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Senate Committee on Natural Resources and Energy
S. 213 - An act relating to the use of smart meters by public water systems
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Testimony from Liz Royer, Executive Director

Hello, my name is Liz Royer and I am the Executive Director of the Vermont Rural Water Association. Vermont Rural Water is a non-profit organization that supports all public drinking water and wastewater systems through technical assistance, training, advocacy, and outreach. We represent over 320 system members that protect public health and allow for economic development in our towns and municipalities. These small, rural utilities provide safe drinking water and return clean, treated wastewater to rivers and lakes throughout the state. Since 2020, I have also served as the Chair of VT WARN – Vermont's mutual aid and emergency response network for water and wastewater systems. VT WARN has been active in recent years with flood events, contamination incidents, drought, and cybersecurity outreach.

Chair Watson, thank you for having me here today and allowing me to share our thoughts on metering and cybersecurity on behalf of all of the public drinking water systems in the state. As a reminder, public system does not mean publicly owned, even for community water systems.

There are just over 400 public community water systems in Vermont. A community water system has at least 15 connections or serves a residential population of at least 25 people. Less than one quarter of all community water systems in Vermont are owned by a town, village, or city. Over three-quarters are owned and governed outside of a traditional town municipal structure, such as fire districts, homeowner associations, and water co-ops. The majority of community water systems are managed by volunteer boards. They are often operated by a part-time contractor who may not be at the system on a daily (or even weekly) basis. These are typically not organizations with the capacity to consider billing structures, meter upgrades, and cybersecurity threats. Many of the small, rural systems are not metered due to the expense of installation and maintenance.

Regarding S. 213, we appreciate the opportunity to review several drafts of this bill and appreciate that our initial concerns have been addressed. In further research on smart meters, it has become apparent that these are not the same level of "smart" as meters used by gas and power companies. "Smart" water meters are typically radio-read and

contain very minimal data, often just a number that represents the water usage of the household. This poses a very minimal risk in terms of cybersecurity threats to both the customer and to the system with very little information being shared.

Our experience with cybersecurity for water systems began with my role as VT WARN chair and working with partners to identify risks and create classes that would resonate with small water and wastewater systems. Most cybersecurity trainings are tailored to an audience of IT professionals. In Vermont, to my knowledge, only one water system has an IT professional on staff that works in house. That system is Champlain Water District, the largest water provider in the state.

In assisting with cybersecurity evaluations and assessments at small systems, we became aware of other concerns. Even for systems that have an IT consultant or company through their town office, those providers are focused on emails and file storage, not SCADA and other operational technology and controls. The operators we spoke with were frustrated that their town managers and other officials didn't understand the need to budget for upgrades and improvements to address current and future cyber-threats.

In October 2024, Vermont Rural Water was selected as one of two states to host a pilot project focusing on cybersecurity at small, municipal drinking water systems. We were trained by EPA headquarters staff, CISA, Water ISAC, DC Water, and other leading agencies and organizations to provide on-site technical assistance for cybersecurity. This experience has expanded our knowledge and awareness of the many threats faced by our small water systems. We learned that the threat actors cast a wide net, and while Vermont system wouldn't necessarily be a specifically targeted, they look for any systems that have an easy path to infiltrate.

Regulation and enforcement of cybersecurity would be a mistake, in our opinion. Cybersecurity is multi-faceted, multi-layered, and constantly evolving. Federally, EPA has backed away from mandates and requirements and has focused their programs on outreach. We have seen the need for more on-site technical assistance and accessible funding to maintain equipment, update software, and provide additional training. This is needed not just for the system operators, but also for town officials, engineers, and service providers who may be called on for assistance.

While many resources already exist, there are very few options for small Vermont systems who want to design practices and procedures that work for the unique needs of their operations and management. We view townwide tabletop exercises as the best way to communicate, plan, and coordinate local resources during a cyber threat. Water

and wastewater systems are often left out of local and regional conversations on many topics, including emergency planning, hazard mitigation and cybersecurity. It may not be clear to town officials why the water or wastewater operators should be involved, but the water or wastewater plant and infrastructure are likely the #1 target in many towns.

Multiple incidents have been reported recently at Vermont water and wastewater facilities, likely a fraction of the true total. While the situations vary, there are some common themes:

- Vermonters are trusting and proud of their facilities
- There is often doubt there was an issue
- Operators want to call someone they know to discuss problems
- Often a current or former employee involved in the potential threat
- Process and protocols are non-existent or overlooked

Let me provide you with a few recent examples from here in Vermont. In one town, a former administrator gained access to wastewater facilities and equipment after he was no longer employed there – both physical and online. In another example, a Vermont operator noticed unexplained mouse movements on their desktop. While they initially dismissed the movement as IT maintenance, an investigation revealed multiple interconnected systems were compromised.

An industrial pretreatment facility in a different town lost process control and they were eventually forced to report loss of data. But, they were not planning to notify the downstream municipal wastewater plant of the potential impacts because they did not realize the threat could be compounded. Finally, a potential threat actor recently posed as industry salesperson to gain physical access to a municipal wastewater plant. This person was given a tour and took photographs of facilities and equipment, then disappeared without providing any contact information. These are just a few of the many recent examples we are aware of.

So what is the solution? Operators are overwhelmed with a growing number of threats. We suggest that they focus on the basics – personal cyber hygiene, developing protocols for former employees, password management, and ongoing training and awareness for VERY SMALL systems. Moving forward, the best option for building ongoing relationships and sharing resources is a townwide cybersecurity tabletop with involvement from the local Emergency Management Director (EMD), Select Board, Fire/Police, Water/Wastewater, and other local officials and legislators. We believe cybersecurity at Vermont water systems can be improved by partnering with the many organization and agencies offering training and outreach, along with direct technical assistance from a trusted and knowledgeable provider.

I would like to share two resources with you as you consider the many challenges facing our industry today, and specifically the unique concerns in Vermont. We have put together webpages to inform local and state officials regarding basic information on water and wastewater systems, cybersecurity, and housing and development. I will provide these links in my written testimony.

VRWA Cybersecurity page - https://vtruralwater.org/cybersecurity/

VRWA Housing page - https://vtruralwater.org/water-sewer-housing/

We believe these resources can inform many discussions here in the Statehouse.

Thank you for allowing me to speak on behalf our state's drinking water systems. We appreciate this committee's efforts towards improving public health and protecting the environment as we all work together for Vermont's future.