

*let's talk*

# Drinking

# Water

*systems and access*



**UNDERSTANDING  
BOIL WATER ADVISORIES,  
COVID-19'S IMPACT ON  
MAINE'S COMMUNITY  
WATER SYSTEMS,  
AGREED ORDER ASSISTANCE,  
*and* MORE**



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# Rural Community Assistance Partnership

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**RCAP Inc.**  
*rcap.org*

**EDITOR**  
Coye Gerald  
Rosalena Morrell

**EXECUTIVE EDITORS**  
Glenn Barnes  
Sarah Buck  
Derik Dressler  
Lisa Fought  
Ami Keiffer  
Jeff Oxenford  
Arianne Shipley

**CONTRIBUTING WRITERS**  
Tom Fulton  
Maggie Mahan  
Ami Keiffer  
Heather Preston  
Kathy Rodgers  
Ida Jett-Smith  
Karen Pereira Tapias



**PUBLISHER**  
Nikki Bowman Mills, *nikki@newsouthmediainc.com*

**DESIGNER**  
Hayley Richard, *hayley@newsouthmediainc.com*

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1725 I St. NW, Ste 225  
Washington, DC 20006  
202.408.1273  
*rcap.org*

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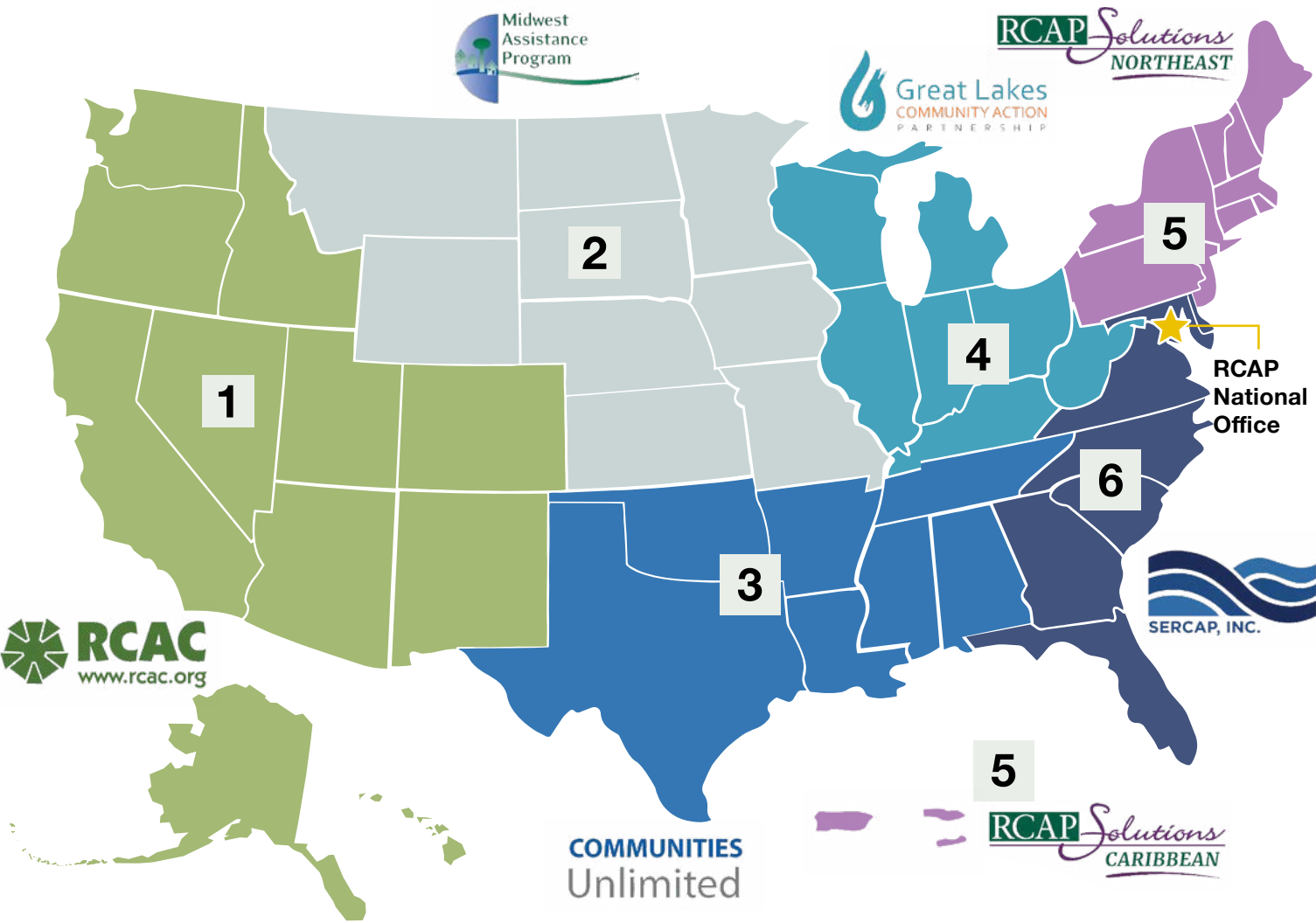
# ceo letter

**T**his edition of *Rural Matters* is dedicated to an essential part of life: drinking water. Water is life. Safe drinking water is fundamental to all our lives. We can't live healthy lives without it. Yet it's hard to believe that there are over 2 million people in the U.S. that still lack reliable access to clean, safe drinking water, indoor plumbing, and basic infrastructure to support this access. Across the country, RCAP's technical assistance providers (TAPs) from all six regional partners are working to improve the quality of life starting at the tap. The articles featured here, many written by TAPs, highlight the need for drinking water support and the ways in which RCAP is supporting it.

In my first months as Interim CEO, I have seen the power of partnership to uplift and support rural communities, including drinking water projects. In May, RCAP hosted "Agua4All" alongside CoBank, the Chris Long Foundation, Liquid I.V., RCAP Solutions (RSOL), Midwest Assistance Program (MAP), Communities Unlimited (CU), and Great Lakes Community Action Partnership (GLCAP). The Agua4All project has brought clean, safe drinking water to nearly 2,000 students in these new participating schools.

I'm looking forward to sharing RCAP's latest projects, partnerships, and lessons learned with you all in this new edition of *Rural Matters*.

**Keith Ashby**  
Interim CEO, RCAP



# Rural Community Assistance Partnership

The Rural Community Assistance Partnership (RCAP) is a national network of nonprofit partners with over 300 technical assistance providers across the country. RCAP works to improve the quality of life in rural America starting at the tap.

## 1. Western RCAP

Rural Community Assistance Corporation (RCAC)  
916.447.2854  
[rcac.org](http://rcac.org)

## 2. Midwestern RCAP

Midwest Assistance Program (MAP)  
660.562.2575  
[map-inc.org](http://map-inc.org)

## 3. Southern RCAP

Communities Unlimited (CU)  
479.443.2700  
[communitiesu.org](http://communitiesu.org)

## 4. Great Lakes RCAP

Great Lakes Community Action Partnership (GLCAP)  
800.775.9767  
[glcap.org](http://glcap.org)

## 5. Northeastern and Caribbean RCAP

RCAP Solutions (RSOL)  
800.488.1969  
[rcapsolutions.org](http://rcapsolutions.org)

## 6. Southeastern RCAP

Southeast Rural Community Assistance Project (SERCAP)  
866.928.3731  
[sercap.org](http://sercap.org)

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“Thousands have lived without love, not one without water.”

W. H. Auden

# Talk to Us!

Visit us on the web and tell us what's on your mind.



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# RURAL ROUND-UP

## Recent wins and happenings



**Building Back Better.** As of the printing of this issue, the Build Back Better Act failed to make movement in Congress, but RCAP remains committed to supporting provisions essential to rural partnership—building, water infrastructure, and a low-income water assistance program. One way to continue to do that is by influencing the 2023 Farm Bill.



**Policy Ideas?** RCAP is providing input on the 2023 Farm Bill to better equip USDA to continue to serve our rural communities. RCAP and the Rural Network have been consistently meeting to discuss our priorities. If you have ideas, please submit them to [msaling@rcap.org](mailto:msaling@rcap.org).



