The Road to Regionalization

Small systems find collaboration as one solution for addressing issues
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Improving the quality of life in rural communities

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Features

Regionalization: A potential solution to affordability and capacity issues of small systems
Restructuring or combining small water and wastewater systems are ways for them to achieve economies of scale and address the increasing costs of meeting regulations.

Breakthrough with regionalization leads to breaking ground with water project
A regional solution helps move a small Ohio lake town to begin a project years in the making.

Large systems are critical to making regional solutions work
Greater Cincinnati Water Works is a case of successful regionalization.

Water over the bridge: Arkansas community solves health problem by securing water from a neighboring town
It pays to have good neighbors when a health emergency looms.

Midwestern communities try different approaches to regionalization
Communities in Iowa, Nebraska and South Dakota find a variety of ways to collaborate.

In South Carolina, an unplanned partnership proves to be rewarding
A water-treatment project is threatened until a partner steps in with funding, and both are rewarded.

How the State of New Mexico has encouraged regionalization
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What Matters

Rural Developments
WaterSmart Innovations conference and exposition
EPA takes new steps to improve water quality
New USDA Rural Development under secretaries begin work
The primary focus of this issue is small-system regionalization. Illustrative stories from around the country on this topic demonstrate the variety of approaches that small community utilities have taken. Whether the motive is to save money, improve operational and managerial efficiency, access additional water supplies, or meet water-quality requirements, small communities are finding ways to improve services to their customers based on approaches that are appropriate to their local conditions.

Some critics contend that regionalization jeopardizes a small community’s identity because, in many rural areas, the primary public service is provided by the local water utility. However, in the stories presented in this issue, it becomes clear that concerned citizens and community leaders took these actions to ensure that their community’s health was protected and that future generations would be able to access the economic benefits of a dependable water supply.

While there are state and federal regulations that encourage various forms of regionalization, these requirements are primarily voluntary. Perhaps the most effective leverage for promoting cost-saving regionalization measures is to require that options for regionalization be considered prior to making available any state or federal subsidized funding for infrastructure improvements. Heightened consideration of this incentive is necessary if scarce financial resources are to be put to their most effective use.

In regard to infrastructure financing, after many years of work by a variety of water and industry groups, legislation was introduced in July by Congressman Earl Blumenauer to create the Water Protection and Reinvestment Fund to support investments in clean water and drinking water infrastructure. This bipartisan legislation is designed to create a sustainable source of revenue for critically needed projects and would primarily distribute funding through the existing Clean Water and Drinking Water State Revolving Funds. More about this and other legislative developments will be included in future issues of Rural Matters and on our website.

Finally, I would like to announce the addition of a member to our national office staff. Stephen Padre started in June as our Director of Communications. His responsibilities include this publication, the RCAP website, and in general to manage overall media communications, creative services and public outreach and education activities and programs. Stephen has considerable experience doing communications in the field and in particular with other nonprofits that carry out development projects. He would welcome any ideas you might have for articles and ways to improve RCAP’s communications programs and activities.
The WaterSmart Innovations Conference and Exposition will be held Oct. 7-9, 2009, in Las Vegas at the South Point Hotel and Conference Center. Registration is $390. To register and for more information, visit www.WaterSmartInnovations.com.

More than 1,200 professionals from 43 states and 17 nations participated in the first WaterSmart Innovations, held in October 2008, making it the world’s largest and most comprehensive conservation-specific conference of its kind. An accompanying exposition featured more than 140 companies specializing in water-efficient products and services.

Dr. Jim Gill, inaugural chairman of Water Australia, a joint public-private organization created to disseminate Australian technology and expertise in water resource management, and past CEO of the Water Corporation of Western Australia, will be the keynote luncheon speaker on Oct. 8.

As CEO of the Water Corporation, Gill was recognized for development of innovative programming to reduce water demand and diversify water resources in Western Australia, counteracting an enormous reduction in the yield of traditional surface water sources. The achievements of his tenure include a desalination plant that uses renewable energy, programs to enhance water supplies through agricultural irrigation efficiency and a system for aquifer storage and recovery of treated wastewater. Gill’s agency also achieved an annual system-wide water use reduction of 45 gigaliters (approximately 12 billion gallons).

Presented by the Southern Nevada Water Authority (SNWA) in conjunction with the U.S. Environmental Protection Agency’s WaterSense Program, WaterSmart Innovations is an event that serves to broaden knowledge of innovations in urban water efficiency and water conservation including products, programs and outreach.

Other organizations collaborating with the SNWA and the EPA on WaterSmart Innovations include the American Water Works Association, Alliance for Water Efficiency, Audubon International, Green Plumbers USA, International Association of Plumbing and Mechanical Officials, International Center for Water Technology, Irrigation Association and California Urban Water Conservation Council. The partnering organizations have a combined 72,000 members.

