

# UTILITY REPORT

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**FEBRUARY 2026**

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**Town of Colonial Beach, VA**

**Authored by:**

**Inboden Environmental Services, Inc.**



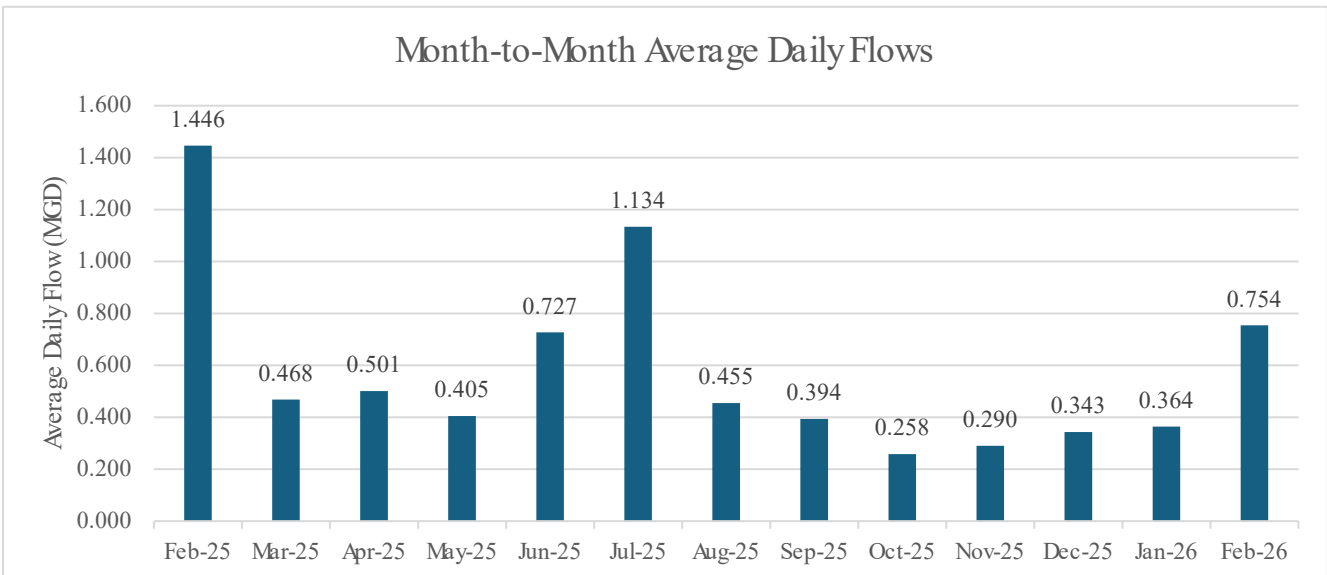
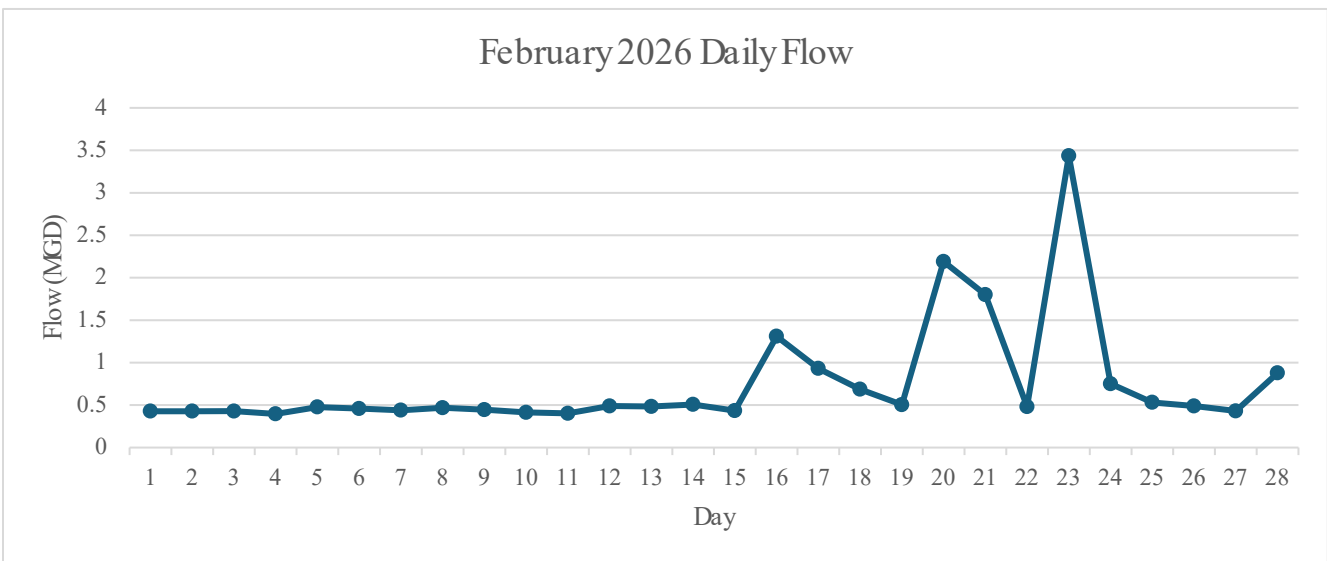
# INTRODUCTION