**Bipartisan Infrastructure Law in Action.** RCAP has been meeting with the EPA to discuss implementation of the first tranche of Bipartisan Infrastructure Law (BIL) funds dedicated to technical assistance. EPA released a competitive funding opportunity for \$100 million dedicated to creating Environmental Finance Centers which will provide technical assistance at the regional and national level to help underserved communities access these unprecedented infrastructure dollars—RCAP is throwing their hat in the mix with a great cadre of industry partners.



**PFAS.** EPA is likely to designate a host of these synthetic chemicals as toxic substances in June 2023 under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). CERCLA would hold companies that produce these chemicals liable for cleanup costs and legal damages, but several loopholes in the law could hold water and wastewater utilities as liable parties under the CERCLA “toxic substances” designation.



## RECENT WINS and Happenings

### RCAP Co-hosts a Rural Development Summit

With the Farm Bill coming up in 2023, RCAP, along with the National Association of Counties (NACo) and the National Cooperative Business Association (NCBA CLUSA) as the steering committee of the Rural Network, a group of more than 150 organizations that are stakeholders in Rural Development came together for an Innovation Summit. With more than 20 organizations present, after a small group breakout section, we came up with three big themes that we will use to create a letter for Congress. All members of the Rural Network will have an opportunity to sign the letter before it is submitted to the House and Senate Agriculture committees.

We were joined by the United States Department of Agriculture Rural Development (USDA RD) Under Secretary Xochitl Torres-Small and House Agriculture Committee Ranking Member Congressman Glenn Thompson. It was great to be together in real life safely, and it was a successful event.

### Agua4All

In May, RCAP hosted Agua4All, an event that showcased RCAP's work providing safe drinking water in schools in rural communities across the United States (AL, MA, MT, ND, SD, TX, and WI) and unveiled new work funded by Liquid I.V. in CA, MI, PA, and TX. We had a panel discussion featuring CoBank, the Chris Long Foundation, and Liquid I.V., an EPA presentation, a fun activity put on by RCAP Solutions, and a presentation on impact stats from all the regions.

# TIPS

## from a TAP (Technical Assistance Provider)



Virtual training has rapidly gained popularity. It is both convenient and effective. States across the U.S. are finding ways to ensure water and wastewater operators stay up-to-date and certified in our current social distancing environment. Virtual training has always had a presence, but now there is the realization we are able to do it effectively and there is great potential in its use. Online trainings may be the solution for cutting down on travel costs and allowing the operator to ‘mind the shop’ while slipping in a 2-hour training right from their desk. Additional presenters or co-hosts can be brought in on a training from almost anywhere in the world. Many online software applications allow multiple ways for trainees and trainers to communicate, such as chat functions, interactive feedback through polls and surveys, and breakout rooms for discussion. An operator may be able to find a larger variety of courses available, and the curriculum can be saved and reviewed following the event.

Read the full post online at [rcap.org](http://rcap.org).



## COMMUNITY & ECONOMIC DEVELOPMENT

# NEWS

### RCAP officially launches its new Open for Business Hub during National Small Business Week

In honor of National Small Business Week this year, RCAP officially launched its new Open for Business Hub site ([openforbusiness.rcap.org](http://openforbusiness.rcap.org)) and monthly newsletter. Funded by the Wells Fargo Open for Business Fund and the Siegel Family Endowment, the hub brings together our network's expertise in growing opportunity and small businesses in rural and tribal communities for over 20 years in every U.S. state and territory.

Through an online platform, Open for Business provides a one-stop-shop for free on-demand, personalized training and assistance to help rural entrepreneurs launch and grow their business on their own schedule and at their own pace through one-on-one coaching, live webinars, and e-learning courses. Training and services are provided in both English and Spanish. The hub also features case studies, articles, and a curated list of financial resources and training tools from our network of partners.

#### RuralRISE Summit Registration is now Live!

Registration for this year's annual RuralRISE Summit has gone live with early bird pricing of \$195 available until July 4th, 2022. The Summit will be held September 28-30 in Emporia, Kansas. While the event is planned to be in-person, there will be

opportunities for virtual participation. To register or learn more, visit [ruralrise.org/summit-2022](http://ruralrise.org/summit-2022).

#### Pay it Forward! Become a RuralRISE Summit Sponsor!

We are still seeking sponsorships for the Summit. If you or an organization in your network is interested in sponsoring the event or scholarships for individuals to attend, please visit [ruralrise.org/sponsorship-opportunities](http://ruralrise.org/sponsorship-opportunities) or contact Nicole Manapol at [nmanapol@rcap.org](mailto:nmanapol@rcap.org). Every little bit helps!

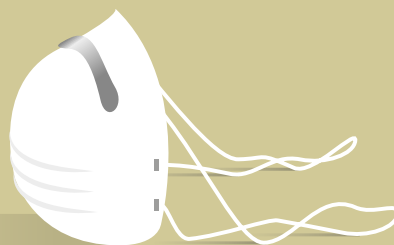
#### New USDA and EDA Resource Guide Boosts Economic Development in Rural Communities

A new joint resource guide helps community organizations access USDA and EDA resources for building strategies to boost economic development in rural America. The resource guide outlines programs and services that can be used to advance community and economic development in rural communities through four key focus areas: planning and technical assistance; infrastructure and broadband expansion; entrepreneurship and business assistance; and workforce development and livability. To download the guide, go to [rd.usda.gov](http://rd.usda.gov) and search “stronger together.”

# COVID-19's Impact

*Debriefing Maine's Community Water Systems.*

**Kathy Rodgers**, State Lead—Maine, RCAP Solutions and  
**Ami Keiffer**, Environmental Program Manager, RCAP



**W**hile COVID-19 is ongoing for the foreseeable future, RCAP Solutions Inc. recognized the value of debriefing Maine's small to medium-sized community water systems (CWS) to assess the management and response to the COVID-19 pandemic, recording key details that otherwise get lost after restoring normal operations. Debriefs are critical to capturing the successes and challenges of any crisis or emergency, especially one as impactful as the COVID-19 pandemic. Learning from mistakes is essential, bringing clarity to a critical incident and establishing a new recovery process.

## **Assessment of Maine's Community Water Systems' Response to COVID-19**

On January 26, 2021, almost a year after the COVID-19 shutdown, RCAP Solutions launched a survey to measure the impact of

**“We are very grateful for the COVID survey you forwarded to us. It is just what we needed to close an inquiry we have regarding the impacts of the pandemic on water utilities. It's much appreciated, and the timing was perfect.”**

— DAVID BRALEY, L.G.,  
DIRECTOR, TELEPHONE  
AND WATER, MAINE PUBLIC  
UTILITIES COMMISSION

COVID-19 and identify challenges faced by Maine's community water systems. The survey encompassed several areas in which utilities may have felt the effect of this global emergency on a local level. The goal of the survey was to identify strengths in emergency protocols that need to be maintained while conversely recognizing potential areas of improvement moving forward. The survey concluded on March 12, 2021, with 96 respondents ranging in size from “very small” to “large” systems.

The survey responses were the baseline for developing a report that outlined key findings and recommendations, noting recommended improvements, in recognition of the fact that community water systems could be faced with a future resurgence of COVID-19 or a future pandemic. Training sessions summarized the assessment findings and lessons learned and emphasized emergency preparedness improvement opportunities and available resources. A two-hour session at the 2022 Maine Water Utility Association Annual Conference featured the survey outcomes and recommendations.



# KEY FINDINGS AND SUGGESTIONS FOR IMPROVEMENT

Below are the findings and suggested improvements identified from the survey and report as well as some COVID-19-specific observations.

