

Testimony of Joseph Duncan, PE
General Manager, Champlain Water District
and
President, Green Mountain Water Environment Association

United States Senate Committee on Agriculture, Nutrition, and Forestry
Subcommittee on Rural Development and Energy
“Rural Water: Modernizing our Community Water Systems”
328A Russell Senate Office Building

July 19, 2023

Introduction

Chair Welch, Ranking Member Tuberville, and members of the Committee, thank you for the opportunity to testify today. On behalf of the Green Mountain Water Environment Association (GMWEA), our water resource professionals, and the communities we serve, we are grateful for the opportunity to share our perspective and we thank the Committee for their keen interest in the issues facing rural communities across the country.

My name is Joe Duncan, and I am the General Manager at the Champlain Water District (CWD), a regional municipal organization supplying drinking water to (12) municipal water systems in (9) communities in northwestern Vermont. CWD is an award-winning regional water supplier having the distinction of receiving the first in the Nation “Excellence in Water Treatment Award” from the Partnership for Safe Water. Prior to joining CWD, I worked for 18 years as a consulting engineer on municipal water resource projects throughout the great state of Vermont.

I am also currently the President of GMWEA, a nonprofit membership organization that supports Vermont's drinking water, wastewater, and storm water sectors - serving water quality professionals, preserving the environment, and protecting public health through technical trainings, public education, and policy advisories. We are the people that design, construct, and maintain the infrastructure necessary to keep the taps running, toilets flushing, and stormwater runoff pollutant free. Our members help keep Vermont's surface and ground waters clean, safe, and beautiful to serve our water use needs, recreation, and precious ecosystems.

I have served in the water resources sector in Vermont for over 25 years from working with very small water systems as a consultant to providing wholesale water with CWD to 83,000 people in Chittenden County to volunteering my time at GMWEA with fellow water professionals to promote and support the industry. My background and experience have given me great insight into what it takes to operate and maintain water and wastewater systems throughout the small and rural state of Vermont.

As of 2023, Vermont's drinking water assets included approximately 1,343 active public water systems serving 59% of the state's 647,000 residents. Most water systems in Vermont are not expanding in size or demand and their aging infrastructure needs to be replaced. A 2021 University of North Carolina study

found the median water utility in Vermont collects operating revenue of \$296,000, which barely funds its \$284,000 annual expenses – before counting capital projects. Under the American Rescue Plan Act (ARPA), the Vermont Agency of Natural Resources allocated about \$100 million to a variety of water quality initiatives with most of this money designated for new projects rather than upgrading existing infrastructure. The State of Vermont expects to receive \$355 million in drinking water funding over five years from the 2021 Bipartisan Infrastructure Law (BIL) – compared to a \$374 million funding need primarily consisting of projects focused on aging infrastructure. The majority of the BIL funds are allocated to address emerging contaminants and lead service line replacements. While the ARPA and BIL funding are significant they do not provide the funding required to address our aging drinking water infrastructure. Unfortunately, Vermont’s wastewater systems are in the same position.

Vermont’s water and wastewater aging infrastructure requires significant investment, and all funding programs are of extreme value to our systems. Being a rural state, Vermont benefits greatly from the United States Department of Agriculture (USDA) Rural Development (RD) Water and Environmental Programs (WEP). This is one of the few programs our small systems can access that provides long-term, low-interest loans with the possibility of a grant to keep user rates affordable. Our rural systems have a fear that Congress will assume that ARPA and BIL will provide the funding necessary to address Vermont’s aging infrastructure and not fund the USDA RD WEP in the next Farm Bill.

As the Committee considers the upcoming Farm Bill, there are a few key points we respectfully request you consider as you work to reauthorize USDA RD programs:

- **Funding for the USDA RD WEP** in the Farm Bill at a significant level is necessary for rural systems because ARPA and BIL do not scratch the surface of what is needed to address aging infrastructure.
- **Circuit Riders** are critical in helping rural systems manage and operate their utilities and funding that program is vital to them.
- **Integrating Asset Management with Resilience & Adaptation** is the path to a sustainable water future and USDA RD needs to require it, and fund it, for any infrastructure constructed under the WEP.
- **Workforce Development** is required to address the critical need for skilled workers in our rural systems and we recommend including financial resources and policy for that in the next Farm Bill.
- **Modernization of RD WEP** is necessary to better address current needs with additional affordable financing and servicing options.

Funding for the USDA RD WEP

Ensuring sustainable and affordable water and wastewater service to customers is the primary shared mission of our systems and RD. Many of our small and rural systems operate on a thin margin, meaning only 1.5% to 2.0% revenue over expenses. Maintaining this margin has become difficult over the past few years as they have absorbed inflationary costs associated with supplies such as piping increasing by 230% and chemicals like chlorine increasing at least 95%. Rural communities must have the ability to modernize their water and wastewater infrastructure, much of which is approaching or past its useful life. The continued operation of these systems is essential, especially since 91% of the country’s drinking water systems serve communities with fewer than 10,000 persons. In Vermont, that percentage is even larger, with 99.5% of our water systems serving populations under 10,000 and 92.7% serving under 1,000.