This Utility Report provides information on operations, facility performance, and regulatory compliance for the month prior. Information includes items related to the wastewater treatment plant (WWTP) operations, effluent discharge volumes, laboratory analytical data, and compliance auditing.

# WASTEWATER

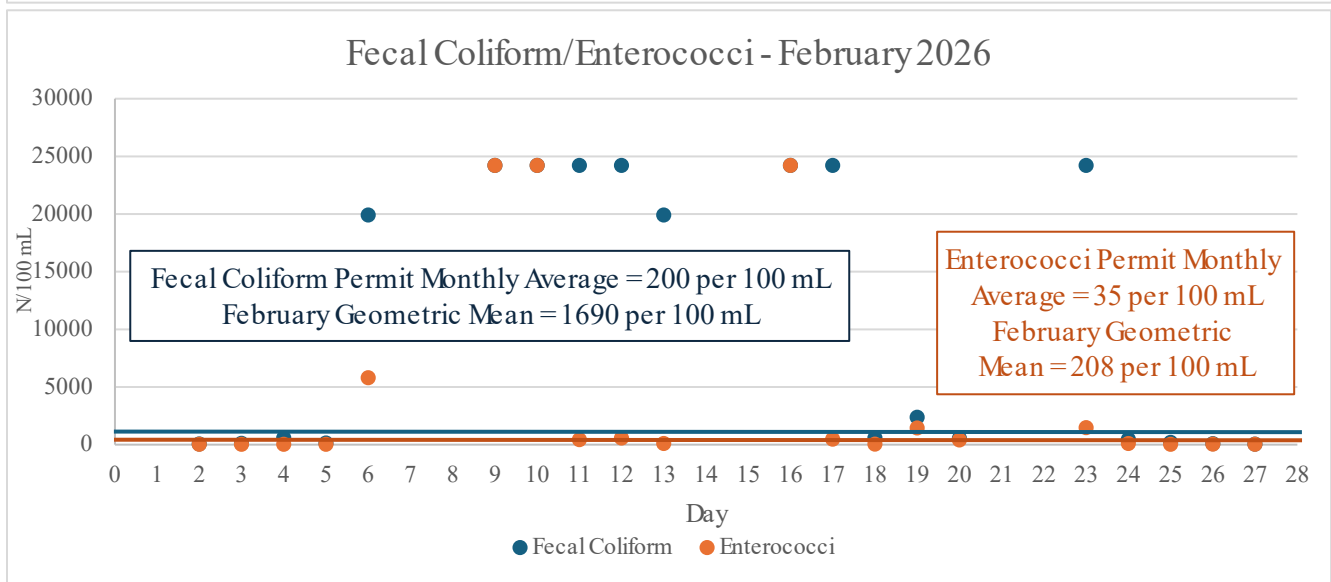
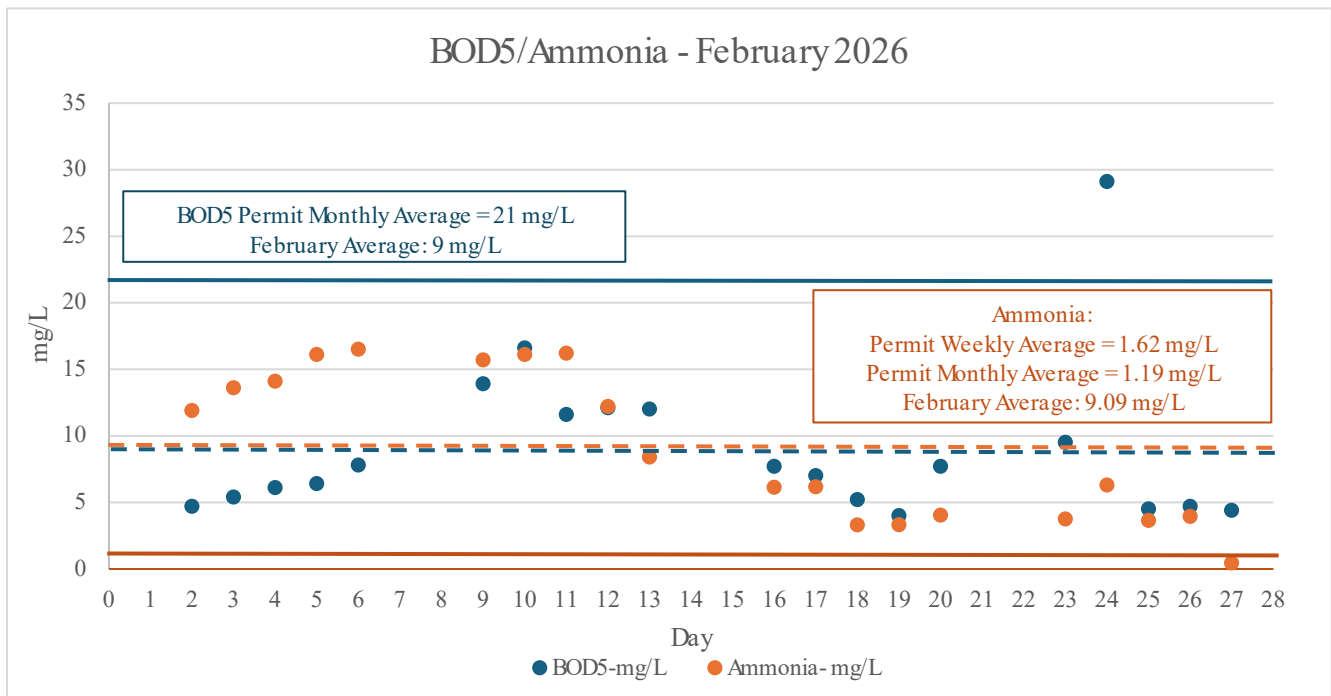
## Wastewater Treatment