Key Finding	Suggested Improvements
Roughly 2/3 of respondents should improve cross-training for critical water system operations.	Incentivize cross-training in the system for employees and offer educational/training opportunities.
21.1% of respondents do not have standard operating procedures (SOPs) for all critical functions.	Establish SOPs for all critical functions and operations, and test the application/use of SOPs with staff and response partners (e.g., mutual aid).
31.6% experienced a decrease in revenue during COVID-19.	Include financial planning in Emergency Response Plans (ERPs) and build contingency/emergency savings. Also, develop a business continuity plan (BCP).
54.7% experienced an increase in non-payment of customer bills.	Offer customers additional options to continue making payments, provide links to potential financial aid, and include financial planning in ERPs/develop BCPs.
23.2% experienced a significant increase in the cost of critical supplies.	Evaluate opportunities to increase critical supplies and equipment stocks to alleviate potentially high costs during emergencies, considering shelf life as appropriate (e.g., sodium hypochlorite). Also, review/update agreements with mutual aid partners and availability of critical supplies.
35.8% did not have emergency savings prior to the pandemic.	Include financial planning in ERPs and build contingency/emergency savings while working with the public utility commission (PUC). Also, develop a BCP.
CWSs have paid ~\$9,000 extra (on average) during the pandemic.	Include financial planning in ERPs and build contingency/emergency savings while working with the PUC as applicable. Also, develop a BCP.
Personal protective equipment (PPE) and sterilizing products were difficult to obtain at times.	Stock and maintain critical levels of PPE and sterilize products on-site. Also, identify mutual aid opportunities and establish contingencies with local emergency management agencies.
10.5% experienced difficulty accessing critical chemicals and supplies.	Increase critical supplies and equipment stocks and identify additional distributors/sources in ERPs. Also, identify mutual aid opportunities.
Only 8.4% of CWSs received concerns about water safety from customers.	Continue to maintain high levels of customer engagement and preemptively notify the public in emergencies while maintaining transparency.
Business water usage decreased overall, and residential use increased.	Include financial planning in ERPs and build contingency savings. Analyze the impact/trend on your system to prepare for usage changes.

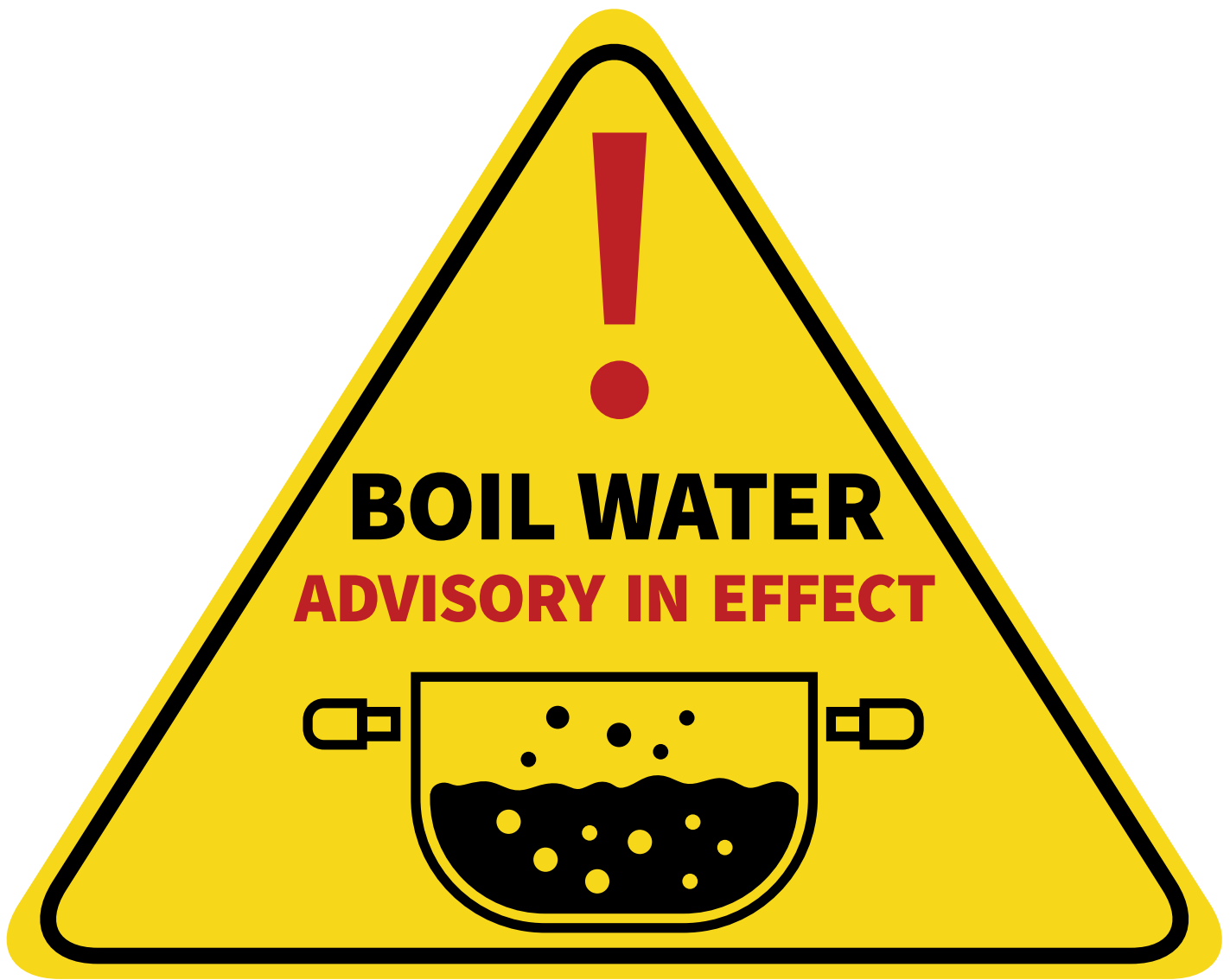
<p>The top three operational and maintenance difficulties reported were meter installation/servicing, preventative maintenance activities, and compliance sampling.</p>	<p>Establish protocols to address difficulty entering homes/businesses during pandemics or other emergencies that interfere with planned or required activities. Further, develop SOPs for impacted preventative maintenance projects. In coordination with the primacy agency, establish compliance sampling contingencies (e.g., adjusting sampling plans).</p>
<p>Nearly 80% of respondents did not experience difficulty maintaining employee/staff safety during the pandemic.</p>	<p>Nearly 80% of respondents did not experience difficulty maintaining employee/staff safety during the pandemic.</p>
<p>Over 95% of respondents did not experience difficulty having samples analyzed by outside laboratories during the pandemic.</p>	<p>This success recognizes the reliability of the services that state and private laboratories provide.</p>
<p>Credentialing and traveling for critical purposes did not present widespread or large difficulties overall.</p>	<p>Include credentialing with local/county emergency management in ERPs.</p>
<p>17.9% experienced difficulty maintaining water operator licenses.</p>	<p>Continue to utilize/explore online and virtual training offerings and offer in-house opportunities for staff education.</p>
<p>Overall, respondents heavily relied on virtual and online services for training and meetings.</p>	<p>Continue to incorporate virtual options and prepare to use them in the future.</p>
<p>37.9% have not updated ERPs following the pandemic.</p>	<p>Expand ERPs to include pandemic planning, exercise the proposed plans, and update plans regularly—at least annually.</p>
<p>66.3% would like to make additional updates to ERPs associated with the pandemic.</p>	<p>Analyze individual CWS' response to COVID-19. Utilize templates/resources and participate in training on how to update ERPs for pandemic scenarios.</p>

## Gratitude all around

This project was made possible thanks to funding from the Maine Drinking Water Program (DWP). RCAP Solutions Inc. partnered with Tom Bahun of Tom's Water Solutions LLC and his team for their expertise and connections to Maine's community water systems for this project. Tom has several years of experience developing vulnerability/risk and resiliency assessments, emergency response plans, and other training curricula. RCAP Solutions received gratitude back from the field after the survey and outcomes were completed and shared. The hope is that these outcomes will continue to influence the future resiliency of water systems in Maine and throughout the nation.

**“This is a great resource. I think it’s really helpful to have this snapshot of how Maine PWSs fared during the COVID-19 pandemic and what their continued needs are for future pandemic (or similar) response.”**

— SUSAN BREAU, HYDROGEOLOGIST, WATER RESOURCES TEAM LEADER, MAINE DEPARTMENT OF HEALTH AND HUMAN SERVICES CENTER FOR DISEASE CONTROL AND PREVENTION, DRINKING WATER PROGRAM



# Boil Water Advisories and Orders

*What they mean and how to respond.*

**Ida Jett-Smith**, Technical Assistance Provider, Missouri, Midwest Assistance Program

**I**t is not often employees of small cities and towns hear gratitude, but they did after their experience with the polar vortex that spanned the U.S. in February 2021. The extreme freezing temperatures led to severe water main breaks in many cities and towns, resulting in widespread Boil Water Orders and Boil Water Advisories.

The media attention on the polar vortex amplified concerns. When residents heard the name of their town or city on the television, radio, or social media platforms issuing a boil water advisory or order, panic

followed. Questions such as: “Are my children and pets safe?” “Can we eat the dinner I cooked?” “I just showered; am I now going to be sick?” and “When will the water come back on?” became trending topics.

