

RCAP

# RURAL MATTERS

The magazine of the Rural Community Assistance Partnership

*let's talk*

# Regionalization



**FINDING SOLUTIONS IN RURAL TEXAS**

**OWNERSHIP AND WATER DISTRICT CHALLENGES**

*and* **MORE**

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# Rural Community Assistance Partnership

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# ceo letter

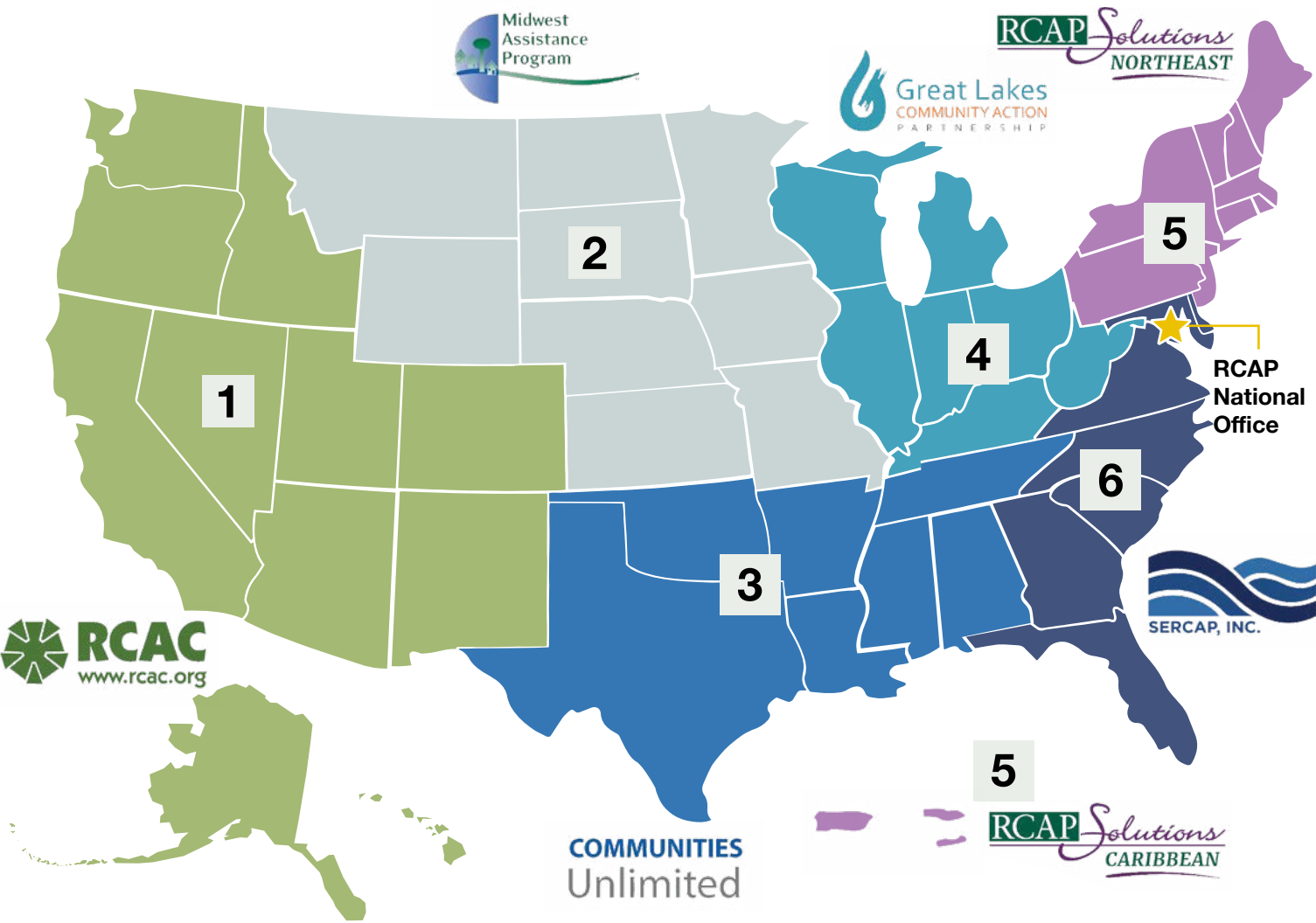
**T**he fall edition of *Rural Matters* covers an issue near and dear to my heart. Regionalization is something I have dedicated several years to developing in my home state of New Mexico as well as through my work with RCAC, with more than 100 partnerships across the west. RCAP has been a leader in this area and sees water and wastewater regionalization as a key tool to help communities become more sustainable and resilient, which can be especially important in a crisis such as a pandemic or natural disaster. Policies at the local, state, and federal levels can help or hinder regionalization efforts. Through research, RCAP recently called out requirements for regionalization’s success in small communities: flexibility across all levels of government, more funding, and an understanding that partnerships can take many forms.

If you are not familiar with regionalization, you may wonder if it is worth the potential headaches that come with forming partnerships. Regionalization offers a path to solving common challenges like access to affordable supplies, sharing the cost of certified operators, or making rates more reasonable. Additionally, it enables communities to build resiliency in the face of both predicted and unpredicted events and creates a culture of collaboration—instead of competition—that enables utilities to lean on or support others, leading to better outcomes for all. Investing in leadership to develop regional projects and business plans for entities that want to regionalize is another form of investment that makes communities and entire regions sustainable. I hope your wheels are starting to spin as you consider how regionalization could be put to work on challenges in your communities, and that you are inspired to become a regionalization advocate as you read the stories in this issue of the magazine.

As I reflect on my first months as CEO, I continue to be impressed with the work our national and regional staff do every day. I also share their excitement over the recent wins that will enable RCAP to bring capacity building and technical assistance to rural and indigenous communities across the nation in the new year. Thank you for warmly welcoming me in this role, and I look forward to working with all of you to help rural America grow and thrive.



**Olga Morales-Pate**  
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

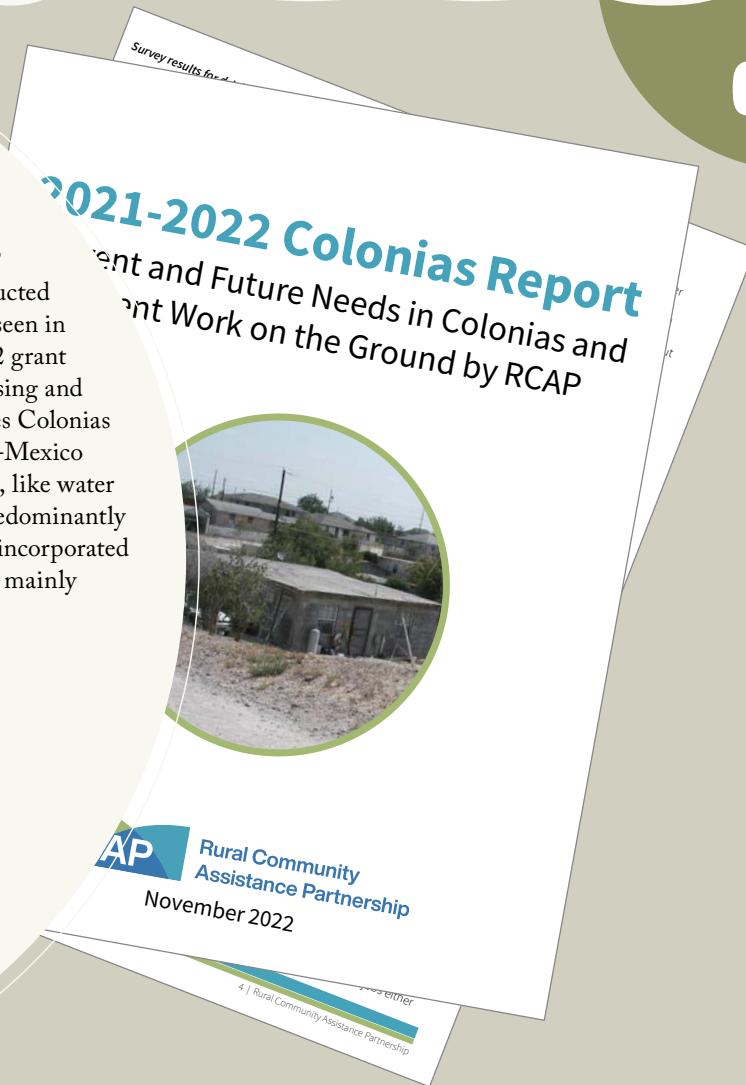
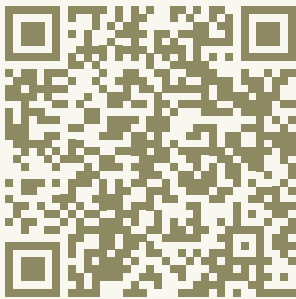
RCAP Solutions (RSOL)  
800.488.1969  
[rcapsolutions.org](http://rcapsolutions.org)

## 6. Southeastern RCAP

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

# WHAT Matters

Check out our new Colonias research report, *Current and Future Needs in Colonias and Recent Work on the Ground by RCAP*, highlighting the 44 projects RCAP worked on as well as research conducted on the greatest needs and patterns seen in communities during the 2021–2022 grant year. The U.S. Department of Housing and Urban Development (HUD) defines Colonias as rural communities near the U.S.-Mexico border that lack access to the basics, like water and sewer services. Colonias are predominantly low-income communities, often unincorporated along the U.S.-Mexico border with mainly Latino residents.



## CONTENTS

- 4** Rural Round-Up
- 7** Ownership and Water District Challenges
- 8** Finding Solutions in Rural Texas
- 11** Managing Drought in New Mexico
- 14** Challenges Facing Cooperatives and Community Association
- 18** A Meeting of the Minds
- 20** A Regionalization Success Story
- 23** Fleet Electrification Is Coming

**“The greatness of a community is most accurately measured by the compassionate actions of its members.”**

**Coretta Scott King**

## Talk to Us!

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# RURAL ROUND-UP

## Recent wins and happenings



**RuralRISE 2022 Summit** RCAP successfully hosted its 3rd annual RuralRISE Summit in Emporia, Kansas, September 28–30. This year's summit was the first in-person summit held since 2019 and brought together 125 rural ecosystem-builders from across the country plus 47 attendees online. Topics covered a range of subjects, including the future of the rural ecosystem-building movement; Diversity, Equity and Inclusion (DEI); broadband; adaptive leadership; innovative funding models; and technology.

