

Advance West Virginia’s Rural Community Drinking Water and Wastewater Management Systems to Enhance Rural Economic Prosperity

Executive Summary

The current drinking water/waste management system not only puts West Virginians’ health at risk but results in economic and societal challenges that prevent our state from reaching its full economic and social potential, as a lack of adequate water treatment and wastewater infrastructure may deter new business investment in the state and discourage visitors and new residents from coming to the Mountain State. To improve this infrastructure, drinking water and wastewater systems in West Virginia that serve small, rural communities need help with basic services including maintenance, testing throughout the system, consumer confidence reports, and other services.

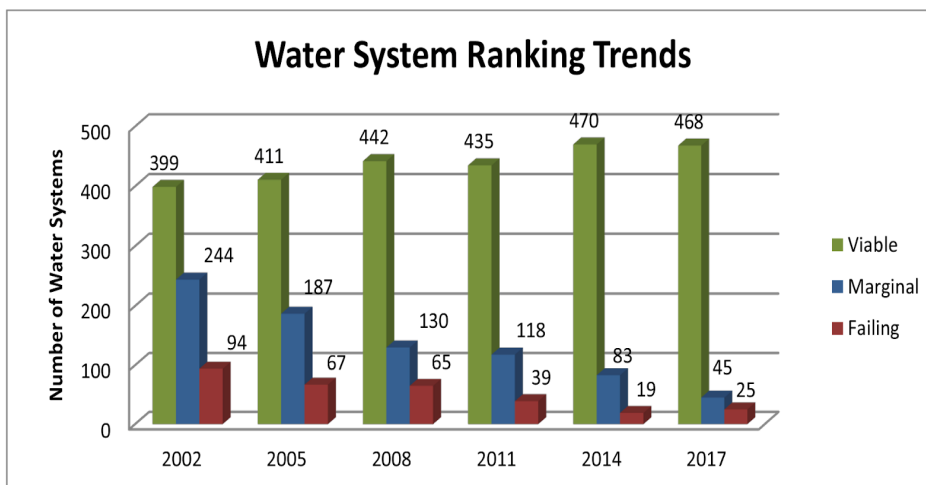
Introduction

West Virginia’s New River Gorge National Park is called a “haven for hiking, climbing, and rafting” by National Geographic. The area surrounding it, however, can emit foul odors due to an insufficient wastewater management system. Similarly, Thurmond is a small, historical town with rave reviews on TripAdvisor and interest from new businesses and the National Park Service in commercial property and housing. The challenge for those interested? A lack of wastewater infrastructure. Without access to this vital infrastructure, development that would bring jobs to the region is at a standstill.



Key Messages and Recommendations

- Safe drinking water in West Virginia has long been a concern as has the infrastructure used to provide that water and to manage wastewater. This infrastructure includes not only the treatment facilities but also the pipes used to convey drinking water to homes and businesses and the resulting wastewater from them.
- West Virginia’s small, rural communities often lack the financial, management, and technical staff to operate their current infrastructure and apply for grants and other support to improve their infrastructure.
- West Virginia policymakers should facilitate coordination of regional approaches that bring together water and wastewater management organizations in multiple counties to improve economies of scale and reduce the cost of services to residents.
- Policymakers should also provide a pool of funding for the matching funds that are needed to apply for federal grants. These regional collaborations should write proposals for federal funding, manage and prioritize the allocation of the available matching funds, encourage brownfield development, and support investment on behalf of rural and disenfranchised counties and communities in their regions.



Source: [West Virginia Department of Health and Human Resources](#) (2017)

Technical and Financial Opportunities and Challenges to Rural Community Drinking and Waste Water Management Systems

Drinking water in West Virginia comes from both surface water and groundwater. Surface water quality in West Virginia is assessed every two years. According to a West Virginia Department of Environmental Protection (WVDEP) [report](#), approximately 44% of West Virginia's streams are impaired and another 33% lacked sufficient data for assessment.

Rural communities and individuals use a number of methods for wastewater management, including small community systems, septic tanks, and what is known as "straight pipes" or "straight piping," where waste goes directly into waterways. According to the West Virginia Public Service Commission (WVPSC), the cost for rural sewer utility services can range from \$8 to \$92.

These small, rural communities often pay a higher cost for basic drinking water and wastewater services due to the smaller population from which to draw the revenue needed to build and maintain these facilities, or because they need to purchase their water and wastewater services from another entity. Technical solutions, such as decentralized wastewater treatment systems, should be cost-effective and economical, avoiding large capital cost, reducing operation and maintenance costs, and promoting business and job opportunities, and should protect community health, the environment, and water quality.

What Can Be Done?

To respond to the challenges of insufficient planning and technical resources available for West Virginia's small and rural communities, difficult geography and geology for traditional community wastewater systems, and insufficient outreach, testing, and inspection for water/wastewater programs, we propose discussion of the following policy options:

- **West Virginia policymakers, working through the existing regional planning communities, could develop a plan that would bring together water and wastewater management organizations to improve economies of scale and reduce the cost of services to residents.** Examples include expanding or increasing funding for the existing "circuit rider" technical assistance program to help small rural areas maintain their systems and provide training, or alternatively providing economic resources that would enable communities to participate in existing organizations.
- **West Virginia policymakers could provide economic incentives to support and promulgate innovative water technology approaches that are better suited for rural areas.** These include drinking water, wastewater, and CSO management technologies. The primary barrier to implementation of these new technologies is lack of awareness and reluctance to implement unknown systems. For example, to support these programs, the governor could provide economic incentives to implement these new technologies when awarding the \$24.7 million funding recently provided by the EPA to improve these systems.
- **West Virginia policymakers could work with state agencies to financially support an outreach/education, testing, and inspection program to facilitate positive changes in drinking water quality, wastewater treatment, and stakeholder education.** Specifically, this outreach and education could support community discussions on the potential for implementing decentralized wastewater management systems in their region.

For More Information: This policy brief, written by Dr. Deborah D. Stine, is based on a policymaker guide entitled *Waters of West Virginia: A Science and Technology Policy Perspective*, published under West Virginia University's [Bridge Initiative in Science and Technology Policy, Leadership, and Communications](#).

The Bridge Initiative identifies challenges and opportunities facing West Virginia and provides a bridge between the science and technology expertise of WVU faculty and staff and West Virginia's national, state, and local policymakers. In our work, we gather the views of stakeholders throughout the state to ensure we are making recommendations that serve the needs of West Virginians. To see the full policymaker guide, go to <https://scitechpolicy.wvu.edu>.

Photo Credit: [West Virginia Department of Environmental Protection](#), Installation of a septic system in Lincoln County West Virginia