Most people do not think about the water that comes to their home for bathing, cooking, and drinking unless the amount or quality is threatened. This article dives into a few of the most frequent questions about boil water notices for water consumers.

“There’s plenty of water in the universe without life, but nowhere is there life without water.”

— SYLVIA A. EARLE,  
AMERICAN MARINE BIOLOGIST

## What is a Boil Water Order or Boil Water Advisory?

Public water systems and water operators take water quality very seriously. Routine testing and maintenance occur 24 hours a day, seven days a week. However, occasionally, there is a problem with water quality that can lead to a Boil Water Order or Boil Water Advisory.

The public water system can advise you to boil water—issue a **Boil Water Advisory**—when there is an unconfirmed concern or potential problem with the quality of your drinking water. Significant water main breaks or other low-pressure events where the possibility of contamination intrusion exists can trigger a Boil Water Advisory. It can take 24 to 48 hours to receive sample results from the laboratory to confirm that the water is safe.

A **Boil Water Order** occurs when there is a likely threat to public health issued by the regulator—in this case, the Missouri Department of Natural Resources (DNR). The most common reason for issuing a Boil Water Order is the presence of fecal coliform or E. coli bacteria, typically caused by low water pressure or inadequate levels of chlorine in systems that require chlorination.

Other technical terms you occasionally hear causing Boil Water Orders are:

- High turbidity levels
- Cross-connections contamination
- Inadequate treatment techniques
- The presence of other microbial pathogens such as Giardia or Cryptosporidium.

## How is water quality maintained?

Water operators, the state regulator—which, for Missouri, is the DNR—and the Environmental Protection Agency (EPA) work hard to monitor, inspect, maintain, and regulate public water systems 24 hours a day, seven days a week, 365 days a year.

### Testing

Samples are taken monthly, or more frequently depending on system size, by an employee of the city, town, or state and submitted to a certified lab to be tested. This tests whether the drinking water is safe for direct consumption, bathing, and cooking. Water operators perform tests regularly to detect contamination. If contamination is suspected, the public water system needs to contact the state regulator regarding the results. Every water

system requires reports of the events recorded with the regulator, which are then accessible online via their Drinking Water Watch.

### Flushing

Have you ever seen water flowing from fire hydrants and water towers? You might think there's a problem. However, it can part of a standard maintenance strategy to keep water fresh and safe to drink within the pipes, also known as the distribution system. Flushing is used as a tool to remove sediment from water lines that may build up over time. Flushing also helps to get water moving and can be used to replace stagnant water with fresh water in areas without much flow in the distribution system.

### Water main break repair

If you have a water main break, water quality can be impacted either through the break or through a pressure drop during the break or the repair. Flushing is often used following break repair to expel any contaminated water.

## What steps should I take if I'm under a Boil Water Order or Advisory?

Knowledge is power. Understanding why a boil water notice occurred is the first step; knowing what to do is the next. Educating yourself and your family on the proper procedure to follow if a Boil Water Order or Advisory is issued will help build confidence in your drinking water quality when they occur and reduce risks involved with contaminated drinking water.

- Boil water vigorously for three minutes before use. Use only boiled water for drinking, diluting fruit juices, other food preparation, and brushing teeth. Note: Let the water cool sufficiently before drinking (to approximately 110 degrees F or below) to avoid scalding
- Buying bottled water may be a practical alternative to boiling drinking water under a Boil Water Order or a Boil Water Advisory. Bottled water offers a safe water source for drinking, cooking, and brushing your teeth. We would recommend larger bottles versus individual-sized in order to limit the impact on the solid waste stream
- Dispose of ice cubes, and do not use ice from a household automatic icemaker—remake ice cubes with boiled water.
- Disinfect dishes and other food contact surfaces through immersion for at least one minute in clean tap water that is mixed with one teaspoon of unscented household bleach per gallon of water.
- Usually, you don't need to boil water for bathing or for your children to play in a kiddie pool, sprinkler, or under the hose. Watch closely that children are not ingesting any water as they play.
- Waterborne diseases can affect specific groups of people. Contact your physician for additional information if you have or are caring for someone who has cuts, severe rashes, or reduced immune function or who is under six months of age or elderly. Additionally, chemotherapy, organ transplants, and diseases like HIV/AIDS can reduce immune function and increase the risk of waterborne illness.

## What are the symptoms of water-borne illness?

It's not entirely uncommon to experience a waterborne illness, even though, according to the Centers for Disease Control and Prevention, the U.S. has some of the in the world. Still, 7.2 million Americans (1 in 44 people) get sick from diseases spread through the water every year. We share this not to scare you, but to inform you. Disease symptoms include diarrhea, cramps, nausea, jaundice, associated headaches, and fatigue. However, these symptoms do not result only from disease-causing organisms in drinking water—several factors other than your drinking water can cause these symptoms.

## What can we do to help?

From personal experience, when a Boil Water Order or Advisory is issued, the public is likely to remain calm if given guidelines and prompt communication. Proactive and timely communication in understandable language is key. Many cities and towns post updates on social media accounts such as Facebook to keep the citizens informed on the progress of repairing a water main break or waiting on the results from a laboratory.

As a resident, be patient with the employees and water operators. They are the experts and do the best they can. Most live in the community and experience the same conditions in their own homes, and they want the repairs completed or results back as quickly as you do. Learning about your town's infrastructure and your role in spreading helpful information will create a stronger community during a crisis.

Residents, city and town employees, businesses, and the infrastructure itself felt the stress of the polar vortex in 2021. However, seeing communities unite and develop an appreciation for drinking water was an unexpected gift. Not every emergency will be of that magnitude, but it's important to remember that every event shapes the relationship between a public water system and the community it serves.





# One Violation, Two Violations, Three Violations = Agreed Order

*How an AO is created, carried out, and closed,  
and how RCAP can help.*

**Maggie Mahan**, Technical Assistance Provider,  
Great Lakes Community Action Partnership (GLCAP)

**W**hen initially working with a system that has accumulated a lengthy list of violations, it is easy to predict that an Agreed Order (AO) is forthcoming. An AO is a written agreement between two parties to resolve a case. In this context, the two parties are the regulating agency and the public water system. Typically, an AO is the last step in the compliance process before the regulating authority exercises a more stringent enforcement option. There are many steps between receiving a violation and executing an AO and multiple ways to be subject to an AO. Once a system is under an AO, it will typically be there for at least a year. This article gives some insight into the process.

## How an AO is Triggered

The U.S. Environmental Protection Agency (EPA) created the Enforcement Targeting Tool (ETT) to guide State Drinking Water Programs in tracking utilities that are out of compliance with the Safe Drinking Water Act (SDWA). The severity of the federal violation(s) and length of time for the oldest unaddressed violation determine the ETT score. Every federal violation has a point value assigned to it (Figure 1), as does the length of time the first unaddressed violation has remained open (Figure 2).

Similar to violations with your driver's license, upon reaching 11 points,

# CALCULATION OF AN ENFORCEMENT TARGETING TOOL SCORE

$$\text{ETT Score} = (\sum S) + n$$

**S = Severity of Violation**    **n = Number of years oldest violation has remained unaddressed**

Violation Type	Point Value	Example
<b>Acute* Health Based</b>	10	<i>E. coli</i> exceedance
<b>Non-Acute* Health Based</b>	5	Disinfection By-Product (DBP) maximum contaminant level (MCL) exceedance
<b>Monitoring and Reporting (M&amp;R)</b>	1	Failing to submit Monthly Operating Report (MOR) by monthly deadline

\* Acute violations make users sick immediately, while non-acute violations make users sick over time.

**FIGURE 1—VIOLATION POINT VALUE**

the utility is referred to the Division of Enforcement (DENF). Each State Primacy agency tracks regulated utilities' ETT point values and is required to update this list quarterly.

Breaching the 11-point threshold and being referred to the DENF is the most common way for a system to be placed under an AO. Additionally, a utility can be referred to enforcement through sanitary defects or violations identified by the Regional Primacy Inspectors, without a point scale. Some field violations of the Safe Drinking Water Act (SDWA) will automatically send a utility straight to DENF, where it will be directly placed under an AO. An example of this would be a groundwater system being re-classified as Groundwater Under the Direct Influence of surface water (GUDI) when the treatment plant is only designed and constructed to treat groundwater. Suppose the utility does not quickly upgrade the plant's ability to treat surface water—in that case, the utility is out of compliance with the SDWA and will automatically be placed under an AO to ensure proper treatment is in place.