The importance of low-cost loans and grant funding under the USDA RD WEP for small rural systems cannot be overstated. Through the USDA RD WEP water systems across the country obtain financing for important infrastructure projects of all sizes. It is critical that our rural systems know that USDA RD WEP will continue to be a trusted lender for our critical water and wastewater improvements.

As previously mentioned, there is a fear that Congress will assume that ARPA and BIL will provide the funding necessary to address Vermont's aging infrastructure and not fund the USDA RD WEP in the next Farm Bill. Given the majority of the BIL funds have been allocated to address emerging contaminants and lead service line replacements, there is not the ability to significantly address our aging infrastructure needs. Over the next 10 years, Vermont municipalities, ratepayers and property owners will face costs exceeding \$1 billion to upgrade our aged wastewater, drinking water, and stormwater systems. And over the next five years, the Vermont drinking water sector will require \$374M to address our immediate aging infrastructure challenges. About \$182M (51.3%) of the \$355M BIL funding to be received in Vermont over the next five years has been allocated to emerging contaminants and lead service line replacements. This leaves a major funding gap for addressing aging infrastructure in our State.

There is also concern that funding levels for the USDA RD WEP will continue at pre-COVID allocations. The worry lies not only in the funding gap but also in the significant increases in construction costs. Inflation over the past few years, combined with supply chain issues, a limited workforce, and contractor pool (especially in rural areas), have significantly driven up construction costs. Funding of the USDA RD WEP at pre-COVID allocations will limit the number of projects that can be built to address our aging infrastructure needs and continue to move our water and wastewater systems in the wrong direction.

One of the major challenges for rural water systems in utilizing available construction funding is the lack of a plan for what is needed. Most small water systems know they need to do something, but they just do not know how to move it forward both financially and technically. The USDA WEP does offer planning funds, but they are in the form of loans. Providing grant funding specifically for planning can play a key role in advancing projects. We recommend that the Committee consider specifically allocating planning grant funding under the USDA WEP.

Lastly, we support providing additional funding to increase staffing for the USDA RD WEP. For our region, a staff of 12 USDA RD employees administer funding for both Vermont and New Hampshire. They work to deliver a \$750 million portfolio that includes improvements across a multitude of sectors (i.e., water/wastewater, hospitals, energy, and Town Halls). The USDA RD engineer we work with on water projects in Vermont is also managing projects across two States for a wide variety of projects. That person does an excellent job but is spread very thin given the scale of work being administered.

Circuit Riders

One of the most successful approaches for overcoming past and current challenges in rural America has been the "Circuit Rider" program, which was created by this Committee. This program provides a nationwide pool of experienced hands-on water experts to provide peer-to-peer direct assistance to help rural systems manage and operate their utility. Circuit Riders are rural America's boots on the ground for troubleshooting issues and solving problems at water systems.

I have witnessed that firsthand in Vermont, with our Circuit Riders providing the training, certification, financial management, environmental compliance, governance, and on-site technical assistance necessary to ensure that water facilities operate at the highest level possible. This assistance actually saves money and protects the community and the government's investments by ensuring efficient and sustainable practices are followed. This training and education empower operators, board members, elected officials, and communities with the support and knowledge they need to understand every aspect of their water system and facilities. Many of these communities lack the staff, capacity, funding, or expertise to address technical water and wastewater issues. The mission of the program is to restore and improve the public health, environment, and sustainability of these small communities or in other words to give them a level playing field with our urban counterparts so rural Americans can live the lives they want. We respectfully ask this Committee to reauthorize this program.

Integrating Asset Management with Resilience & Adaptation

Much of Vermont's rural water infrastructure was originally constructed or upgraded in the 1970s with the passage of the Safe Drinking Water Act. At that time, significant grant sources were used to fund the improvements. The grants helped to keep rates low while constructing the improvements necessary to provide safe drinking water. Unfortunately, since that time most communities have implemented a "run to failure" model by not maintaining and investing in the original water systems. This has not only resulted in failed infrastructure, but unsustainably low user rates as well. Instead of increasing water rates to account for necessary operation and maintenance (O&M) and capital costs, water systems have historically flat lined them thinking it was in the best interest of the users.

We have reached a point where this "run to failure" approach is not sustainable. To make matters worse, the country is experiencing extreme weather patterns that affect our water systems. The impacts range from severe heat drying up source waters to heavy wind and rain events damaging water infrastructure, as well as the energy sources that power those facilities. America's water systems need to develop more resilient infrastructure and adapt to extreme weather patterns. To change the historical practice away from "run to failure" we recommend that any projects funded through USDA RD WEP include an asset management program integrated with resilience and adaptation implementation measures.