Headlining the event were some of the key thought leaders and founders of the rural entrepreneurship ecosystem building movement, including Andy Stoll, senior program officer with the Ewing Marion Kauffman Foundation; Dell Gines, lead community development advisor, Federal Reserve Bank of Kansas City; Don Macke, vice president of e2 Entrepreneurial Ecosystems; and Steve Radley, CEO of Network Kansas—along with dynamic newcomers like Molly Pyle, entrepreneurial ecosystem development lead for the Center on Rural Innovation (CORI), and Tim Lampkin, CEO of Higher Purpose Co., an economic justice nonprofit that's building community wealth with Black business owners across Mississippi by supporting the ownership of financial, cultural, and political power. Other featured presenters included Main Street America, Heartland Forward, Mash-up Lab (Nova Scotia), RuralLISC, and Startup Colorado. The event culminated with a walking tour of downtown Emporia led by summit hosts Main Street Emporia and a block party featuring Emporia's main street businesses, food trucks, and live music.

**About RuralRISE** RCAP co-leads RuralRISE with the National Center for Resource Development (NCRD), who co-founded RuralRISE along with RCAP, the Kauffman Foundation, the Appalachian Regional Commission (ARC), Network Kansas, AARP Foundation, and others back in 2018 at the inaugural summit in Canaan Valley, West Virginia. Founders recognized that, in order for rural communities to meet the future challenges of a new and emerging economy, they will need to bring to the forefront solutions that address the unique challenges of rural areas, and that to do this requires working together to drive innovation and entrepreneurship growth.

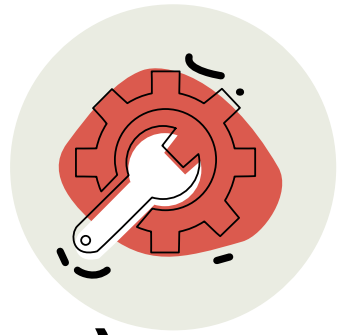
Since 2018, RuralRISE has grown into a network of hundreds of organizations and individuals working together to increase opportunities and prosperity for rural and tribal communities across the United States. It is the only network of its kind, with national—and increasingly international—reach, that specifically focuses on rural entrepreneurial ecosystem-building. The annual summit drives connections, ideas, and actions for rural communities by spotlighting innovative, entrepreneurial, and start-up activities that work in a rural context. The network also meets monthly for a virtual speakers series featuring diverse voices from the field. To learn more visit [ruralrise.org](https://ruralrise.org)—or join us at our next summit in Maine the week of June 20, 2023!



“RuralRISE was really born out of the recognition that rural ecosystems have their own set of challenges that are unique and distinct from many of the challenges that urban communities face.

— JOE KAPP, CO-FOUNDER, NCRD





# TIPS from a TAP (Technical Assistance Provider)

Lorraine Magee, Communities Unlimited (CU)

Is your water or wastewater system prepared for winter storms, freezing temperatures, heavy snowfall, and the dangerous ice they can bring?

According to the Environmental Protection Agency’s (EPA’s) Incident Action Checklist—Extreme Cold and Winter Storms (2015)<sup>1</sup>, cold weather can impact operations and cause problems. The effects of cold weather may have a costly and lasting impact on utilities that may include, but are not limited to:

- Broken pipes throughout the distribution system
- Loss of power and communication lines
- Limited access to facilities due to icy roads or debris
- Reduced workforce due to unsafe travel conditions
- Source water quality impacts due to an increased amount of road salt in stormwater runoff
- Potential flooding risk due to snowpack melt and ice jams
- Potential surface water supply challenges as ice and frozen slush can block valves and restrict intakes

Now is the time that utilities should think about the resilience of their systems. The EPA’s *Incident Action Checklist—Extreme Cold and Winter Storms*, lists ways utilities can prepare for, respond to, and recover from the cold and winter storms. Read more here, [rcap.org/are-your-utilities-prepared-for-the-upcoming-winter/](http://rcap.org/are-your-utilities-prepared-for-the-upcoming-winter/)

1. ENVIRONMENTAL PROTECTION AGENCY. (2015, JANUARY). INCIDENT ACTION CHECKLIST—EXTREME COLD AND WINTER STORMS. EPA. RETRIEVED NOVEMBER 8, 2021, FROM [HTTPS://WWW.EPA.GOV/](https://www.epa.gov/)

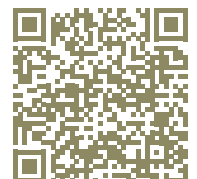


# Training Calendar

RCAP hosts free webinars on topics ranging from capacity building to wastewater treatment. **Sign up for an upcoming webinar here!**



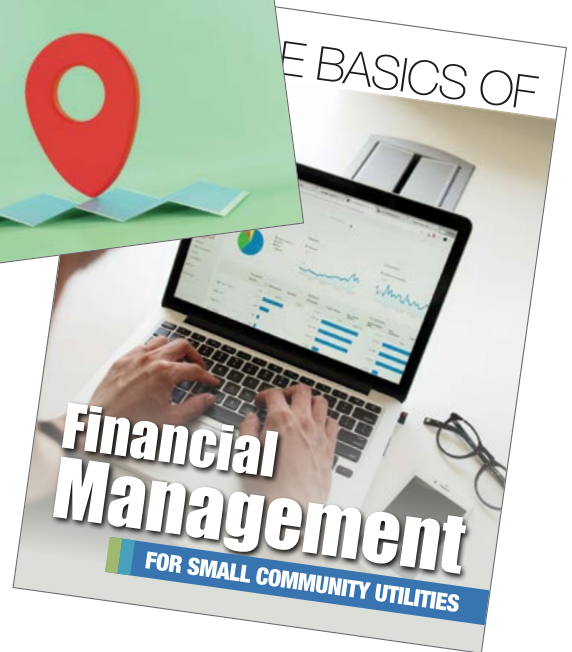
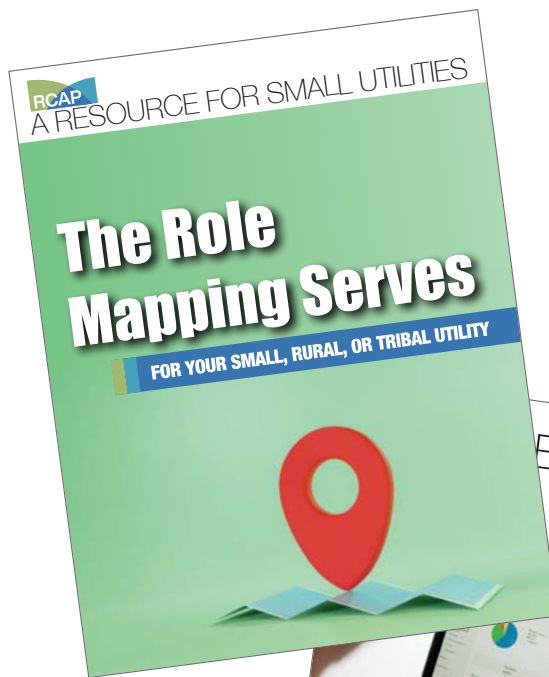
We also have webinars in business and financial planning designed to support small business entrepreneurs across the country in our Open For Business Hub powered by the Wells Fargo Open for Business Fund. **Learn more and sign up for an upcoming webinar!**



# Advocacy News

by **Maranda Saling**

The Rural Community Assistance Partnership (RCAP) has released its policy priorities for the next Farm Bill, which Congress is expected to start working on in the coming year. We ask for Congress and the Administration to prioritize USDA Rural Development programs, resources, and strategies that will increase opportunity for all rural Americans, including those living in underserved areas. Our Farm Bill Resource Center includes more details on our policy requests as well as a link to our one-pager outlining RCAP's overall goals for the bill. We have submitted letters to Senate AG for their Rural Development hearing and are meeting with House and Senate AG regularly. Despite being raised in rural Ohio (everyone feel free to visit my family farm!), this is my first Farm Bill, and I'm very much looking forward to working with network partners, stakeholders, and communities and building even stronger connections to advance rural development priorities. If anyone has questions or wants to participate in the dialogue, please contact me, Maranda Saling, at [msaling@rcap.org](mailto:msaling@rcap.org).



## RECENT WINS and Happenings

Our new eLearning on regionalization and resiliency went live earlier this year and lives at [rcap.talentlms.com/catalog/info/id:223](http://rcap.talentlms.com/catalog/info/id:223). In this module, individuals will learn:

- The four different regionalization approaches
- Ways that your system may already be performing regionalization work
- How to identify the different types of emergencies and provide definitions
- Ways utilities and communities can use regionalization to plan for and recover from disasters
- How to build partnerships for this type of regionalization work and how to fund planning and/or mitigation projects

With the help of quite a few folks, including our GIS Working Group and various National Office members, we've released two guidebooks: a new small systems mapping guide titled *The Role Mapping Serves for Your Small, Rural, or Tribal Utility* and an updated *Basics of Financial Management for Small Community Utilities*.







# Ownership and Water District Challenges

*The path to well ownership for one Wyoming water district.*

**Tyrel Owens**, Wyoming Field Manager, Midwest Assistance Program (MAP)

The Aladdin Water District (WD) supplies drinking water to the community of Aladdin, an unincorporated town in Wyoming with a population of 20. Every year for the Sturgis Motorcycle Rally, Aladdin WD provides water for hundreds of people during the rally festivities, which is part of why it is considered a public water system.