## RCAP Can Help—the Kentucky Example

RCAP can help small, rural systems monitor their violation status and manage the way it progresses. We've had a lot of experience with this in Kentucky.

As the result of an aggressive effort to regionalize and increase the financial sustainability of rural water systems, Kentucky is full of small, rural consecutive distribution systems that purchase all their water from one or more wholesale providers and have no emergency connections. In spite of significant efforts across the state, many of these small utilities are still battling Disinfection By-Product (DBP) issues. Even though these systems have no control over the quality of the water purchased, they have been placed under AOs. RCAP technical assistance providers (TAPs) can assist these systems by tracking their data quarterly, helping with proper public notices, providing flushing and sampling guidance, and much more.

Number of Months	Point Value
<b>&lt;12 months</b>	0
<b>12-23 months</b>	1
<b>24-35 months</b>	2
<b>36-47 months</b>	3
<b>48-59 months</b>	4
<b>60 months</b>	5

**FIGURE 2—TIME POINT VALUE**

By proactively reviewing this data, systems will know their violation status before formally being notified. For example, if a system received a DBP violation, there would be more than one 5-point violation over 12 months due to EPA's Local Running Annual Average calculation. Additionally, suppose a system receives violations for both Haloacetic Acids and Total Trihalomethanes (each a 5-point violation) and that system has one M&R violation (1 point). In that case, it will have 11 points, which sends it directly to enforcement in just one quarter.

Once a system accumulates 11 points, it can take a few months until it has a first consultation with DENF. Typically, systems are formally notified by letter that they have been referred to DENF. Many small systems are unfamiliar with this part of the regulatory arena; consequently, letters go unanswered. RCAP can review the utility's violations, discern the requirements, and facilitate communication between the utility and the primacy agency. After responding to the letter, the utility has at least one

teleconference or in-person meeting with DENF. Having a friendly and knowledgeable TAP to guide them through the process can dramatically improve communication between the operator and the utility they represent on the one hand and DENF on the other.

## Negotiating the AO and Creating the CAP

At the initial consultation meeting, all participants are introduced, and a roster is kept of everyone in attendance. DENF explains its procedures, then moves on to a full review of the utility's background and violations. The utility presents its side of the story, followed by a discussion of proposed general resolutions. The resolutions may include a minimum of a Corrective Action Plan (CAP) as well as quarterly progress reports and the negotiation of the civil penalty.

Furthermore, participants discuss stipulated penalties and termination of the AO and a few specific possibilities to correct and/or document the situation. Although a civil penalty is always assessed, the amount is negotiable depending on the system's financial situation.

Once the initial meeting concludes, it can take a few months to execute the AO. DENF expects a system to negotiate the civil penalty and provides a deadline for the negotiation, usually within 30 days of the initial meeting. Negotiations usually include a response letter that details the financial burdens, the lack of financial capacity, the monthly revenues and expenses, and a counteroffer for the civil penalty. Penalties may be negotiated down to as low as 50% of the original amount if evidence indicates the full penalty would cause an undue burden. Installments can be negotiated as well.

Once the negotiations are final, the AO will be reviewed by DENF and the Office of Legal Services within primacy. The AO is fully executed when each party has signed the document. The utility will receive a final, fully signed copy, and the 30-day timeline begins for the CAP to be submitted and for the civil penalty payment.

The CAP should explain why each violation occurred, report what corrective actions have taken place including a schedule of proposed corrective actions, and provide a proposed Return to Compliance Date. If there are similar violations, the utility may be able to group them with a general explanation. Next, the utility must propose corrective actions to correct any outstanding issues and the dates that corrections will be completed. RCAP can work closely with the system to ensure the actions and dates are realistic and attainable. Most AOs are open for at least one year; however, if construction is included as a necessary action, it may be open longer.

Here are a few examples of corrective action in a CAP for DBP compliance issues:

- Adjust the flushing schedule to align with the wholesale provider's schedule. Contact the wholesale provider or work with primacy to receive technical assistance to ensure a sequential flushing schedule.
- Take samples at the master meter where the systems interconnect. If the utility can determine that the water at the point of purchase contains elevated levels of Haloacetic Acids (HAAs) or Total Trihalomethanes (TTHMs), this could serve as documentation, even though the purchaser can do little to correct the issue.
- The utility can increase tank turnover to keep the water from aging further, add aeration to the tank, or clean sedimentation from the tank. While system hydraulics can be evaluated, many small systems do not have the financial capacity or staff to prioritize this.
- Evaluate the water purchase contracts; however, amending the contracts has proven to be difficult due to contract duration—40 years on average. The state does not have regulatory authority to penalize the wholesale provider for selling water that does not meet current water quality standards.
- All of these actions should be listed in the quarterly progress reports.

## Compliance is Critical

To ensure that the actions listed in the CAP are met in a timely manner, DENF requires quarterly progress reports. RCAP can assist small systems with these reports and guide them through the steps identified in the CAP, which will successfully return them to compliance by the Return to Compliance Date. Reports should succinctly detail what has happened during the previous quarter. If there are significant delays in accomplishing the tasks specified in the CAP or new actions are needed, an amended CAP can be submitted for approval by DENF, which does not always occur. Failure to submit the reports or to follow the CAP can lead to stipulated penalties or other actions. In Kentucky, "violations carry civil penalties of







up to \$25,000 per day per violation depending on the statutes/regulations violated,” as stated in Notice of Violation letters.

The critical thing to remember is that both the AO and the CAP are legal documents. If a utility chooses not to respond or not to sign the AO or fails to submit a CAP, the utility will be taken to circuit court, which is the last resort for primacy. Blatantly disregarding regulations leads to additional penalties and less leniency for the system. For example, other penalties for a wastewater system could be sanctions that do not allow the system to accept any additional flow; this would prohibit new industrial or even residential growth until all corrections are made. Depending on the regulations violated, operators can permanently lose their licenses, be fined, and/or be jailed. Even if it continues to receive new violations, the AO protects the system if it can show that it is actively working to correct the issues. Typically, systems cooperate, learn more about their utility, and return to compliance, and the AO is closed by the deadline listed in the CAP. In some cases, being under an AO can be helpful to a utility—for example, State Revolving Fund applications receive more points if the funds go toward correcting issues in an AO.

## Closure of the AO

If the utility has successfully addressed the violations by the AO deadline, the Order can be closed. The utility must draft a letter stating that all violations have been addressed and requesting the Agreed Order be closed. If DENF concurs, it will issue a Case Closure letter for the utility’s records, which ends the case. The utility must maintain compliance to avoid returning to enforcement. DENF is less lenient on offenders who receive the same violations repeatedly.

Due to circumstances beyond their control, many small systems lack full technical, managerial, or financial capacity, and their operators and board members have little experience with enforcement. It is essential to recognize that assisting a utility through the Agreed Order process typically cannot be completed within 12 months. It’s a long-term commitment to a utility that could benefit significantly from RCAP’s services. I find this kind of project extremely rewarding, as long as the utility will put forth the effort needed to return to compliance. Fortunately, most do!



# Lightning Never Strikes the Same Place Twice

*How Lybrook Mutual Domestic Water Consumer Association overcame a decade of hardships.*

**Karen Pereira Tapias**, Rural Community Assistance Corporation (RCAC)

**R**are, unexpected occurrences don't usually happen twice. However, the small town of Lybrook, New Mexico, experienced two lightning strikes in the same place that led to 10 years of noncompliance, infrastructure in disrepair, and even an embezzlement scandal.

To set the stage, Lybrook is a small, rural community located in northwestern New Mexico, with a population of approximately 289 people and a median household income of \$21,964. The local water system, Lybrook Mutual Domestic Water Consumers Association (MDWCA), serves 64 connections in Rio Arriba, Sandoval, and San Juan counties. The public water system serves the Nageezi and Counselor Navajo Chapter. Most of the population is Navajo, but the community of Lybrook itself is not part of the Navajo Nation.

I work with Rural Community Assistance Corporation, or RCAC, the Western RCAP, as the Rural Development Specialist—RCAC's title for technical assistance providers. I began working with the Lybrook MDWCA system in July 2015 after it elected a new president of the all-volunteer board of directors.

