



##PRESS RELEASE##

Rivanna's Lab Implements New Testing Method

First Authority to be Approved in the State

For Immediate Release

Charlottesville, VA... May 28, 2025...The Rivanna Water & Sewer Authority (RWSA) received approval from the State's Division of Consolidated Laboratories Services to implement a new testing method for Total Kjeldahl Nitrogen (TKN).

TKN measures organic and ammonia nitrogen in wastewater. Understanding and knowing TKN levels allows Rivanna to adjust its wastewater treatment processes to ensure that the treated water leaving its plants meets the EPA's monitoring program standards under the Clean Water Act. Neglecting to monitor these levels (beyond violating permit requirements) may lead to an excess of nitrogen entering local streams, which can cause algae blooms. These blooms can potentially decrease the oxygen levels in the water, resulting in the death of aquatic life and a reduction in biodiversity.

Last fall, RWSA began the process of implementing a new TKN testing method. The then-current method required large sample volumes, hazardous reagents (compounds added to samples to start a chemical reaction), and about 11 hours to complete. Rather than replacing end-of-life equipment with exact replacements, Rivanna's lab staff began evaluating other potential testing methods to improve efficiencies.



Patricia Defibaugh adds a reagent to a sample in the Moores Creek Laboratory.

The Authority selected the Simplified Total Kjeldahl Nitrogen method (S-TKN). This new method reduces sample volumes by 96%, reagents are now non-toxic and can be disposed of without any special handling, and the time necessary to complete the test has been reduced to 4 hours. Additionally, the method saves about \$10,000 per year.

To gain approval for the new method, RWSA created a new Standard Operating Procedure (SOP). Over the course of a month, side-by-side comparisons between the old and new methods were conducted. The laboratory team examined the results for any discrepancies. Both testing methods were found to align within the approved margins. A third-party verifier certified the equipment, and a request for acceptance was submitted to the State's Division of Consolidated Laboratory Services. Approval was granted last month, and this month, the RWSA began using the new method exclusively.

The RWSA is the first Authority in the state to be approved for this testing method.

More Information about RWSA's Laboratory

RWSA's laboratory conducts thousands of tests annually, tracking various metrics related to our drinking water and wastewater treatment processes. It also monitors algae populations in our reservoirs and performs laboratory services for the Albemarle County Service Authority (ACSA) and the City of Charlottesville Utilities Department.

*The **Rivanna Water and Sewer Authority & Solid Waste Authority**'s mission is to serve the Charlottesville, Albemarle, and UVA communities by providing high-quality water and wastewater treatment, refuse, and recycling services in a financially responsible and sustainable manner.*

*The **Rivanna Water and Sewer Authority** provides wholesale water and sewer services to the Charlottesville Department of Utilities and Albemarle County Service Authority.*

*The **Rivanna Water and Sewer Authority** manages five reservoirs, nine dams, six drinking water treatment plants, five finished water pumping stations, eleven water storage tanks, four advanced water resource recovery facilities (wastewater treatment plants), and nine wastewater pumping stations.*

In 2024, the Authority processed an average of 10.21 million gallons of drinking water and 10.20 million gallons of wastewater each day.

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