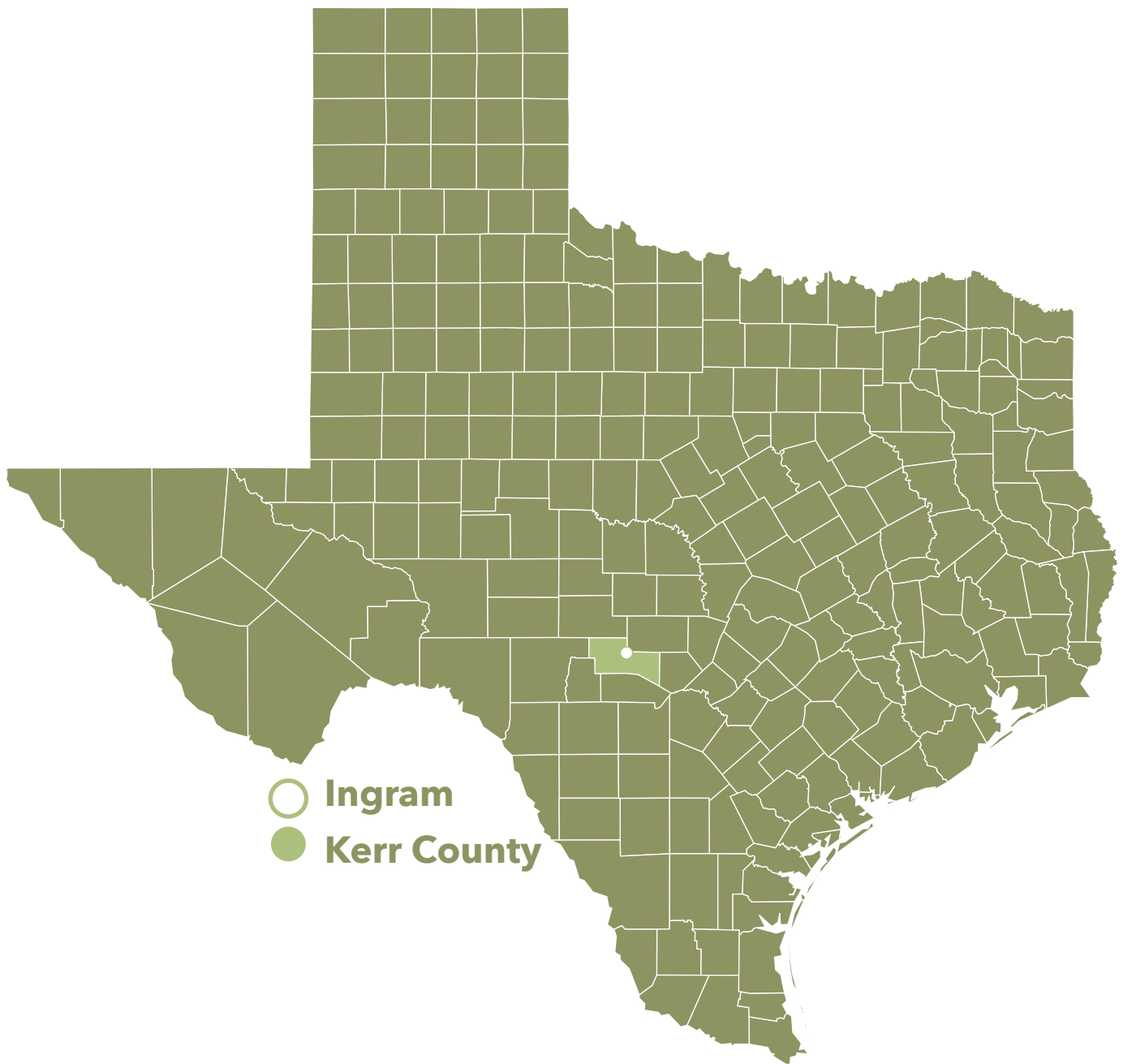
The district produces all of its water from an exploratory well that was drilled in 1995 by the Wyoming Water Development Commission (WWDC). WWDC still owns this well, yet desires to sell the well to Aladdin WD.

The district has seen much change recently. Aladdin Water District's president and vice president were found to be outside of the district, so not actually eligible to be on the water board. Their last official act was to appoint an entirely new board, and a new WD president was elected. Aladdin has also struggled with compliance issues, along with a possible dissolution of its district. At a hearing, it was decided that Aladdin would be able to negotiate terms with WWDC over the upcoming year.

The district asked Midwest Assistance Program, Inc. (MAP), the Midwest RCAP, to perform an income survey to provide an accurate median household income (MHI) for the district users. When Aladdin WD began an application for State Revolving Funds (SRF) for the purchase of the well, it discovered that the county-based MHI was too high to qualify—but it expected that its true MHI would be far below the state average due to high unemployment in the area. USDA Rural Development (RD) accepted the proposition that the MHI needed to be studied and concluded it would accept the new MHI computed from the income study MAP was completing for eligibility and grant-to-loan ratio consideration.

## The Impact

Because of MAP's assistance, the community was able to begin conducting an income survey and gained the resources needed to calculate the new MHI. The new MHI will make the community eligible for USDA funding to buy the well from WWDC so it will no longer rely on WWDC for the operation and maintenance of its well. Sometimes shared ownership is the best answer—other times, a local community maintaining control of its assets is a better fit.



# Finding Solutions in Rural Texas

*Small water and wastewater system case studies.*

**Lupita Ortega**, Regionalization Coordinator, Communities Unlimited (CU)

**C**ommunities Unlimited (CU) works with communities in seven states in the southern United States to overcome poverty and achieve sustainable prosperity. Among the organization's areas of focus is environmental services—addressing rural communities' water and wastewater needs. Two case studies and an event in rural Texas illustrate the challenges and progress.

## City of Ingram

The City of Ingram, Texas, is located in Kerr County on the banks of the Guadalupe River, northwest of San Antonio. Founded in 1879 by J.C.W. Ingram, the city is home to Lion's Park, which holds a full-size replica of Stonehenge. The park borders Lake Old Ingram, which the Guadalupe River feeds. The river and lake border a colonia, where several homes are located. Colonias are small, rural, and often unincorporated communities along the U.S.–Mexico border where access to services, including water and wastewater, is often limited.

For years the homes in this area used decentralized wastewater systems, more specifically septic systems, instead of a centralized wastewater system, and many of the septic tanks began to age and leak. The aging septic tanks leaked untreated sewage that ran into the water table and the river, causing an environmental and health hazard.

The City of Ingram was aware of this problem as well as the large amount of work required to connect the homes and businesses in the area, including the colonia, to a centralized wastewater system. In 2002, the city received a grant from the United States Department of Agriculture (USDA), but this grant was just the beginning of a very long and complicated process. The City of Ingram spent more than a decade researching to find additional funding and support for this much-needed infrastructure project.

The previous mayor of Ingram, James Salter, said, "it has been a long journey to get here, and there's going to be more to come." In addition to the mountains of paperwork the city secretary had to contend with, they also faced backlash from local business owners who were irritated they had to pay to hook up to wastewater collection lines. Some citizens even petitioned to dissolve the local government over fears of city debt. The former mayor worked through the myriad processes and was passionate about finding funding to see this through.

Decommissioning septic systems has historically worked to improve water quality in other towns, so officials believed the outcome would improve the local economy by drawing new businesses in and cleaning up the river for locals and tourists alike. All of this would make the city a place where people would want to live and travelers would want to visit. As such, in April 2022, the Ingram City Council formally accepted almost \$4.7 million in grant and loan funds

to finish the multi-phase wastewater project.

Ongoing testing showed that the Guadalupe River was becoming cleaner than it had been in a long time, and Salter continued his campaign to have the city "hang in there" for a few years and see this project through to completion. Due to this effort, he was able to show residents that they were on the right course after they connected more than 500 people.

During a city council meeting, council members agreed to issue \$947,000 in bonds and receive a \$3.74 million grant from the USDA under the federal colonia program. According to Ingram City Manager Mark Bosma, the funds will be used to finance the design, engineering, and construction of wastewater infrastructure to connect approximately 125 homes to Kerrville's wastewater system as Phase III of this project. The City of Ingram currently has an agreement with the City of Kerrville to purchase sewage treatment services from Kerrville.

Also in Phase III, the City of Ingram will incorporate areas to its northwest, including Winona Street to the North, Josephine Street to the East, Moore Street to the West, and State Highway Number 27 to the south. In addition to the sewer collection lines that will be installed, an additional lift station must be added to the system to tie Phase III into the wastewater collection system.

## Lake Medina

CU staff learned through participating in the Texas Water Infrastructure Coordination Committee (TWICC) about the Medina Highlands Water System's need for funding. Located in Bandera County, Medina Highlands needs to replace its original well, which has severely declined in production over the hot summer months. The well no longer meets Texas Commission of Environmental Quality (TCEQ) requirements for water capacity.

Following the referral through TWICC, CU staff assisted with a CU loan application—CU is a Community Development Financial Institution, or DFI—but later learned that the loan was declined due to the uncertainty of the utility, because it only had 45 connections. Medina Highlands needed to submit a rate application to the Public Utility Commission (PUC) before it could raise water rates in order to complete the required infrastructure upgrades, and it did so with the help of a consultant. In March 2021, CU staff assisted system owner John Moore, in coordination with an engineer and geologist, in submitting a Project Information Form (PIF), or initial application, to the Texas Water Development Board (TWDB). The application was for a possible Drinking Water State Revolving Fund (DWSRF) loan to fund the construction of a new well that could meet water capacity needs. The need was only growing: Just the previous month, in February 2021, Winter Storm Uri caused a big freeze across the state of Texas, and Medina Highlands, like many systems

across the state, experienced broken infrastructure and loss of water service and required repairs.

