAS removal process equipment.	Not Started.	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.	Not Started.	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 in mid-2025. SGWASA is awaiting information from the NCDEQ regarding the Intent to Fund the PFAS removal project. At project timetable is shown on the following page.

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 towns of Creedmoor, 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 Creedmoor and portions of Butner, until additional collection system capacity is provided.

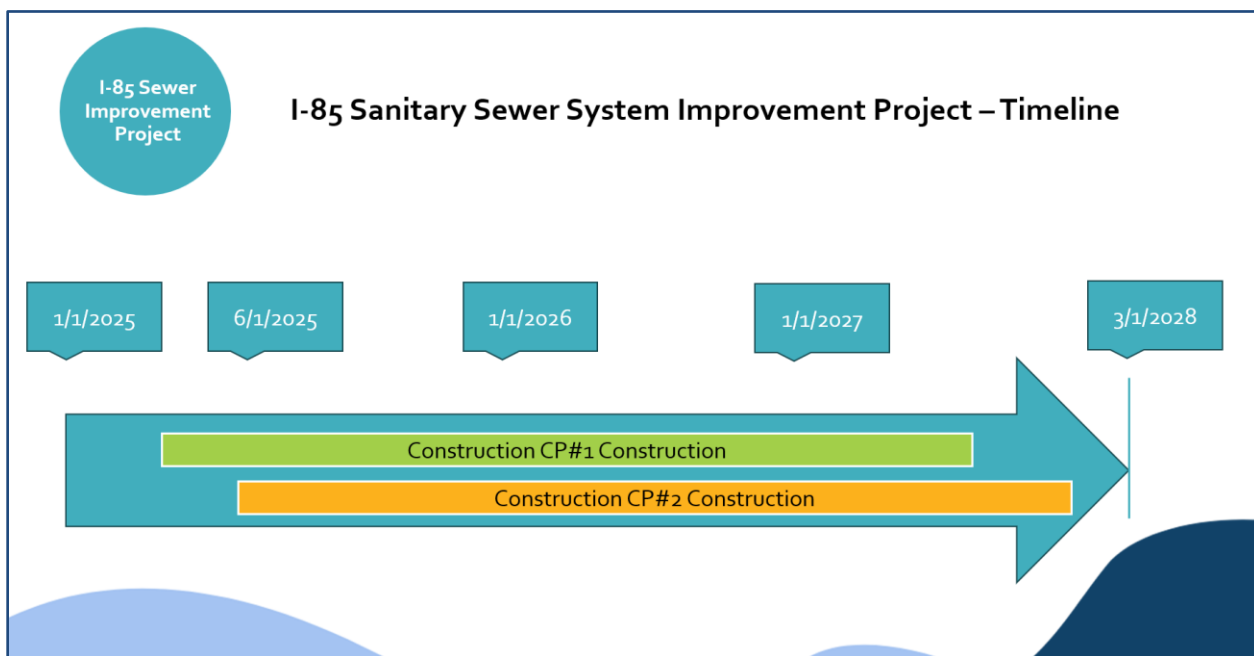
Between 2019 and 2025, SGWASA worked diligently with many partners to design and fund a solution to resolve the problems identified in earlier studies regarding sanitary sewer capacity problems throughout certain service areas.

To date, CDM-Smith completed the engineering design plans and created two construction packages to align with the various funding packages associated with the entire project. The two construction packages, known as Construction Package #1 (CP#1) and Construction Package #2 (CP#2) are being advertised, awarded for construction, and built on separate schedules. The estimated cost of the project is \$70 million.

CP#1 was publicly bid in late July 2024, and the bids were opened in October 2024. SGWASA received two bids for CP#1. The Board of Directors approved a contract with Haren Construction for \$34,823.00 at the December 10, 2024, Board of Directors meeting. CP#2 is scheduled for public bidding in the first half of 2025.

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

Status: (■ In Progress/On Schedule): CDM-Smith is actively working with Heron Construction to prepare for the upcoming construction, scheduled for the summer of 2025. Additionally, CDM-Smith is awaiting final approval from the USDA prior to bidding CP#2. The approval from the USDA is expected by April 1, 2025. Following, CP#2 will be publicly bid. Construction on CP#2 will commence sometime in the late summer/early fall. The entire project is scheduled for completion by March 1, 2028.



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=F1aXIKAAebQ>

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

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

- a) **Background:** SGWASA has approximately 6,600 water meters throughout its service area. During the past several years, SGWASA has replaced old water meters with new water meters throughout its service areas, including the City of Creedmoor.

The SGWASA/City of Creedmoor service area contains 2,200 water meters. 2,000 of the 2,200 water meters in the SGWASA/City of Creedmoor service area need to be replaced with new water meters. Based on the number of water meters that need to be upgraded, SGWASA determined the most cost-effective way to replace these water meters was to hire a contractor who specializes in water meter upgrades. This project is identified in the SGWASA 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.

During January, SGWASA staff met with Vanguard Utility Services staff to discuss the schedule for meter replacement. The water meter replacement project schedule will be provided in future updates; however, a tentative start date is in July 2025.

5) 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. The Harris ICS platform does not meet SGWASA’s current/future needs, and it fails to provide important information to current utility customers. Because of these issues, SGWASA’s executive management team has 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, 2024, Board of Directors meeting.

- b) **Status** (■ In Progress/On Schedule): SGWASA’s staff and Tyler Technologies implementation team started the implementation process. The implementation process will take 12-18 months to complete. The scheduled completion date is 6/30/25.

