

## Year Two Activity Report: August 1, 2022 – July 31, 2023

**EPA-G2021-ORD-B1:** Deployment of Innovative Water Technologies for Very Small Drinking Water Systems, Areas Served by Private Wells, and Source Waters

### **Innovation Applied: Streamlining Access and Approval of Technology for Small Systems and Private Wells**

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**Project Period:** Start date: August 1, 2021; End date: July 31, 2024

**Project Amount:** \$965,395.13

**Objective of Research:** The primary aim of this project is to develop and validate programmatic approaches through research and technical assistance for obtaining approval for new or alternative technologies for very small water systems in a state and how to ensure that, or to the greatest extent possible with technical assistance, approvals could transfer from state to state without compromising public health protection.

**Progress Summary/Accomplishments (Outputs/Outcomes):** In September 2022, the Research Team hosted a Lessons Learned Forum in the DC-area, bringing together state primacy agency staff and members of the vendor and consulting communities to review the project's work-to-date and preliminary findings. Through a series of facilitated breakout and poster sessions, the attendees developed a list of recommendations to guide the Research Team's work in Year Two.

#### **Recommendations:**

- 1. Developing a decision guide for small systems to use when evaluating innovative technologies.*
- 2. Configuring a shared resource for state regulators to accelerate research and foster greater knowledge transfer about innovative treatment technologies, including lessons learned and important considerations to ensure successful deployment and speed regulatory review.*
- 3. Generating resources for vendors to learn more about bringing their technologies to market, emphasizing increasing their understanding of the state regulatory review process and expectations.*
- 4. Creating online training courses to support a rules-based understanding of treatment options to assist state regulators. Less technical versions of this content should also be developed and made available for small and rural systems and private well owners for them to understand how best to evaluate innovative treatment options.*

The Research Team worked through Year Two to develop draft solutions to address each of the recommendations.

- 1. Recommendation 1** - the Research Team worked on a guide that communities, technical assistance providers (TAPs), and other stakeholders can use when selecting a new drinking water treatment technology. When finished, this guide will prompt small systems to consider if a treatment solution is right for them, then consider both conventional

treatment and innovative technologies, ranging from new innovations to technologies established but not commonly used in small and very small systems.

2. **Recommendation 2** – the Research Team worked with the State Workgroup to set up a Microsoft Teams environment where state regulatory staff could conduct research and communicate with their peers across state lines. The Team also initiated an effort to collect and organize information on individual state technology approval requirements and “notes from the field” - lessons learned and valuable considerations to assist other state reviewers. The Team also pulled information from the Water Research Foundation (WRF) on emergent treatment technologies to assist state regulatory reviews.
3. **Recommendation 3** – the Research Team worked with a student group from George Washington University to develop an interactive map of the US populated with information on state requirements. When the effort is complete, there will be a publicly accessible resource that will allow an individual to click on a state to learn more about their requirements, including links to additional information. Other efforts to address Recommendation 3 include longer-term goals to develop simple guidance for smaller start-ups just entering the sector. For more mature but still “innovative” treatment options, the Research Team is considering the best processes for encouraging their inclusion in our database of emergent technologies.
4. **Recommendation 4** – the Research Team engaged with an online learning service provider, Learning Camel, to develop a pilot module focused on the Arsenic Rule and how to evaluate relevant treatment options. If the pilot is successful, subsequent training modules will be developed for Evaluating Treatment Options for Private Well Owners and Evaluating Treatment Options for Small and Very Small Systems.
5. The Research Team continued to engage with other sector groups leading complementary projects, where collaboration has a high potential for mutual benefit.

**Future Activities:** The Research Team plans to host a second Forum in the Spring of 2024 to bring stakeholders together to review the project’s progress since the first engagement and learn about the various solutions we’ve developed. The goal of that forum is to ensure that all the recommendations from the first forum have been addressed, identify gaps, and explore any additional activities or recommendations the Research Team might consider for future planning.

This project's next phase will focus on finalizing the development of our proposed solutions to promote the use of innovative technologies by very small systems and private well owners, lower barriers to technology approvals for systems of all sizes, increase knowledge exchange and information sharing between stakeholders, and promote innovation broadly within the sector.

**Supplemental Keywords:** water, technologies, treatment, innovation, state, approvals, small systems