In response to the March 2021 PIF, Medina Highlands received the formal invitation to apply for DWSRF funds and was ranked No. 32 in the State Fiscal Year 2023 DWSRF intended use plan (IUP) for Texas. CU assisted with compiling some of the information needed for the application while, at the same time, engineers completed the project budget, descriptions, and the Peak Expiratory Flow Rate (PEFR). CU also organized and facilitated a meeting for Medina Highlands with Texas PUC staff to review the separate Sale, Transfer or Merger (STM) application and the current rate application. They wanted to ensure that both review teams were aware of the simultaneous funding application to the TWDB to have an adequate water supply for community residents.

Medina Highlands may be in the second or third round of invitation for SRF funding, either as a loan or with the partial inclusion of small system grant funds. However, the process is slow, and the system continued to experience water outages. CU inquired with DWSRF staff about the possibility of a CU interim loan to help the well completion happen faster. However, TWDB considers interim financing IOUs not eligible for “refinancing,” so this option is not currently a possibility. CU will continue to work with the community and funders to find a workable solution so the health and safety of community members can be maintained.

## Texas Infrastructure Funding Event

On April 14, 2022, the Rural Community Assistance Partnership (RCAP) and CU joined forces to host the Texas Infrastructure Funding Event, thanks to the generous support of the Cynthia and George Mitchell Foundation. Presenters included

- **USDA: Michael Canales, State Water and Environmental Programs, Rural Utilities Services (RUS)**
- **TWDB: Enriqueta Caballero, State Outreach Coordinator**
- **Texas Department of Agriculture (TDA): Aubrey-Ann Gilmore, Texas Community Development Block Grant Program (CDBG)**
- **TCEQ: Dorothy Young**
- **North American Development Bank (NADBank): Temis Alvarez, and**
- **Communities Unlimited Loan Team: Kevin Tillman and Kevin Davis.**



USDA presented and provided information on affordable financial assistance to rural areas and towns to develop water supply, sewage, stormwater, and solid waste disposal. TWDB provided information on available financial services, including DWSRF, the Clean Water State Revolving Fund (CWSRF), Texas Water Development Fund (Dfund), and the State Water Implementation Fund for Texas (SWIFT). TDA presented information on Texas CDBG Programs. These programs included presentations addressing infrastructure, Community Development (CD), Colonia Fund Construction (CFC), Downtown Revitalization & Main Street (DRP), and State Urgent Need (SUN). Other programs mentioned included Planning & Capacity Building (PCB) and Fire, Ambulance and Service Truck (FAST). NADBank shared information on their programs and services, including lending, grants, and technical assistance. Types of projects include water and sewage; residential, industrial, and hazardous waste; air quality; clean and renewable energy; and energy efficiency.

Nearly 100 people registered for the event, and several connections were established between funders and small and rural communities in need of funding. For example, Joe Craig from Grassland Water Supply Corporation (WSC) attended the workshop. Grassland WSC has since turned in a Project Information Form (PIF) to the TWDB for a reverse osmosis treatment plant. Surveys from the event showed favorable feedback, and CU and RCAP hope to host events like this in the future and have plans to host similar events, hopefully in person, in Texas in 2023.

# Managing Drought in New Mexico

*Water security and resiliency within the Cañada de los Alamos Mutual Domestic Water Consumers Association (MDWCA).*

Ramón Lucero, Regional Field Manager, Rural Community Assistance Corporation (RCAC)



**T**he Cañada de los Alamos Mutual Domestic Water Consumers Association (MDWCA) was incorporated in 1957 under the 1949 New Mexico Sanitary Projects Acts. One of approximately 600 public water systems throughout the state, 88% of which are under 500 in population, the system operates in the foothills of the Sangre de Cristo Mountains, approximately seven miles southeast of Santa Fe. In Cañada de los Alamos, this system has been providing water to 68 people through 24 service connections and has strived toward water security and resiliency from its inception until recently.

## Prolonged Drought

While the southwest part of the U. S. has endured extended droughts since records have been kept, according to a recent NBC report, the western part of the U.S. is the driest it's been in 1,200 years—raising questions about a livable future. “Drought is not a temporary condition we can expect to go away, but rather something we have to deal with,” said John Berggren, water policy adviser for Western Resource Advocates, based in Boulder, Colorado.

Water is increasingly scarce in the western U.S., where 78.6% of the region ended 2020 with moderate to exceptional drought, based on the U.S. Drought Monitor. According to data compiled by drought.gov, in 2021, New Mexico drought conditions were the driest period during the past 127 years. More than two million New Mexicans are affected by the drought. For the week of January 27, 2022, 78.2% of the state was in severe drought. Santa Fe County, where Cañada de los Alamos is located, has been classified as in extreme drought, which, according to drought.gov, creates extreme fire danger. Livestock are suffering, producers are selling their herds, and irrigation allotments decrease.

## Infrastructure Drought Mitigation

The village of Cañada de los Alamos has relied on community water for 61 years—the homes were constructed when water was more plentiful. The village is in a hydrological area where wells are very susceptible not only to drought but also to high levels of uranium and other contaminants, and they are located in a low water productivity area. No well in the village produces enough water to serve more than one or two homes.

Cañada de los Alamos has tried to mitigate its drought vulnerability for years. In 1996, the village secured funding to design and upgrade its delivery system and to install water meters. In 2003 through 2004, the association secured funding to complete a geohydrology report and to design and construct a larger water storage tank and two water supply wells. The wells' purpose was to supplement water from the infiltration gallery well, which was extremely susceptible to the drought. During this period, water rates were also increased to promote conservation.

Unfortunately, the deep wells have not solved the drought or single-source vulnerabilities. One well has uranium levels higher than the safe drinking water standards, and the second has issues with iron. Additionally, the deep wells only produce very small quantities of water.

Drought continues to present a problem, and Cañada de los Alamos continues to address it. Over the next two to three years, the association will purchase and haul water to the community at a huge, unmanageable expense until they can approve, fund, and construct the new water source. The Canada de los Alamos has been purchasing and hauling water since July 2020, when its infiltration gallery went dry due to impacts from the prolonged drought. With the goal of securing outside financial resources, the community adopted a drought declaration like the one adopted by Governor Michelle Lujan-Grisham for the entire state.

Cañada de los Alamos submitted its drought declaration to the Santa Fe County Office of Emergency Management, the Department of Homeland Security Office of Emergency Management, and the New Mexico Environment Department Drinking Water Bureau in search of assistance. Unfortunately, all three agencies

## Existing Infrastructure — Existing Facilities



Gallery Well (Well 1)



Well 1 Well House



Well 2



50,000-Gallon Tank



Well 3

MOLZENCORBIN

responded that they did not have the resources to address this environmental emergency. This response left Cañada de los Alamos to fend for itself.

## Austerity Measures

Rural Community Assistance Corporation (RCAC) assisted Cañada de los Alamos in applying to secure funding from the New Mexico Finance Authority to complete a Preliminary Engineering Report (PER). The PER will identify short- and long-term water source alternatives to address the impact that the extended drought has had on the community's water sources. Each of the three Cañada de los Alamos wells were compromised; one with high levels of uranium, one with a high concentration of iron oxide, and the third, traditionally the most dependable well, was bone dry.

To further mitigate this issue, beginning as early as September 1, 2019, a new rate schedule was adopted to encourage water conservation. The cost to purchase 6,000 gallons of water was \$70 per month per household. Based on water rates published by the New Mexico Environment Department during the same period, the water rates in Cañada for 6,000 gallons were \$23.97 higher than for water systems of a similar size.

A year later, on September 1, 2020, an Emergency Rate Schedule was approved to address the increased cost of water purchased from the County and hauled to the Cañada de los Alamos tank. Cañada charged \$.1125/gallon for every gallon over the 1,000 gallons base rate allowance. To keep the cost of water as low as possible for Cañada members, the board voted to subsidize the first 1,000 gallons. At the time, Cañada de los Alamos had a considerable cash reserve, which was used to provide some financial relief to their customers until the emergency would be resolved with fall rains. However, this was not the case, nor has there been the spring runoff that typically replenishes the infiltration gallery well. As a result, Cañada continues to purchase water from Santa Fe County and haul it to its water storage tank.

But soon unable to sustain the financial stress from subsidizing the first 1,000 gallons, the board, during its meeting on May 4, 2021, updated the previous rate structure to meet the Cañada de los Alamos 2021–2022 budget needs. As of June 1, 2021, a new Emergency Rate Schedule was adopted imposing a \$0.12/gallon fee for every gallon used over 330 gallons, to cover both the cost of purchasing and hauling water and to meet the expenses of its operating budget. The cost to purchase 6,000 gallons of water rose to \$720 per month per household. Compared with water rates published by the New Mexico Environment Department during the same period, the rates in Cañada for 6,000 gallons are approximately \$665 higher than for water systems of a similar size—an incredible financial burden on every member. To keep the household cost of water affordable, everyone is making sacrifices by drastically reducing their water use.

## Emergency Rate Schedule

June 1, 2021

Non-Users: \$30.00

Users: \$40.00/month includes 330 gallons

Each gallon over 330 gallons: \$ .12/gallon

*Based on this rate schedule, the cost to purchase 6,000 gallons of water is now \$720 per month per household—approximately \$665 higher than for New Mexico water systems of a similar size.*

## Community Impact

Over a 10-month period during 2021, Cañada de los Alamos spent its entire financial reserves of \$44,713 to purchase and haul water from Santa Fe County. Unable to sustain the high cost, members in arrears was at an all-time high—more than \$8,500. Beyond the financial distress, the community's health, safety, and welfare were at stake, with the potential to be without drinking water, water for hygiene, or water for cooking.

Twenty-four households could not sustain the \$53,724 needed to purchase and haul water from Santa Fe County. The monthly cost per member to cover this expense was approximately \$186 per month, not including the \$14,000 annual operating expense.

## Short-Term Emergency Funding

The PER could take up to a year to complete, and accessing funding for long-term projects could take at least three years, so there was a need to mitigate the looming financial distress and the inability to purchase water for the community's most basic needs. RCAC assisted Cañada de los Alamos to submit a funding application to the New Mexico Board of Finance under the Emergency Water Fund.