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

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

- a) **Background:** According to the National Centers for Environmental Information (NCEI), During 2024, North Carolina experienced the 2nd warmest year on record, just behind the warmest year in 2019. Notably, all twelve months in 2024 were warmer than the historical average statewide. The warm weather temperatures throughout the year caused higher demand for water usage throughout the SGWASA service area. During the year, most markedly between the months of May through September, SGWASA experienced some water production problems related to the water filtering process. In summary, the five water filters could not keep up with their normal production for water processing. In summary, this meant that the filters struggled to keep up with demand.

To better understand what was occurring with the filter system, SGWASA contracted with Hazen, one of SGWASA's on-call professional engineering companies, to perform a detailed investigation of the water filter system. Hazen started their work in mid-July 2024 and concluded their work and final technical memo in December 2024.

Based on the observations and data analyses performed during the filter investigation, the following items were recommended for the improvement and optimization of 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.

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

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 does not include that 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 first to seek cost estimates from several filter media replacement vendors to evaluate the total estimated cost for the entire project.

- b) **Status** (■ In Progress): SGWASA staff met with filter media replacement vendors in February to obtain a cost estimate for the filter media replacement. Based on these estimates, SGWASA staff asked Hazen to modify their scope of work to lower the overall cost. SGWASA staff is preparing legislation to bring to the Board of Directors to consider approval of the engineering task order associated to this project.

Note: This is a high priority project that needs to be funded and constructed this calendar year.

Section 2 –Board Meetings Topics Update - Past 90 days

Board Meeting Month/Year	Topic	Status
December 2024	Fiscal Year 2024-2025 Budget Amendment #8 & #9	Approved by the Board of Directors.
January 2025	Task Order with CDM Smith for Updating SGWASA’s Water and Sewer Standard Details and Specifications.	Approved by the Board of Directors.
January 2025	I-85 Sanitary Sewer Improvement Project: Escrow Agreement for Stormwater Construction Performance Security	Approved by the Board of Directors.
January 2025	Emergency Spending Authorization-Lake Road Water Booster Pump Station Water Leak.	Approved by the Board of Directors.
January 2025	Check and Purchase Order Countersigning Authority Resolution– Revision	Approved by the Board of Directors.
January 2025	Fiscal Year 2024-2025 Budget Amendment #10 & #11	Approved by the Board of Directors.
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	Approved by the Board of Directors.
February 2025	Fiscal Year 2024-2025 Budget Amendment # 12	Approved by the Board of Directors.

Section 3 - Utility Operations Highlights During the Reporting Period

a) **Water Distribution System Topics**

i) **December 2024: City of Creedmoor Service Area - Water Distribution System Lake Rogers Booster Pump Station – Frozen Pipe Break and Interior Damage**

(1) On the morning of Saturday, December 7, 2024, a water hammer arrester control device connected to a 2-inch diameter waterline inside the Lake Rd. booster pump station attic burst from being frozen, causing a significant amount of water to drain from the ceilings, down the walls, and onto the floor, thus causing significant damage. Due to this event, water infiltrated electrical equipment that controls the water pumps. As a result, the water pumps could not pump water into the Creedmoor water distribution system, nor the water tower. A full report on this item was presented to the Board of Directors at the January 14, 2025, Board meeting. The repair contractors started their work in early January and are wrapping up the work.

(2) Crews responded to several water main breaks in the Town of Butner area throughout the month of February. All water main break repairs were completed in a timely manner with few customer service disruptions.

b) **Wastewater Collection System Topics**

i) **Sanitary Sewer Overflows (SSO's):**

(1) A sanitary sewer backup occurred in the City of Creedmoor near 301 Watson Street. Unfortunately, the sewer blockage caused sewage to back up into a customer's home. Crews found non-sewer related debris in the sewer that caused the sewer backup. Following the backup, SGWASA crews sewer jetted (cleaned) the sewer system throughout the local area as a preventative measure. A SGWASA supervisor reported the incident to the City of Creedmoor Police Department.

ii) **Other Topics:**

(1) None.

c) **Water Treatment Plant Topics**

ii) No operating issues.

d) **Wastewater Treatment Plant Topics**

i) No operating issues.

e) **Utility Customer Service/Administration Topics**

i) Due to inclement weather during the month, the utility billing office and the Welcome Center (payment lobby) were closed for two days. During this period, SGWASA finance staff monitored the customer service email and phone system to ensure that staff was able to respond to customers in a timely manner.

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 Treatment Plant Operator (1)

b) Wastewater Pump Station Mechanic (1)

c) Utility Maintenance Mechanic (1)

3) Vacant Positions – Final Candidate Selected/Pending Background Checks

a) None.

4) Recent New Hires

a) None.

5) Recent Internal Promotions

a) Alex Marcinko was promoted to crew leader

b) David Rosario was promoted to pump mechanic, leaving us with only one opening for pump mechanic

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.

i) City of Creedmoor Strategic Retreat

ii) Town of Butner Strategic Discussion

c) Lead and Copper Program.

d) PFAS Reduction Program.

e) I-85 Sanitary Sewer System Improvement Project.

Special Note(s) from the Executive Director

I was notified in late February that SGWASA received \$150,000 in State Reserve grant funds for the Water Treatment Plant Master Plan - AIA project. SGWASA had submitted a request for funding in October 2024. This project is listed on the SGWASA 10-Year CIP as project: 101-01 Water Treatment Plant Evaluation & Master Plan. This project was scheduled for FY26-27. Getting this project started sooner is beneficial. I'll provide additional information on this project in the future.

Attachments

- 1) None.