When I begin working with a system, I start by connecting with a community, board, or agency member that will introduce me and help me build an atmosphere of trust. I acknowledge that most small system boards volunteer their time and focus on demonstrating that they can count on me through my actions. Eventually, this leads to them relying on my expertise and learning while completing tasks together. Often, volunteer boards don't fully realize the scope of the regulations they have to comply with,

which can be overwhelming. My approach is to work with them little by little, completing one step at a time.

RCAC provides free training in communities, often traveling to provide additional one-on-one technical assistance. In New Mexico, boards of directors must receive annual training. Over time, the systems and staff incorporate the skills needed and are usually able to bring their systems back into compliance.

## History of Hardships

Lybrook MDWCA faced several technical, managerial, and financial challenges, like many of its size. Adding to the complications, the manager/operator responsible for keeping the system in compliance with federal and state regulations had recently quit because the system did not have funding to pay him. Although the manager stayed to help and advise the board on a volunteer basis, the system fell out of compliance.

The board president worked with the bookkeeper and former president to correct the system, but he could not get the support and access to reliable information, including financial documents, budgets, bank statements, and compliance and usage records, required to perform his duties. Souder, Miller & Associates, an engineering firm that works with the Navajo Nation, had been helping the MDWCA and referred the board president and former manager/operator to RCAC for technical assistance.

The board initially requested RCAC to complete a rate analysis, believing that increasing its revenues to cover operational expenses would help overcome the system's challenges. The analysis, however, uncovered other problems in addition to the lack of financial resources, such as the board's general lack of knowledge about the state and federal regulations and requirements to ensure safe drinking water and a lack of good management practices.

During the financial analysis, RCAC staff asked for financial records and backup and, after facing resistance, discovered that a former bookkeeper had embezzled close to \$50,000. Because the former board did not have clear management practices and financial expertise, they never uncovered the missing funds. The system had experienced equipment failures, one after the other, and needed funding for repairs.

In 2012, the MDWCA received an emergency loan from the New Mexico Board of Finance Division to pay for water pump repairs for a pump that was struck by lightning, but, by 2015, the system had fallen behind on the payments. RCAC worked with the system to obtain an extension on the 2012 state loan. But in 2016, the same pump was struck by lightning again and had to be replaced a second time. RCAC worked with the MDWCA and the Board of Finance Division to set up a correction plan. The system got an extension on the 2012 loan—restarting annual payments in 2018. Meanwhile, the system was able to secure a grant for the 2016 repairs.

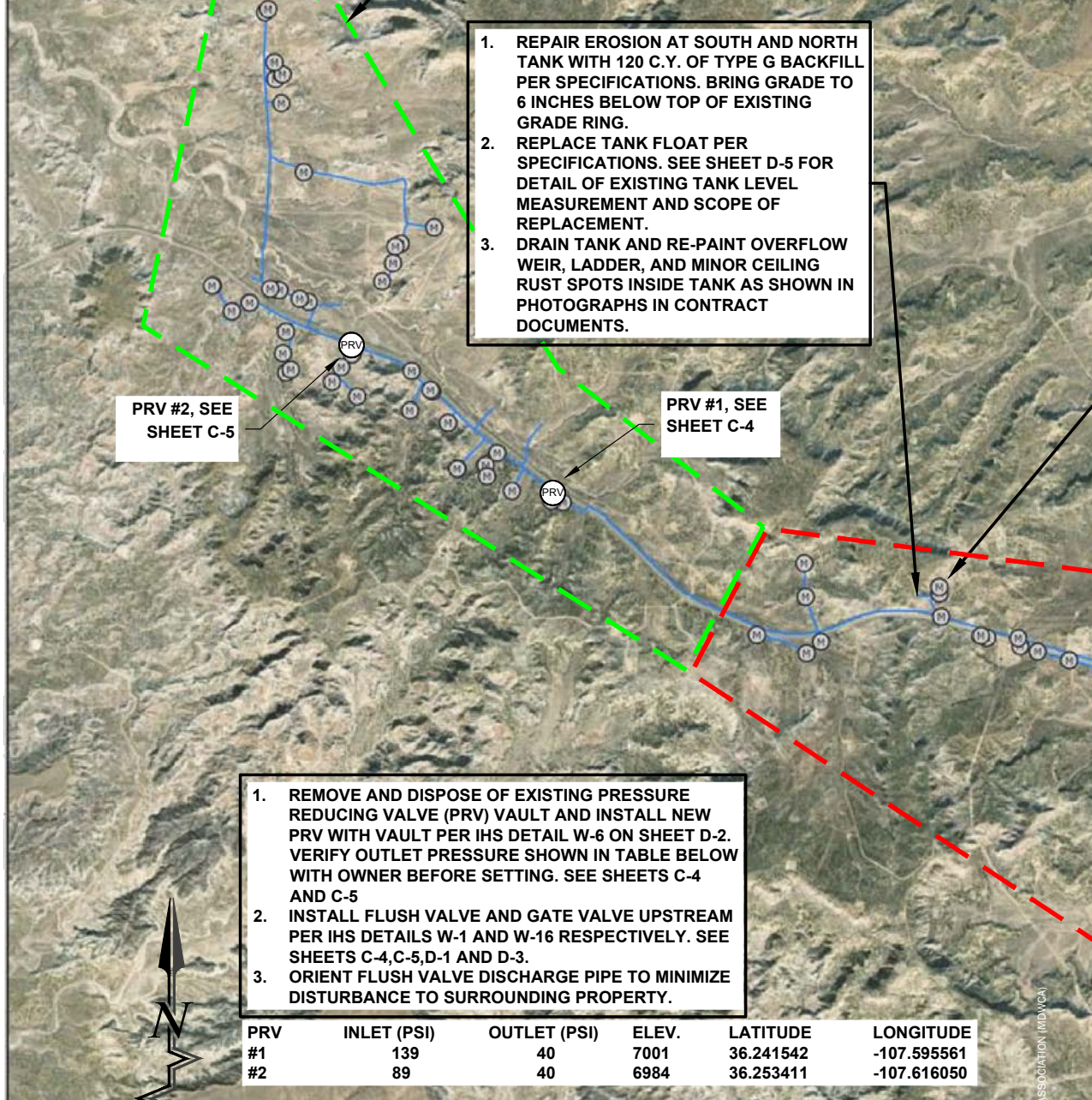
## RCAC Makes Great Strides

RCAC staff completed the rate analysis and worked with the board and system to bring its operations back into compliance over the past five years, including providing one-on-one technical assistance and training.

My work with the MDWCA included addressing sanitary survey deficiencies, consumer confidence reports (CCRs), annual reporting to the Department of Finance Administration, and audits. RCAC conducted rate analyses for the board of directors to plan for the future and ensure financial sustainability, facilitated collaboration efforts with the Navajo Tribal Utility Authority, and helped complete funding applications for emergency repairs and capital improvements.

Some of the MDWCA's accomplishments during the past five years while working with RCAC include:

- **Achieving compliance with the New Mexico Secretary of the State's annual reporting requirements, including reincorporating the association, amending governing documents, and completing necessary reports.**
- **Achieving compliance with New Mexico Audit Act requirements, which requires businesses to submit Annual Audits or Revenue Certifications to the Office of the State Auditor based on the system's annual income. RCAC has been assisting the MDWCA in meeting these requirements. Agreed Upon Procedures were completed for 2018, and we are currently working on determining requirements for 2019, 2020, and 2021 to bring the system into compliance.**
- **Completing its sanitary survey in 2018 and finding significant deficiencies that need correction to guarantee the safety of the drinking water. At the same time, the system failed to submit CCRs for 2018, 2019, 2020, and 2021. RCAC helped the system address the deficiencies and complete CCRs for 2018 and 2019 and is currently working on the 2020 CCR.**
- **Obtaining \$500,000 in State of New Mexico capital outlay funding for capital improvements to the system.**



## COVID-19 Challenges

During the COVID-19 pandemic, I worked remotely using technology and tools like Microsoft Teams. It was a challenge at first, as some of the systems and volunteers did not have access to or expertise with technology.