After much deliberation, the governor of New Mexico and the Secretary for the New Mexico Board of Finance signed the funding agreement granting the Cañada de los Alamos the full \$161,172. Cañada secured some breathing room while the PER could be completed and design and construction funding for a long-term solution could be secured. The emergency funding will enable the Cañada to remain financially sound and provide for the health and safety of its community for up to three years.

## Preliminary Engineering Report (PER)

Anxious to begin the planning process for a long-term water source solution, in April 2021 Cañada de los Alamos signed a contract with an engineering consultant, Molzen Corbin, to complete the PER. Cañada directed the engineering consultant to focus on the following alternatives.

- Water source alternatives within a three-mile radius of the community
- An interconnection to Santa Fe County
- An interconnection to the City of Santa Fe
- Purchased and hauled water from Santa Fe County
- On October 7, 2021, and January 31, 2022, respectively, PERs for the Cañada de los Alamos MDWCA were approved by the New Mexico Environment Department and USDA-Rural Development.

The PER approved by USDA-Rural Development identified a short-term water source alternative. The recommended alternative in the PER identified an infiltration well project to drill a shallow water supply well in the alluvium to approximately 90 feet below ground level. The existing infiltration gallery is drilled to 18 feet below ground level. The PER recommended rehabilitating the existing 50,000-gallon water storage tank. The total cost and fees for these projects was \$713,000.

The PER identified a long-term water source alternative: interconnection to Santa Fe County water. The project's first phase would install 9,000 linear feet of 4-inch waterline to connect to a private water system named Sunlit Hills. The first phase is intended to wheel water from Santa Fe County through Sunlit Hills to Cañada de los Alamos. The total cost for this project was \$5.2 million. Cañada de los Alamos applied to become a Wholesale Customer of Santa Fe County upon completion of the project.

When approved, Santa Fe County will make Cañada de los Alamos a Wholesale Customer and, more importantly, will add the third and final phase of the interconnection project on its Infrastructure Capital Improvement Plan (ICIP). Placing the Cañada project on the ICIP will give Santa Fe County the ability to seek state and federal funding to contribute to the last phase of the Interconnection Project.

Multiple funding sources have been secured or applied for, including New Mexico State Board of Finance Emergency Water Grant funds, New Mexico Finance Authority, USDA Rural Development Emergency Community Assistance Grant, Water Trust Board, Capital Outlay, and New Mexico Drinking Water State Revolving Fund.

Water safety and resiliency is defined as the ability to provide an uninterrupted supply of safe drinking water. Drought and water quality conditions interrupted and threatened Cañada de los Alamos' ability to provide safe drinking water to its community. Fortunately, emergency funding reserves accumulated over an extended period and funding under the New Mexico State Board of Finance was enough to buy Cañada de los Alamos some valuable time. With enough emergency funding to purchase and haul water for approximately three years, Cañada is taking progressive steps by submitting funding applications to multiple funding agencies to address long-term water needs.

With the support of RCAC, the community of Cañada de los Alamos was able to make significant strides to supply their community with a safe and reliable water source.



# Challenges Facing Cooperatives and Community Associations

*A review of New Hampshire projects.*

**Erick Toledo**, State Manager (New Hampshire), and **Martin Mistretta**, Community Specialist, RCAP Solutions

In New Hampshire, there are no drinking water and wastewater systems more vulnerable than those that provide services to mobile home communities. Many of these communities are resident-owned cooperatives where the residents collectively buy the land, existing facilities, and infrastructure, including drinking water and sewer infrastructure, from a private owner by taking a sizable loan from a funding agency. There are hundreds of Cooperative Homeowner Associations across the state, sometimes around or embedded into large metropolitan areas or in very isolated regions of the state.

For some of these communities that RCAP Solutions assisted, their long-term loans ranged from \$500,000 to over \$2 million at a considerably high interest rate—typically 3–4%. For instance, Base

Hill Water Cooperative, a community of 150 people living in 80 homes outside of the City of Keene, has a cumulative debt of \$1.8 million. Base Hill Cooperative is currently looking to replace its water infrastructure for a total cost of close to \$1 million.

Most of the trailer parks in New Hampshire were built in the 1960s and 1970s and still have their original drinking water and wastewater systems in place. Many water systems in these parks were constructed by the private park owners. These water systems were often “do-it-yourself” type projects, constructed without proper engineering design, materials, or construction methods. Wastewater systems at these parks are typically individual or community septic tanks and leach fields, with similar challenges like failing leach fields, where the septic tanks have not been



properly maintained and pumped out on a regular schedule. As a result, most of these cooperatives acquire their homes with deficient water and wastewater infrastructure. As an example, the water infrastructure for the Mountain Homeowner Water Association in the Town of Putney was recently acquired by its residents, but the water system was built over 40 years ago and is currently in need of a \$565,000 investment to supply their 54 homes.

## Systems' Challenges

Residents that own trailer parks across New Hampshire experience similar infrastructure problems: drinking water systems with multiple pump houses that have confined space, entry enclosures, and/or leaking distribution lines. Water leaks are quite frequent and often go unchecked for long periods of time. Engineered drawings are missing, and the community and board members often do not know where the water distribution lines are located. Consequently, it is not uncommon to find communities spending thousands of dollars annually repairing water leaks on systems that should be replaced instead. Without a significant replacement or upgrade, residents will continue spending money chasing water leaks and depleting their limited resources on systems that are falling apart.

Wastewater infrastructure is also poorly designed and in bad shape. Commonly, collection lines are broken with signs of infiltration and septic and leach fields are dangerously close to water sources, compromising public health or resulting in unnecessary violations. Bringing these wastewater systems back into compliance often requires a higher investment cost than the replacement of drinking water utilities.

Since cooperatives already have significant accumulated debt, covering the replacement cost is beyond these communities' financial capacity.

Under these circumstances, many cooperatives are providing poor services at a high cost to their customers. For instance, two years ago, the South Weare Water Association (SWWA) in the Town of Weare, a community of 200 residents, took \$5,000 from their capital improvement reserves to pay for the hauling of 27,000 gallons of water. According to Former SWWA President Elaine Banacos, the purchase was needed to supplement the poor water production due to the 2019 drought in New Hampshire.

Cooperatives are among the smallest public water systems in the state and have unfavorable economies of scale, both because of their small customer bases and the fact that most of their residents are low- or fixed-income individuals. The Colebrook Homeowner Association in the Town of Northumberland is a mobile park consisting of only 25 units with an income level of \$22,000, a fraction of the statewide Median Household Income (MHI) of \$76,768. The North Country Village Cooperative, a retirement community in Center Tuftonboro, has a population of 150 with an average fixed income of \$28,468, a third of the state's MHI.

Not surprisingly, most of these cooperatives are not raising enough through their monthly billing systems to cover the total operational costs of their drinking water and wastewater services, minimizing their ability to provide sustainable services in the long run.

To simplify their accounting practices, the boards of these cooperatives normally establish "bundle fees" without a clear separation between their drinking water, sewer, and other services. Since bundle fees also pay for solid waste collection and disposal, snow plowing during the winter, and mowing during the summer, it is hard to tell if the individual enterprises are solvent.

Adding the fact that the management of utility services rely upon poorly trained volunteers who have a high turnover rate, you can infer that many of the cooperatives operate under inadequate budgets, lack appropriate reserves, and are carrying financial deficiencies.

## RCAP Assistance and Capacity Development

For many years, RCAP Solutions<sup>1</sup> has been helping these cooperatives to ensure access to adequate funding to replace or upgrade their aging drinking water and wastewater infrastructure. Assistance provided includes identifying funding sources, filing applications, and developing asset management programs. Income surveys are particularly helpful to document their low-income status, making them eligible for programs that favor disadvantaged communities. Most income studies completed in these cooperatives have helped them access programs such as the Principal Forgiveness Program from the New Hampshire Department of Environmental Services (NHDES) State Revolving Fund, the Drinking Water & Groundwater Trust Fund (DWGTF), grant programs from USDA Rural Development, and the Community Development Block Grant (CDBG) program. As an example, Rock Rimmon Cooperative, a community of 121 units, was recently awarded \$606,000 in grants from CDBG and DWGTF and \$702,000 in State Revolving Fund loans to replace their drinking water infrastructure.

RCAP Solutions is also supporting cooperatives in improving their institutional capacity by reviewing and projecting their budgets, segregating drinking water or sewer operations to closely monitor these two enterprises, completing rate analyses to adjust rates, and establishing appropriate reserves to cover contingencies, pay for capital improvement projects, or meet debt obligations.

In very rare occasions, RCAP Solutions' intervention is required for just one specific task. In Pine Grove Home Park Cooperative in Swanley, a community of 122 homes, only an income survey for principal forgiveness eligibility was required.

In most cases, RCAP Solutions' work requires multiple interventions for an extended time to ensure financial stability. For instance, Lee Oak Cooperative in Barrington, a community of 163 people living in 69 units, needed assistance completing their funding applications, Vulnerability Assessment, Emergency Response Plan, and board training in addition to their income survey.

The assistance provided by RCAP Solutions for the two projects above resulted in a \$620,000 grant from the Trust Fund and a \$415,000 SRF loan for Pine Grove Cooperative and a \$500,000 grant from CDBG for Lee Oak Cooperative, awarded in 2019.

## Project Coordination and Collaboration

Most projects are referred to RCAP Solutions by New Hampshire primacy agencies such as NHDES, USDA Rural Development, and the Community Loan Fund (ROC-NH). All projects are executed in close coordination and collaboration with these agencies.

One of the first tasks of a Technical Assistance Provider (TAP) from RCAP Solutions is to complete a Technical, Managerial and Financial assessment (TMF) at the beginning and at the completion of a project. The pre-TMF assessment helps to identify problems and the post-TMF tracks changes or progress.