The wastewater treatment plant had an average daily discharge of 0.754 MGD resulting in a total discharge of 21.118 MG for the month.



## Effluent Quality:

All sample results for BOD5 and TSS were within permit limits. Ammonia, Fecal Coliform, and Enterococci exceedances were noted as explained below.



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## Exceedance details:

During this monitoring period, the Town of Colonial Beach WWTP experienced elevated Ammonia concentrations, exceeding the weekly and monthly permit limits of 1.19 mg/L and 1.62 mg/L, respectively. Additionally, the monthly geometric mean for Enterococci was >208 n/CML, exceeding the permit limit of 35 n/100 mL, and the geometric mean for Fecal Coliform was >1690 n/100 mL, exceeding the permit limit of 200 n/CML

### Cause:

- Ammonia: In addition to the conditions described in the Letter of Explanation submitted for January, with an already low MLSS, on February 7th the facility's #1 clarifier scraper gearbox failed, resulting in activated sludge being trapped in the clarifier for over 24 hours, stressing the microorganisms further. With stressed microorganisms and the frigid temperatures significantly inhibiting nitrification, we were faced with several events throughout the month where all mixers and aeration blowers were temporarily shut down during periods of heavy rainfall and snowmelt to retain solids during I&I events. Each of the events negatively impacted nitrification performance and contributed to elevated ammonia concentrations.
- Enterococci and Fecal Coliform: The elevated enterococci and fecal coliform results are believed to be non-representative of treatment performance considering the effluent remained visually clear throughout February's operational challenges. The facility experienced increased flows associated with significant rainfall and snowmelt events. In response, operators increased the frequency of cleaning within the UV disinfection channel, including cleaning performed prior to sample collection that we believe negatively affected the sample results.

### Remedy:

- Ammonia: The clarifier gearbox was replaced with a spare and a new one was ordered. On February 10<sup>th</sup> and 11<sup>th</sup>, Biological treatment was reseeded to restore process stability. The unusual weather has passed, and aeration has been returned to normal operation, and treatment performance is being closely monitored to ensure continued recovery of nitrification. The facility will continue to evaluate process conditions and make operational adjustments as necessary. The Town continues to address I&I issues in an effort to minimize these events.
- Enterococci and Fecal Coliform: When the elevated results were received from the lab, investigations began to determine the cause. On February 20<sup>th</sup>, it was discovered that the maintenance and sampling practices were causing the elevated results. Adjustments were made to the cleaning schedules, and the results dropped the next day. Operators will continue routine monitoring of UV system performance and adjust cleaning times to minimize disturbance immediately prior to sample collection when practicable.

### Effluent Quality (continued):

Samples were also collected twice per week for Total Nitrogen (TN) and Total Phosphorous (TP) that have specific Year-to-Date (YTD) permit requirements with an end-of-year evaluation. Results for all samples are presented in the charts below.