WASHINGTON—The U.S. Environmental Protection Agency (EPA) has made available comprehensive reports and data on water enforcement in all 50 states. This is part of Administrator Lisa P. Jackson’s larger effort to enhance transparency, promote the public’s right to know about water quality and provide information on EPA’s actions to protect water under the Clean Water Act.

In a memorandum issued July 2, Jackson directed EPA’s Office of Enforcement and Compliance Assurance (OECA) to develop an action plan to enhance public transparency regarding clean water enforcement. In the memo, she also calls for stronger enforcement performance at federal and state levels and a transformation of EPA’s water quality and compliance information systems.

In keeping with this directive, EPA has posted to the agency’s website detailed information on the current state of clean water compliance and enforcement in each state, and copies of the latest clean water enforcement and compliance performance reports for each state. EPA also launched new web-based tools to help the public search, assess, and analyze the data the agency used to help prepare those reports.

These actions are among several aggressive steps taken by Jackson to improve the nation’s water quality by increasing the transparency and effectiveness of the agency’s national Clean Water Act enforcement program.

The administrator’s memo directed the agency to take several actions, including:

- Improve and enhance the information available on the EPA website on compliance and enforcement activities in each state, showing connections to local water quality where possible;
- Provide information in a format that is easily understood and useable by the public;
- Raise the bar for clean water enforcement performance and ensure...
enforcement is taken against serious violations that threaten water quality; and

- Improve EPAs enforcement performance in states where EPA directly implements the clean water program.

Jackson directed OECA to work with EPAs Office of Water and to consult closely with EPAs 10 regional offices and the states on the action plan. After obtaining input from other stakeholders, OECA Assistant Administrator Cynthia Giles will report back to Jackson in 90 days with recommendations.

More information on the state-by-state reports can be found at: www.epa.gov/compliance/state/srf/index.html

More information on EPA and state enforcement data can be found at: www.epa.gov/compliance/data/results/performance/cwa/index.html

New USDA Rural Development under secretaries begin work

Under Secretary Dallas Tonsager

Dallas Tonsager began as the new Under Secretary for Rural Development on May 18. His appointment was announced in March by President Barack Obama.

On Tonsager’s appointment, USDA Secretary Tom Vilsack said Tonsager is “well aware of the challenges and opportunities in rural America” and has dedicated his life to “enhancing the success and improving the lives of farmers, ranchers and those living in rural areas.”

Prior to joining USDA, Tonsager served on the board of directors for the Farm Credit System Insurance Corporation and the Farm Credit Administration (FCA), which is responsible for regulating and examining the Farm Credit System.

In 1993, then-President Bill Clinton selected Tonsager to serve as USDA South Dakota’s state director for Rural Development. Tonsager oversaw a diversified portfolio of housing, business and infrastructure loans in South Dakota totaling more than $100 million. In 1999, he was recognized as one of two outstanding state directors. His term concluded in February 2001.

Prior to his tenure as state director, Tonsager served as executive director of the South Dakota Value-Added Agriculture Development Center in Huron. He coordinated initiatives to increase the economic value and consumer appeal of agricultural products.

From 1988 to 1993, Tonsager served two terms as president of the South Dakota Farmers Union. He also served on the board of National Farmers Union Insurance from 1989 to 1993, and was a member of the advisory board of the Commodity Futures Trading Commission from 1990 to 1993.

Tonsager grew up on a dairy farm near Oldham, S.D. He graduated from South Dakota State University with a Bachelor of Science in agriculture in 1976.

Deputy Under Secretary Cheryl Cook

Cheryl Cook was appointed as Deputy Under Secretary for Rural Development on April 10. Cook manages policies and programs in Rural Development’s three main areas.

Cook served from May 1993 until March 2000 as Rural Development’s Pennsylvania State Director. She also worked in USDA’s Washington, D.C., office, specializing in food, nutrition and housing program delivery.

Between federal appointments, Cook served as Deputy Secretary for Marketing and Economic Development at the Pennsylvania Department of Agriculture. She previously worked for the Keystone Development Center, a nonprofit organization in Pennsylvania that helps new and emerging cooperatives. She was a member of the National Farmers Union’s public policy staff, focusing on dairy, credit, and environmental issues. She also maintained a private law practice.

Deputy Under Secretary Victor Vasquez

Vctor Vasquez was appointed as Deputy Under Secretary for Rural Development on May 13.

Vasquez has more than two decades of experience in government and the private sector in community and economic development at the local, state, federal and international levels. His special interest is local decision making and leadership development.