The same protocol is followed across the country by our five other partner organizations. Over a year ago, Eric LaRose, data science and research fellow from RCAP, performed a statistical analysis of 2,000 pre- and post-TMF assessments completed in the U.S. from 2015 to 2020, analyzing which questions changed most frequently between the before and after a project was completed. He found remarkably

1. RCAP SOLUTIONS SERVES ALL 6 NEW ENGLAND STATES, NY, NJ, PA, AND PUERTO RICO AND THE US VIRGIN ISLANDS

similar patterns for both drinking water and wastewater systems. He also found that the most frequent changes tend to occur in areas related to emergency planning, long-term planning, and rate setting. The fewest changes were related to environmental sustainability, board meetings, and governance/ownership.

Similarly, RCAP Solutions completed an exercise in New Hampshire by reviewing the pre-and post-TMF assessment from 2019 to 2021 in more than 20 projects, but focused on the changes and performance of systems managed by cooperatives. We went back to some of our earlier projects and checked their current situations by conducting interviews during site visits and phone conversations. The objective of the exercise was to identify factors that make a significant contribution to success or failure of some of these associations. The results of these “observations” revealed similar patterns to those from the larger study completed by RCAP across the U.S.

One of the conclusions of the larger analysis conducted by LaRose is that it is not an easy task to assess the causality of RCAP in the implementation of these projects. In New Hampshire, some noticeable and positive changes were observed in some of the cooperatives. By reviewing the TMF assessments, it became evident that cooperatives operated under the supervision of well-organized and functional boards had a higher rate of success in accessing funding.

## Keys to Success

Due to numerous challenges faced by these cooperatives, boards that consistently schedule regular community meetings—monthly or bi-weekly, and sometimes even more frequently during construction projects—tend to do better than those that do not. For instance, well-organized cooperatives such as the Paradise Estates Homeowner Park and the Fox Hill Cooperative, routinely organize board and community sessions. By doing so, these cooperatives invested more time and resources to monitor budget execution, discuss their rates, review internal policies, collect feedback from customers, or simply assign specific tasks. Clearly defining the board’s roles and responsibilities and attending training events are important discussions normally happening during board and community meetings.

Cooperatives adopting these habits have a better chance to be well-positioned during critical times like the prioritization process from the Department of Environmental Services in New Hampshire. It might not be a coincidence that, during this time, they met the application deadlines and ranked relatively well. For instance, from a pool of 200 pre-applications to the DW State Revolving Fund in 2021, Rock Rimmon Cooperative from the Town of Danville ranked No. 3, Presidential Pines from the Town of Loudon ranked No. 10, and Paradise Estates Homeowner Park ranked No. 14. All of these cooperatives also ranked high during the pre-and post-TMF assessment completed by RCAP Solutions.



Cooperatives ranked poorly for the managerial or financial assessments might experience more difficulties attracting donors’ attention simply because they miss an application deadline or might not have all the required documentation in place.

Adopting good habits like keeping records and reviewing and following up on items from previous meetings keeps boards better informed. It might also contribute to boosting confidence and elevate the trust from customers and funding agencies alike. These habitual changes might give boards a better chance to get the support from residents during the unpopular times of rate increases or water restrictions.

Some cooperatives are comprised of one or more strong leaders. A well-respected board member, a skillful manager or accountant, or a committed open-minded operator could be tremendously beneficial for many cooperatives. These people can make things happen and establish a culture of setting actionable tasks and following up. They are real community champions who move projects in the right direction. The work of a TAP in these cases might be fruitful by helping them to increase their skills, providing the



right tools and support so they can do their work more easily, quickly, and efficiently.

Adopting these habits is not always easy but seems to pay long-term dividends to a community. As Pete Billings, president of North Country Village Cooperative, indicated in June 2021, “Although our association was frustrated with the huge amount of time taken to complete our water project, it is rewarding to see how much we accomplished so far. We are putting [aside] \$1,500 every month for the CIP.”

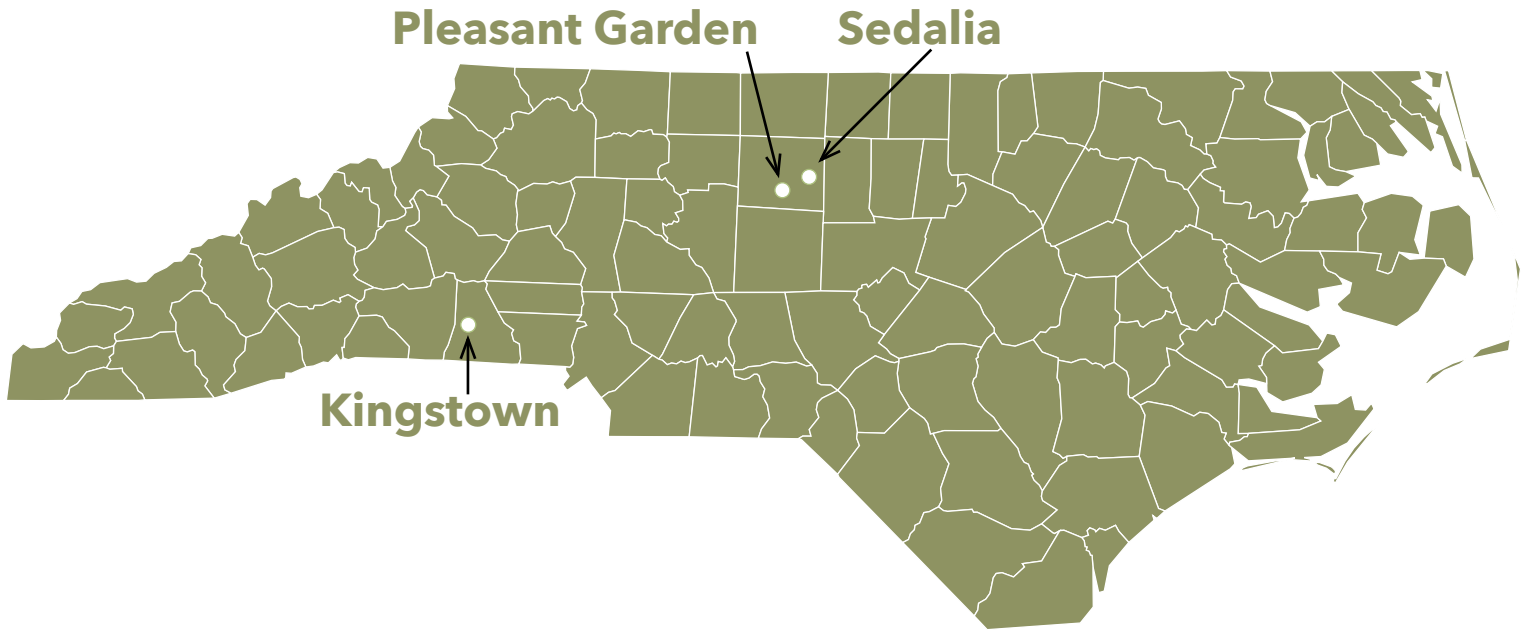
There are also cooperatives with dysfunctional governing bodies that meet sporadically. As an example, a water association serving a community of 150 assisted by RCAP right before the pandemic was awarded a \$500,000 grant in 2019 but has not been able to execute their replacement project due to internal conflicts. A pre-TMF assessment shows that they meet only twice per year and, unfortunately, have high turnover on their board. The importance of informative meetings cannot be stressed enough, because drinking water and wastewater utilities, even if they are very small, are relatively complex enterprises. They are also heavily regulated by state and federal rules to protect public health. Drinking water and wastewater systems characteristically have multiple

moving parts that are hard to maintain when association members do not have the time or do not allocate resources.

Since cooperatives are comprised of volunteers that may not have the correct background or experience in drinking water or wastewater operations, organizing informational meetings is very important, as expressed in June 2021 by Darrel Brook, treasurer from Mascoma Valley Homeowner Cooperative, serving 29 homes: “It is hard to understand all the issues related to our water and septic systems; what is necessary to maintain and repair, and the cost of the project.”

Boards that exclude the participation of their staff, such as the utility operator or manager, and/or preclude input from residents, raise a red flag that technical assistance providers cannot ignore. They might lack the support from the community, making them less likely to be successful.

According to the modest review of New Hampshire projects, even those cooperatives that do well on the technical assessment appear to have a higher rate of success if they adopt sound managerial and financial practices. As TAPs, it is important to take more time to carefully complete and review the TMF assessments during the enrollment and closure of these projects. These reports can serve as a good indicator of the likelihood of success or failure of a project.



Left to right: Kingstown Mayor Janet Gerald; Tara Hawk of Kingstown; Randy Welch and John Poteat, representing SERCAP; Reginald Speight of the USDA; Pleasant Gardens Mayor Dean Maddox; Sharon Martin of Kingstown; and Sedalia Mayor Howard Morgan.

# A Meeting of the Minds

*Idea sharing between local North Carolina municipalities and USDA Rural Development.*

**Gloria Gentry**, Technical Assistance Provider, Southeast Rural Community Assistance Project (SERCAP)

In November 2021, the North Carolina towns of Sedalia, Kingstown, and Pleasant Garden met in Sedalia to get to know each other and to share ideas, best practices, and issues faced by their individual towns. The attendees were looking forward to getting together so that they could learn and share experiences and challenges in running a small rural town. This type of initial gathering can be a very valuable form of informal regional collaboration and can help communities network, build trust, and assist one another while also laying the groundwork for more formal potential collaboration in the future.

Randy Welch, SERCAP North Carolina State Manager, invited Reginald Speight to the meeting. Speight had been appointed by President Joe Biden in October 2021 to the position of North Carolina Rural Development State Director for the U.S. Department of Agriculture (USDA) and was making an effort to meet leaders of small rural towns. Speight wanted to hear about the types of challenges small rural communities are facing and to offer guidance and assistance with acquiring loans or grants where possible.

Janet Gerald, mayor of the Town of Kingstown, was the first to share the issues facing her town. She detailed some of

the problems they have faced, including planning and zoning, water and sewer issues, developing a master plan for the town, and code enforcement.