It took a while for the system staff and me to adjust to changing their approach to communication and training, but I used techniques like sharing my computer screen so board members and staff could watch me complete forms or review requirements. I also used GoToTraining, which enabled me to take control of the systems' computer screens, and Facetime, in order to conduct technical assistance by phone. I even had board members and staff take photos of the paperwork on file. It took time, but eventually, they adjusted, and we were able to continue the work.

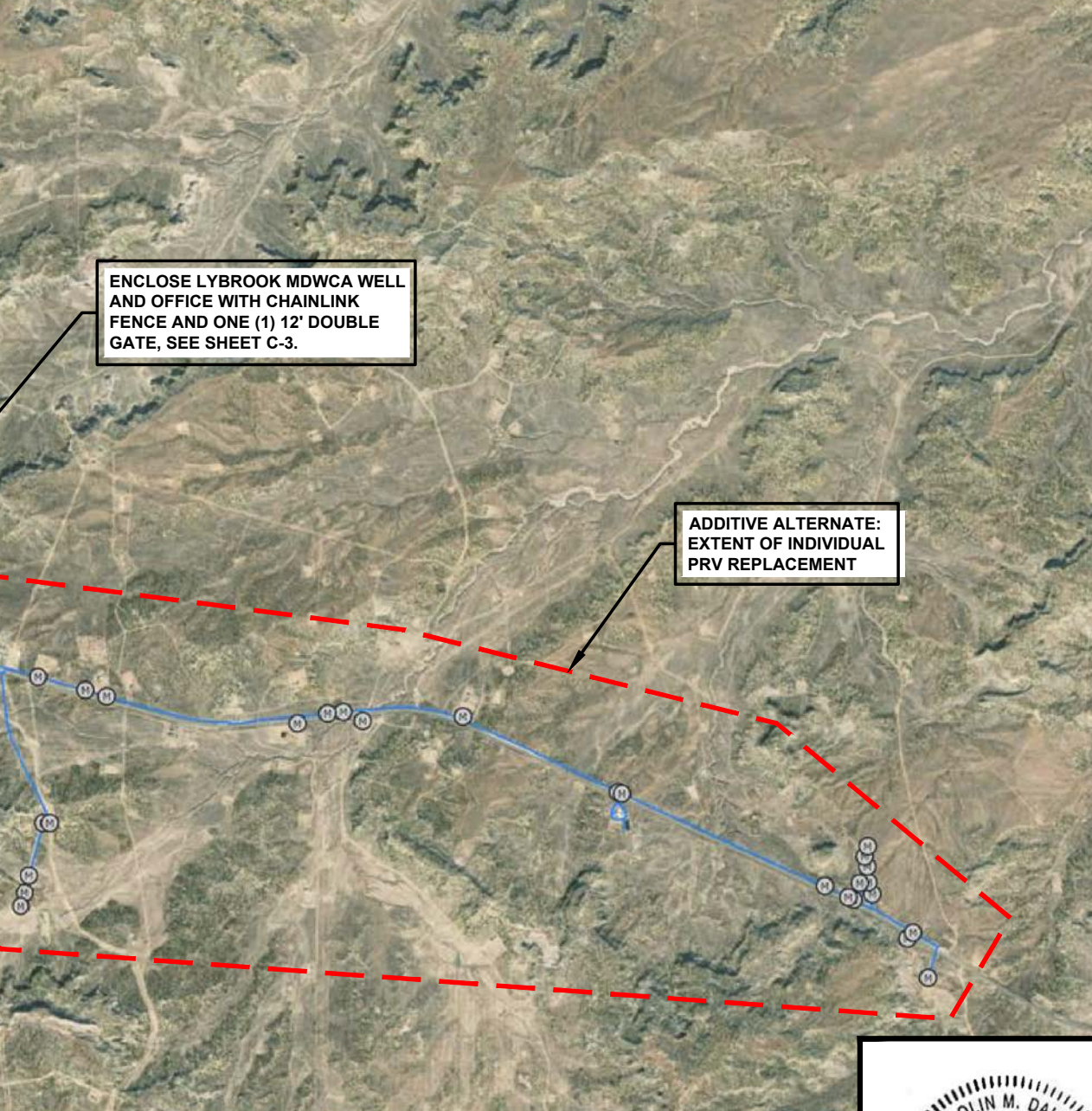
## Future Planning: Navajo Gallup Water Supply Project–Cutter Lateral

The U.S. Bureau of Reclamation is funding a \$1 billion-

plus project to provide a sanitary, renewable water supply to Navajo Chapters and surrounding communities from the San Juan River. The project, known as the Navajo Gallup Water Supply Project (NGWSP), includes a component called the Cutter Lateral. Navajo Nation manages the Cutter Lateral, designed by Souder, Miller & Associates (SMA), and will be operated by the Navajo Tribal Utility Authority (NTUA). An agreement developed by SMA, NTUA, and the Lybrook MDWCA will incorporate three of the local communities—Lybrook, Counselor Chapter, and Nageezi—into the lateral project.

The MDWCA will not be able to participate in the lateral project unless its system meets NTUA's standards. To meet the criteria, the MDWCA will use the State of New Mexico capital outlay funding received in 2019 and 2020 to complete source water protection projects, valve and meter upgrades, pipeline extensions, and capacity upgrades.

RCAC and SMA collaborated to develop funding applications for capital improvements needed to bring the system up to NTUA standards and coordinated



community outreach to discuss the project and the possibility of integration into NTUA. They are now working with other relevant agencies to coordinate and plan the project.

The MDWCA constructed security fencing around a previously unprotected business office and well. The next phase includes replacing pipes that freeze and break during the cold New Mexico winters. Once MDWCA completes the improvements, they will be considered qualified to join the project. The upgrades ensure that the volume of water entering the system doesn't overwhelm it and risk breaking pipes.

The MDWCA is currently collaborating with NTUA to discuss the possibility of transferring ownership and operation of the MDWCA system to NTUA, given NTUA's extensive expertise in rural water system operations and the fact that the majority of the MDWCA's customers are members of the Navajo Nation.

### **Commitment to Building Trust**

Looking back on the six years I have spent working

with the MDWCA's board and staff, I am proud of the trust I have built and the progress the system has made.

Rural development specialists—aka technical assistance providers—should always have good intentions and commit to their communities. For example, the MDWCA staff know that they can call me anytime. The amount of responsibility water boards carry can create a lot of stress, so I make myself available whenever they have a question or concern. I am not afraid to learn along with them. Sometimes water system staff or board members call with questions I have no idea how to answer, so I work side by side with them to research answers and conduct problem-solving.

My advice to small water system staff and boards and those whose job is to assist them is “stay calm and try your best.” The water board and system staff's efforts to keep water safe and accessible to their communities are a huge responsibility and critical to the customers they serve.



# More Water Needed

*Carl's Corner Seeks Options for Additional Water Supply*

**Tom Fulton**, East Texas Coordinator, Communities Unlimited

**C**arl's Corner is a town of 198 people located in the northeastern Hill County in the northern part of Central Texas. The county seat of Hillsboro is seven miles southwest of Carl's Corner. The town is named for Carl Cornelius, a longtime friend of country music singer Willie Nelson and owner of a local truck stop recognized by travelers for the large dancing frogs on top of the diesel sign. The property adjacent to the truck stop was the site of several Willie Nelson Fourth of July concerts in the early 1980s, which seemed to be the catalyst for the town's formation. Residents in Carl's Corner enjoy local parks, museums, and restaurants. The town's history makes it an interesting place for travelers to stop while passing through the central part of Texas.

In early 2021, Communities Unlimited (CU) began working with the town of Carl's Corner to assist them with obtaining funding for an additional groundwater well.

The mayor of Carl's Corner, Susan Ezell, and CU staff worked together on the Drinking Water State Revolving Fund (DWSRF) application, including submitting the Project Information Form (PIF) to the Texas Water Development Board (TWDB) for a grant to drill a new, larger, and deeper groundwater well, estimated to cost \$870,000.

Since the cost was going to be high, Carl's Corner was also looking at other options. CU staff worked with Mayor Ezell to include information from the town's budget in the application and discussed options for an additional water supply for Carl's Corner. Through this review process, CU staff discovered that Carl's Corner had many needs. Not only did the town need an additional groundwater well, but they also needed assistance with some maintenance and repair issues. CU worked closely with the community to guide Carl's Corner on mitigating these many issues.