Asset Management programs use asset inventories, life-cycle cost analyses, risk assessments, and financial planning to set priorities and help meet level of service goals in a cost-effective manner. Asset management is a way of thinking – of seeing the infrastructure world from an asset-centered perspective as opposed to operations centered. It allows utilities to direct limited resources to where they are most needed, and it is the basis for both short- and long-term investment planning and rate setting – as well as for building public support for these decisions. To effectively manage water infrastructure, utilities must answer the question: Is it the right work and the right investment at the right time and for the right reason? The more utilities understand about their assets – the demand, the condition and remaining useful life, the risk and consequence of failure, the feasible renewal options (repair, refurbish, replace), and the cost of these options – the higher the confidence there is in investment decisions.

Having a clear understanding of risks associated with extreme weather events is critical for identifying potential long-term adaptation options for decision-making related to implementation and infrastructure

financing. Combining an asset management program with an understanding of what is needed for long-term resilience and adaptation is the start down a path of sustainable water infrastructure. Funding and policy through the USDA RD WEP for integrating Asset Management with Resilience & Adaptation is recommended.

Workforce Development

Today, attracting and retaining capable, licensed water and wastewater system operators is the biggest challenge facing the rural water industry in Vermont and across the nation. First, water and wastewater operator salaries have not kept pace with their responsibilities in complying with the ever-changing governmental regulatory requirements. Second, modern water systems have state-of-the-art SCADA control systems, complicated variable-frequency drive electrical motors, and computerized control valves. This requires operators to have strong technical skills and the mental capability to pass the required training to receive a waterworks license.

It is even more concerning for smaller water systems that have financial limitations that make competing for employees even more challenging. Employment data indicates up to 50% of this workforce will leave the water industry within the next 10 years. Rural water and wastewater utility owners and operators need a pipeline of skilled workers to help ensure clean and safe water for the public and to maintain the water infrastructure necessary to keep rural service areas economically viable.

The vast majority of the country's small community water systems have extremely limited staff, sometimes only employing one part-time or one full-time paid operator. Unfortunately, the limited economies of scale and technical expertise in rural water utilities are compounded by the scarcity of qualified operators. This challenge increases the difficulty small and rural communities have complying with complicated federal mandates and providing safe/affordable drinking water and sanitation.

We suggest financial resources and policy be included in the 2023 Farm Bill to provide mentorship and training to address these workforce challenges specific to USDA RD borrowers and potential borrowers. A long-term solution is critically needed to enhance water workforce participation and retention in small and rural communities, protect the significant federal investment in rural America's water and wastewater systems, and improve these vital services and basic civic necessities on which our customers depend.

Modernization of RD WEP

USDA RD is the only federal agency created by Congress specifically to serve rural communities. The sole focus of the WEP is to serve communities under 10,000 population. These rural systems operate on small margins of revenue over expenses, coupled with a lack of economies of scale, increasing the challenges to provide affordable rates for lower-income residents. It is recommended that the USDA WEP be modernized to better address current needs with additional affordable financial and servicing options. New affordable financing options should include the ability for USDA RD to offer zero and one percent loans to disadvantaged or economically distressed communities. This should be a limited authority targeted to lower-income communities to ensure affordable water and wastewater services to those residents. Regarding the servicing options, USDA RD should be provided with the ability to financially stabilize a current borrower within communities where their customers have been suffering an economic downturn at no fault of their own.

One of the challenges we face in Vermont is getting small rural water systems to utilize USDA RD WEP funding due to the timing for confirmation of funding. A positive bond vote by the municipality is required to get approved and locked in on a funding package through the USDA RD WEP. USDA RD provides an estimate of the potential loan and grant funding, but it is not guaranteed. As a result, the bond vote language presented to the voters typically includes the total project cost and states the final cost to the users will be subject to reductions in grants and aid. With other funding sources like the DWSRF, the municipalities speak confidently during the bond vote informational hearings about the specific funding package they will receive because there is a priority list and bypass process. During bond votes with USDA RD funding the municipalities need to say this is the funding package we hope to get as there is no certainty that the funding will be available since monies are allocated on a first come first served basis. I have been involved in many projects across Vermont that have failed bond votes due to the public's skepticism for receiving the potential USDA RD WEP funding package. The ability to temporarily lock in funding with a bypass process is recommended to provide more certainty to municipalities when pursuing USDA RD WEP funding.

Conclusion

In closing, the USDA RD Development Loan and Grant funding for water and wastewater systems is critical in addressing critical infrastructure needs in many communities in rural and small-town America, while helping to maintain affordable user rates. Despite the recent ARPA and BIL funding, the demand for water and wastewater infrastructure funding in our rural communities remains high. The direct technical assistance from USDA RD and the Circuit Rider program provides the capacity and experience to protect both the federal government's investment and the communities' mission to provide safe, sustainable, and affordable water and wastewater service. USDA RD plays a critical role in creating a sustainable water future for our rural water and wastewater systems and we support any efforts by the Committee to strengthen that role.

As the Committee considers the upcoming Farm Bill, we look forward to working together in our shared goal of providing safe drinking water and sanitary waste disposal, which is vital to public health and the economic vitality of rural America.

Thank you for the opportunity to participate. I am happy to answer any questions you may have.