Mayor Gerald stated that Kingstown is currently \$180,000 in arrears on its payments to the City of Shelby for sewer treatment. One issue Kingstown had encountered was that the town had not installed cut-off mechanisms in the event of customer non-payment for services. To remedy the issue, the town entered into a collection agreement with the company that supplies water to Kingstown. The supplier would collect sewer billing in combination with water billing so that consumers had to pay for both services in order to avoid disruption in service. While alleviating the initial issue, the underlying issue that still needed to be addressed was getting citizens who have sewer access but are not connected to sewer lines to pay accessibility fees.

The towns also collaborated and shared success stories about enforcing code. For example, Kingstown has a major problem with the enforcement of the town's ordinances and has noticed an increase in petty crime. The towns of Sedalia and Pleasant Gardens shared information about the agencies they use for code enforcement as a possible solution for Kingstown to use.

Howard Morgan, mayor of Sedalia, was next to speak about the challenges facing his town. Sedalia residents have individual wells and septic tanks for their homes and would prefer to remain decentralized. Not having access to a communal water source, though, is problematic in cases where access to water is critical, such as in the event of a fire. Mayor Morgan told the group about a residence that burned down because the fire department was unable to quickly access enough water to put the fire out. Even though there was a fire hydrant sitting right in front of the house, the fire department could not access the hydrant because it belonged to the Town of Greensboro!

An additional challenge Sedalia faces without communal water sources is attracting new businesses. Businesses need to have access to water and sewer in order to operate, and not being able to offer these services to new businesses is a major obstacle to growth in the town. The Town of Greensboro has water and sewer lines that run directly down the main street in front of the Sedalia Town Hall, but Greensboro will not grant access to those lines to the town. Sedalia has offered to pay the "out of town" access rate, but it has not been able



Girls dormitory and east campus at the Charlotte Hawkins Brown Museum / Palmer Institute – Girls Dorm and East Campus in Sedalia, North Carolina.

to reach an agreement with Greensboro. In the meantime, the town is unable to move forward with negotiations with any potential businesses wishing to open in the town.

Dean Maddox, mayor of Pleasant Gardens, told the group that his town does not have public water or sewer services either; homeowners use individual wells and septic tanks. He mentioned that Pleasant Gardens' leadership had decided to focus on building economic development opportunities by addressing access to recreation for the youth in the town, and that it is not as nervous about a lack of centralized utilities having a negative impact on business development.

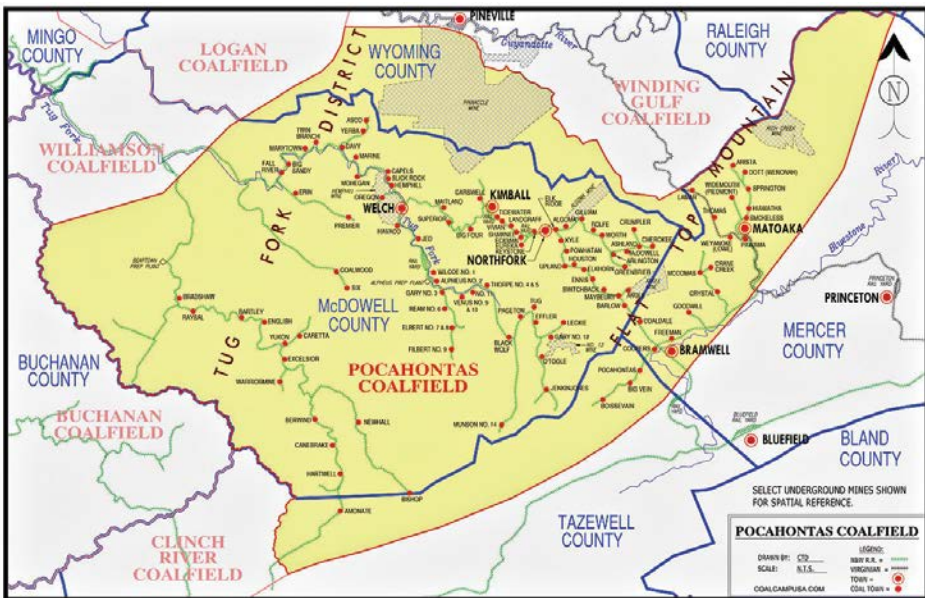
Pleasant Gardens had lost a few major employers, which resulted in several vacant commercial properties. Leadership decided to revitalize the vacant businesses by establishing public-private partnerships and utilized grants which required a 50/50 match to accomplish its goals. The town also established a youth softball team, which has gained area-wide recognition and has attracted teams from other towns to participate in events. The influx of people attending these events provides additional revenue to local restaurants, hotels, and other businesses in the town and has built camaraderie with surrounding towns.

Speight, of the USDA, told the group that he was appreciative of the opportunity to meet and to hear in person their issues and concerns. He stated that he wanted to be clear on his level of understanding of issues faced by small towns. "Don't let this suit fool you," he said. "I'm a regular ol' country boy who knows firsthand the issues that small towns deal with." He said that he was aware of the difficulty some towns face when trying to apply for grants and loans and that he was also aware of the inability of small towns to pay back loans when they have very limited funds. He acknowledged that grant funding would be of greater help to them, given the financial standing of some of the towns. He took the opportunity to share his contact information with everyone in attendance and encouraged them to reach out to him personally. He stated that he would always be open to listening and that he is willing to help each mayor whenever possible.

The towns of Sedalia, Kingstown, and Pleasant Garden coming together to discuss challenges and solutions is an example of how communication and collaboration between utilities, cities, and government agencies can help in the sharing of resources and knowledge about the issues small towns face with regard to water, sanitation, and economic development. This gathering was just the start of a future of collaboration between these three local communities and with USDA.



Elkhorn water tower was built in the 1950s.



A coalfield map of McDowell County

McDowell County has endured significant population decline in the last several decades. From the 1920s through the 1950s the area was fueled by coal mining money, and McDowell County's population grew to nearly 100,000 people, making it the third most populous county in West Virginia at that time. However, with the decline of the coal industry and the severe floods of 2001 and 2002 that destroyed homes, businesses, and vital infrastructure, people left the county. The population has been in decline and, as of 2018, the population was estimated to be 18,233 people, the 32nd (of 55) most populous county in the state. The county ranked 35th in population density at that time, according to the U.S. Census Bureau's American Factfinder, with 38 people per square mile, compared to the state average of 77 people per square mile.

Mountainous regions like southern West Virginia have an abundance of water, but the terrain creates challenges. Many of these communities were constructed from scratch in and around the V-shaped hollows that split the wooded mountains blanketing this region's landscape.

Although the coal mining industry built much of the infrastructure here and provided everything to support the workforce, as the mining industry has weakened in recent years, coal company water systems have changed hands.

Most coal company water systems were sold, either to the communities themselves or to private entities. The private owners who took over systems from the coal companies often neglected upkeep, resulting in poorly maintained systems and unsafe water. Customers were charged flat rates for poor service and even poorer quality. It was clear the revenue coming in was not being put into required system maintenance.

By 1971, a private utility known as McDowell County Water Company controlled water service in Coalwood, Caretta, and 12 other communities. These water systems were already nearing the end of their usable lifespans, and the company allowed them to further deteriorate. In 1987, Olga Coal Company, the owner/operator of the McDowell County Water Company, filed for bankruptcy, shutting down all mining operations. Repeated complaints to McDowell County Water Company about the water achieved no results.

Community residents, led by Frankie Rutherford, resolved to take legal and

# A Regionalization Success Story

*Little by little, the McDowell County Public Service District in solving decades old problems in southern West Virginia.*

**Mary Hutson**, State Coordinator, Great Lakes Community Action Partnership (GLCAP), West Virginia

**W**est Virginia's southernmost county, McDowell County, located in the southern coalfields, totals 535 square miles in size, making it the 13th largest county in the state based on land mass. The county is roughly in the shape of a semi-circle, with its borders following the Appalachian Mountains. The county's topography is characterized by rugged and steep mountainside slopes and ridgetops, with narrow floodplains along streams. McDowell County is 87% forested and is situated in the most forested region of the state.

political action to secure clean water for McDowell County. With the pro bono assistance of a local attorney, Big Creek People in Action (BCPIA) was formed and aspired to force McDowell County Water Company to fix the existing supply problems and seek compensation for damages to fixtures and appliances.

In March 1989, the West Virginia Public Service Commission (WV PSC) found McDowell County Water Company culpable of:

- Providing grossly inadequate water service to its customers
- Inadequate, inefficient, and irresponsible management/operations
- Being unresponsive to the needs of customers

The court ordered the company to take specific steps to remedy this situation. As of October 1989, little had been accomplished by the water company, and the WV PSC found McDowell Water to be “irresponsible” and “unresponsive.” Ordered receivership proceedings began against the company.

Company assets were turned over to the McDowell County Commission, the only existing form of government for the small unincorporated communities in the service region. The Commission was initially inclined to place the water system in the control of another private operator, but BCPIA was vehemently opposed to this idea.

McDowell County Commissioner Bobby Lewis recommended that communities would be better served by retaining local control through the organization of a Public Service District (PSD) under the auspices of the county commission. PSDs are public corporations established by county commissions with approval of the WV PSC to develop and maintain water systems.

After a long series of hearings which several members of the local commission resisted, McDowell County PSD was established in 1990. Since its inception, the McDowell PSD has continued to expand its role in the county, taking over and upgrading small private community

## Elkhorn Water Project-Phase I



systems in trouble, one or two at a time, and building new treatment plants when needed, often using groundwater extracted from deep abandoned mines. The PSD’s customer base has grown to about 3,600, and it now operates a total of 15 very small water systems.

District personnel are experienced in the planning and implementation of extensions to its systems. Since its creation in 1990, the district has completed 14 major water projects, essentially all of them on time and within or below budget.

The district has recently identified three additional water projects and is proceeding with implementation as funding allows.