CU staff investigated alternative supply options for Carl's Corner with the nearby Files Valley Water Supply Corporation (WSC) and received a proposed contract to provide water. Carl's Corner leadership felt the contract was unfair. CU staff reviewed the proposed contract and worked with the towns to modify it to include more lenient terms, which Carl's Corner would then consider with the suggested changes.

## Winter Storm Uri 2021 and the Aftermath

Along with the many existing challenges, winter weather in February 2021 caused all customers to be without water for over 11 days. Carl's Corner told customers to let their faucets drip to prevent pipes from freezing. However, it had the opposite result: Running more water than the system could supply caused the pipes at the well to freeze and burst and the well pump to burn out from the excess pressure. Carl's Corner was not alone—more than 800 water systems were affected by the freezing temperatures throughout Texas, making repair parts difficult to find. Numerous field problems caused the town to suffer an extended water outage.

Finally, in March, Carl's Corner purchased the needed parts and pumps and made the repairs required to restore service. CU continued to assist Mayor Ezell through virtual meetings and phone calls to discuss the DWSRF application for a new well. In April, Mayor Ezell filed a preliminary grant application because of the continued assistance for emergency repairs and other pertinent equipment needed to bring the system into compliance with Texas Commission on Environmental Quality (TCEQ) requirements. In addition to the new well, Carl's Corner's plan included:

- A pump station,
- Ground storage,
- A pressure tank,
- Booster pumps, and
- An auto control system with a fully operational generator system.

A virtual meeting was then held with CU to discuss purchasing water from Files Valley WSC, the concept of drilling a new groundwater well, and how to access Federal Emergency Management Agency (FEMA) funds for winter storm damages.

On July 12, 2021, CU staff traveled to Carl's Corner to meet with the mayor. They discussed future grant applications that the city may qualify for, TCEQ violations issued for current well and



transfer pump capacity, and the purchase of new equipment, buildings, large transfer pumps, and a pressure tank. The discussion of purchasing water from Files Valley WSC continued, recognizing that purchasing wholesale water rather than drilling a new well can be a hard sell. The mayor was advised to employ an engineer as soon as possible and a full-time operator to navigate the system's needs, as the town currently uses a part-time contract operator. CU again offered its assistance and continued to meet with the mayor throughout the summer to discuss funding opportunities and alternatives to address the problem, including a Water Purchase Agreement with Files Valley WSC. They also discussed engineering firm utilization short-term and long-term plans, TCEQ violations, and U.S. Department of Agriculture Rural Development (USDA RD) funding.

## CU Continues to Help

Communities Unlimited staff are still working with the mayor of Carl's Corner on the application for the new groundwater well and the city's other needs. There have been multiple emails, phone calls, site visits, and virtual meetings. CU has worked with them to establish short- and long-term goals and will continue to assist the city of Carl's Corner. The city is grateful for everything CU has done to help them.



# Lead and Copper Rule Revisions

*Assisting South Carolina's Rural Communities*

**Heather Preston**, Technical Assistance Provider, Southeast Rural Community Assistance Project, Inc (SERCAP)

**I**n the fall of 2021, SERCAP, the Southeast Rural Community Assistance Project, received a grant from the United States Department of Agriculture (USDA) under the Rural Community Development Initiative (RCDI) to educate and assist small, rural communities across South Carolina in complying with the new federal lead and copper rule revisions. Regulatory requirements have a disproportionate impact on small, rural communities that have fewer resources to devote to compliance, and the needs are significant for the small, rural communities in South Carolina.

## **Lead and Copper Rule Revisions**

The developments surrounding the Lead and Copper Rule Revisions (LCRR) are complex. Initially, the U.S. Environmental Protection Agency (EPA) published the final LCRR in the Federal Register on January 15, 2021, with an effective date of March 16, 2021. The rule was delayed shortly after by an executive order issued by the Biden administration. On June 10, 2021, the EPA published another Federal Register notice extending the rule's effective date until December 16, 2021, which extended the compliance date to October 16, 2024, and stated its intent to review the rule. The





Lynchburg Town Hall – March 2022



Town of Clio Water Treatment Facility – March 2022

EPA published the results of its review in the Federal Register on December 17, 2021. In this notice, the EPA announced it had determined that areas within the LCRR can be improved upon with a focus on removing lead service lines and more equitably protecting public health. Thus, the EPA announced its intent to begin developing a new proposed rule to strengthen these elements. This rule will be named the Lead and Copper Rule Improvements (LCRI).

However, while EPA works on the new rule, the administration has made it clear that the inventory requirements of the LCRR will remain. Accordingly, states and water systems should develop their lead service line inventories. The minimum compliance requirements for water systems will be to submit their inventories to the states and have them publicly available to their consumers by October 16, 2024.

This will be a heavy lift for many small water systems in South Carolina, and this is where SERCAP steps in.

## SERCAP RCDI Grant

As noted above, the goal of the SERCAP project under the grant is to assist rural communities with compliance with the LCRR. Given that portions of the rule are being rewritten, the main focus of SERCAP's efforts initially will be on assisting rural communities with their lead service line (LSL) inventories.

For this grant, SERCAP plans on assisting a minimum of seven communities by providing them with technical assistance and training. Our focus will be broad and, at this time, we expect it will include:

- helping our communities with mapping their service lines,
- assisting them with public meetings and communication,
- helping them develop their inventories, and
- helping to determine the state and federal requirements, etc.

The grant has identified the communities listed in Table 1 for assistance. These communities are under 10,000 in population, with all but one under 5,000, as determined by the U.S. Census data for 2010.

These communities were selected based on their income eligibility, need for technical assistance, and the potential for significant benefit from the proposed program. Table 2 provides data on median household income (MHI) for each community gathered from the U.S. Census Bureau’s 2006–2010 American Community Survey 5-Year Estimates.

At the time of this writing, staff visited the mayors and other town personnel of three of these communities: Clio, Eastover, and Lynchburg. The initial meetings show that these communities will require assistance to comply with the LCRR, and community work plans were developed with SERCAP assistance. SERCAP intends to meet with the rest of the mayors and other key town personnel to begin educating and assisting these communities during the length of this project.

Location	County	Total Population
Town of Lamar	Darlington	3475
Town of Clio	Marlboro	2246
Town of Calhoun Falls	Abbeville	2757
Town of Ridge Spring	Saluda	2930
Town of Lynchburgh	Lee	1518
Town of Whitmire	Newberry	1518
Town of Eastover	Richland	5437

TABLE 1—POPULATION COMPARISON AND COUNTIES

Location	Median Household Income (MHI)	% of South Carolina’s MHI	% of United States’ MHI
Town of Lamar	\$30,262	53.8%	46.1%
Town of Clio	\$35,278	62.7%	53.7%
Town of Calhoun Falls	\$26,982	48.0%	41.1%
Town of Ridge Spring	\$44,813	79.7%	68.2%
Town of Lynchburgh	\$29,760	52.9%	45.3%
Town of Whitmire	\$35,950	63.9%	54.7%
Town of Eastover	\$41,362	73.6%	62.9%
South Carolina	\$56,227	N/A	N/A
United States	\$65,712	N/A	N/A

TABLE 2—MEDIAN HOUSEHOLD INCOME COMPARISON

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**American Water Works  
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# What do operators & well owners have in common?

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WaterOperator.org and PrivateWellClass.org are sister programs that serve a unique role by providing training and technical assistance exclusively via the Internet, supplementing the critical work performed on the ground by RCAP network staff.

## WATEROPERATOR.ORG

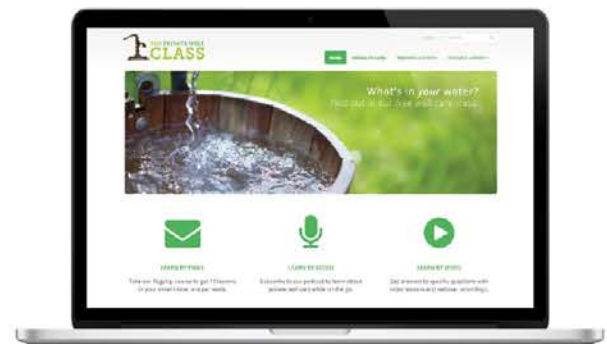
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- Extensive resource library

WaterOperator.org and PrivateWellClass.org are collaborations between the Rural Community Assistance Partnership and the University of Illinois, through the Illinois State Water Survey at the Prairie Research Institute, and funded by the U. S. Environmental Protection Agency.