- Elkhorn Phase II, currently in progress, will also replace systems in Northfork and Keystone with water from the Maybeury plant. Keystone has been on a boil water advisory since 2010, and Northfork has been under an advisory since 2013.
- Elkhorn Phase III will provide service to customers up Northfork hollow, which will include Ashland and Crumpler.
- Elkhorn Phase IV will replace the Kimball plant with water from the Maybeury plant and upgrade water lines to the county line.

Randy Whittaker, field supervisor and the district’s most senior employee, takes great pride in the quality of its operations. Mr. Whittaker is responsible for the 12 field staff and the O&M of the 15 water systems. These individual systems, spread across the county, create additional burdens with reporting and water sampling; just performing daily systems checks requires workers to drive about 300 miles. Working together, the PSD applies makeshift solutions to the most urgent problems until funding can be obtained to provide long-term remedies. Forget water loss percentages—just keeping water in the decaying lines is a triumph! It is a minute-by-minute struggle most of us could never envision.

Financial challenges exist as well. As the district has made upgrades, borrowing has stacked up, much of it in the form of loans. “We have a tremendous amount of loan debt,” Mavis Brewster, the district’s general manager, says, adding that monthly payments total about \$32,000. She didn’t seem panicked about the district’s debt load.

The district currently charges \$32.26 per month for up to 2,000 gallons of water for its customers.

The McDowell County Public Service District has worked for 31 years to improve and maintain infrastructure that provides drinking water to people in remote corners of the state. The district has been making decisions based upon its 20-year plan in order to prepare for expansion into additional areas operating on these core values and philosophies:

- Excellence in customer service
- Professional management
- Operational excellence in system operations
- Regulatory compliance with local, state, and federal regulations
- Implementation of industry best practices
- Technical expertise with a commitment to technical training and certification for employees
- Forward looking as evidenced by long-term planning for operations, capital, and growth
- Committed to safety in operations and in enhancing public safety for the communities through improved water quality and fire protection

“We’ve been pretty aggressive in the county about trying to provide water to as many residents as we possibly can,” Brewster says. There are still pockets of the county that do not have access to public water, or that have poor quality water, according to Brewster.

RCAP has been working with the PSD since 2017 to assist with the funder requirements. If you can name it, RCAP has assisted with it. With 15 separate systems, it has been a task to meet funding requirements, such as having up-to-date and easy-to-use Operation and



Mavis Brewster, General Manager

“ You know you have become part of the community when you call to make hotel reservations and they know you by first name and say your room is ready. I now officially have my own room at the Count Gilu in Welch.

— MARY HUTSON

Maintenance (O&M) manuals, standard operating procedures, safety programs, cross-connection programs, asset management plans, vulnerability assessments, and emergency response plans, not to mention compliance issues such as helping the systems deal with public notices, administrative orders, sampling plans, and monitoring schedules. Last but not least, RCAP has also helped with the district’s needs around operator continuing education and certification training.





# Fleet Electrification Is Coming

*Here's how rural areas can shine as early adopters.*

**Tamra Reynolds**, Managing Director at CoBank

**W**hen most people think about vehicles that run on electricity, they picture small or expensive high-tech cars. This makes sense. Yet, the day is coming when medium-sized and heavy-duty vehicles, including big rigs, buses, and construction equipment, will also make the move toward electricity. And that day is coming quickly.

Already, 17 states and the District of Columbia have indicated that they're interested in forming a coalition to advocate for truck and bus electrification en masse. The goal, of course, is to reduce costs, improve revenue, and, in many cases, make shareholders happy.

To be sure, many companies have announced that they intend to switch to electric for their delivery services: Amazon, DHL, UPS, and even Waste Management. So, now is a good time for rural businesses and governmental organizations, such as school districts, to get on board and move some or all their fleets from gas to electric, too.

## Benefits of Fleet Electrification

Although this move might seem like mostly a way to address problems involving greenhouse gas, companies and entities that

switch to “greener” fleets stand to gain other benefits. This is especially true for fleets that operate in rural areas.

For instance, air pollution has become a hot-button topic in rural America. Once considered more of an urban concern, pollution has been shown to affect the residents in—and visitors to—towns and municipalities far away from bustling cities. Consequently, bringing more electric vehicles onto the roads will clear the path for better air quality, particularly in the summertime.

Along with improved air quality is the possibility for health improvements. Children and adults who are exposed less to diesel exhaust are less likely to experience respiratory responses triggered by airborne allergens. The EPA estimates that more than six million young people struggle with asthma. Taking diesel engines off the road could mean the difference between being able to breathe comfortably or having to use a rescue inhaler daily.

Another advantage to moving toward electric fleets involves cost. Without a doubt, the initial purchase price of a vehicle such as an electric school bus can be up to four times that of a conventional diesel one, and price parity isn't predicted to occur until around 2030. Nevertheless, the lifetime cost of owning and operating an electric bus is minimal in comparison. Plus, electric

fleet vehicles tend to be augmented with additional high-tech safety features such as backup cameras, reducing the likelihood of accidents and, therefore, extra repair costs.

Want another reason to aim higher when it comes to replacing diesel fleets with electric ones in rural regions? Rural areas often face high poverty rates, meaning rural families rely heavily on public transportation. The Bureau of Transportation Statistics asserts that about one-fifth of low-income families don't own vehicles. Children from these families are more likely to use school bus services, so those buses generally spend a lot of time on the road. Rural bus routes are naturally longer than urban bus routes. In fact, rural kids could end up sitting on their buses for six or more miles to get to and from school. With so many miles logged, it just makes sense for the buses to operate on electricity.

## Ways to Prepare for Electric Fleets

These findings point to all the reasons why switching to electric fleets makes sense. Still, it can be hard for many people to wrap their minds around how to make everything work. One of the greatest hurdles is figuring out how to manage an increased use of electricity on the current power grid.

Without a doubt, the nation's power grid is under tremendous pressure. There is a greater reliance on electricity to power everything from technical gadgetry to vehicles. At the same time, major issues such as wildfires, hurricanes, and ice storms wreak havoc on these systems. In short, the grid is being stretched and strained. All isn't lost, though.

One solution to keeping the grid running effectively and efficiently is to leverage area median income (AMI)-based software and systems. AMI programs can predict future usage, enabling them to reroute electricity where it will be needed most. Having enough electricity when and where it's needed will help reduce pressures on the entire grid system.

Another recommendation is to find better ways to store energy that's not being used. Being able to tap into electricity held in some type of battery will provide smarter energy management choices. The right kind of battery could also help avoid problems related to the need for superchargers at the pump. Currently, it can take longer than most fleet operators would like to "fuel up" an electric truck or bus. Finding better ways to get electricity quickly from a charging station into a vehicle will make an enormously positive impact.

## Rural Co-Ops: Well-Suited to Handle Electric Fleet Obstacles

There's little doubt that electric fleets are going to be needed, and rural electricity suppliers are poised to become leaders in figuring out ways to efficiently get electric vehicles, such as buses and heavy-duty trucks, on the road.

Why rural co-ops? Their leaders are accustomed to being innovative. Rural communities tend to be harder to serve in many ways. Yet co-ops have figured out time and again how to meet demands in a variety of creative ways. No doubt they will take up the charge this time when it comes to green fleet technologies, processes, and ideas.

Of course, they have a head start, thanks to some of the following changes and initiatives being considered and implemented at the highest levels of business and government:

### 1. MONEY IS BEING EARMARKED FOR FLEET ELECTRIFICATION.

Little by little, funding sources are showing up that can help rural areas bring electric vehicles to their communities. For instance, the EPA's Clean School Bus Program might be a key step in the right direction. Promising \$500 million in rebates in 2022 and billions in the coming five years, the Clean School Bus Program aims to get as many diesel school buses as possible off the road.

As similar programs bubble to the surface, more rural communities will be able to begin bringing electric buses into their fleets affordably. At that point, they can test those buses against their diesel counterparts to see for themselves how to make electrification work best.

### 2. DISCUSSIONS ARE HAPPENING AROUND FUEL MANAGEMENT STRATEGIES.

To bring about full-scale fleet electrification, rural businesses, fleet operators, and government agencies need to flip their thinking about fuel management. Electric vehicles can only run if there is enough electricity available at conveniently located charging stations.

Today, many conversations are being held around electric distribution system planning to identify and overcome vulnerabilities. These discussions are essential, because they open the door to new concepts on prioritizing the known fueling needs of electric vehicles.

### 3. ELECTRIC VEHICLES ARE BECOMING MORE AVAILABLE.

Electric fleets might be in their infancy, but the move to electric cars is growing. The United States government has set a goal of ensuring that most of the vehicles operating by 2050 are electric. Recently, in California, Governor Newsom signed an order to phase out gasoline-powered cars and reduce fossil fuel demands by 2035. This will likely drive similar action in more than a dozen states.

With gas prices in flux, the consumer market is becoming more amenable to switching to electric. Nearly 23% of respondents in a YouGov poll for Forbes Wheels said they'd be open to buying an electric vehicle the next time they went auto shopping.

Gradually, consumers are buying into electrification for their cars, SUVs, and pick-up trucks across the country. They'll need charging stations, which will impact community planning. As a result, rural areas will have to adjust to the changing fueling needs of commuters. These changes should help pave the way for electric fleet opportunities.

Comprehensive fleet electrification won't happen next week or even next year. It will happen, though. The sooner communities start planning, the sooner everyone can gain the health, environmental, and cost benefits of electric vehicles.

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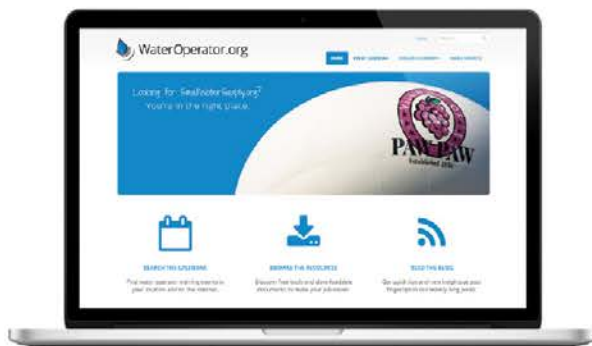
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