Most recently, Vasquez served as Deputy Assistant Commissioner for the Department of Transitional Assistance for the Commonwealth of Massachusetts. His responsibilities included policy and program management for TANF, Supplemental Nutrition Assistance and the Housing and Homeless Services programs. In addition to Massachusetts, he has worked in state governments in New York, Oregon and Washington.

Previously, Vasquez worked in Washington as the director for both economic development and Workfirst programs, and he also served with the Department of Defense as the Deputy Assistant Secretary of Defense for the Military Community and Family Policy Office in the Office of the Secretary. Vasquez spent more than five years working in Rural Development, serving as Assistant Administrator in the Office of Community Development with responsibility for launching the Rural Empowerment Zone and Enterprise Community program.
Regionalization: A potential solution to affordability and capacity issues of small systems

By Debra Martin

In recent years, the U.S. economy has gone through another historical cycle of mergers and acquisitions, with many companies joining others to become stronger. While this trend has received a lot of negative press lately for the risk it has exposed the economy to, there remains a compelling motivation for businesses to do this – namely creating economies of scale.

The water and wastewater industry can benefit from economies of scale as well. The term for this concept when applied to small water and wastewater systems is regionalization. Restructuring or combining small water and wastewater systems is one solution for addressing the increasing costs associated with meeting regulations. Regionalization is also a way to address the widening gap between infrastructure needs and available federal and state supportive resources as more systems reach the end of their useful life and the demand for new systems in previously unserved areas escalates.

Challenges small systems face
Capital needs for small systems dramatically exceed local capacity to meet them. Small systems simply do not have enough users – sufficient economies of scale – to make major projects affordable without significant federal and state assistance, yet federal investment in water and sewer infrastructure has fallen nearly 70 percent since 1980, according to the Water Infrastructure Network Coalition. In addition, far more federal assistance today comes in the form of loans rather than grants, meaning that a community’s customers ultimately bear more of the costs directly. As a result, funding is less readily available and more competitive.

According to the EPA, small water systems last year accounted for 86 percent of the systems that were out of compliance with the Safe Drinking Water Act, as well as 91 percent of total violations. Complying with existing and proposed treatment standards is becoming increasingly unaffordable for small systems.

Approximately 30 percent of small water systems have operating expenses that exceed their revenues, according to the EPA. This figure does not include debt service, nor does it take into account those systems just barely making revenues meet expenses and thus have no reserve or emergency funds. Moreover, many systems delay essential maintenance to balance their budgets.

In addition to their smaller customer base, small systems face numerous other challenges. Most small systems are managed by volunteer boards whose members seldom have formal training in utility management and other critical skills. Frequently, they do not have a clear understanding of their essential role in the continued viability of the system. The considerable amount of turnover that often occurs in the leadership of rural communities compounds this problem and results in frequently shifting priorities, lack of institutional memory, and limited transfer of knowledge and skills.

Why regionalization?
Regionalization can mean many things, ranging from the physical interconnection or consolidation of two or more systems to administrative solutions such as cooperative purchasing, contract operations or billing, and numerous other collaborative ventures. EPA has developed a system partnership spectrum to show the range of possibilities available to small systems, as shown in the box on the next page.

A 2004 study of economies of scale in community water systems, “Economies of Scale and Technical Efficiency in Community Water Systems,” published by Resources for the Future, found that consolidating small systems into a large system could generate significant efficiency gains, as large systems
experience lower unit costs in the production and delivery of water.

Larger facilities have greater technical, managerial, and financial capacity, which increases the likelihood of meeting existing and developing regulations while maintaining a fiscally sound operation. In addition, having a larger customer base generally enhances a system's ability to attract and retain qualified staff, offer more sophisticated treatment, better respond to emergencies, and provide more reliable service.

Systems with greater capacity are in a better position to manage their assets and achieve full-cost pricing, which should result in these systems having the capability to finance more of their own improvements over time, potentially necessitating less federal investment in the future. In addition, while the initial capital outlay to create regional systems may be significant, it is frequently less than the cost of financing multiple small facilities.

Other potential benefits include the ability to plan on a watershed basis and the reduction of environmental impacts as discharge points are reduced and less land is utilized for treatment facilities. With fewer facilities to monitor, regulators can better focus on compliance and ensuring water quality.

According to EPA data, the majority of water systems are within five miles of the next closest system. Therefore, from a purely geographic perspective, there are ample prospects for consolidation or coordination among systems.

Market forces may gradually push systems toward regionalization. Consumers have increasing expectations of their drinking water quality and environmental protection. Furthermore, a combination of population growth, climate change, impaired water resources and other environmental issues is driving a trend toward total water management, which means utilities that have previously operated in relative isolation will have a need for greater cooperation.

An issue that may drive larger utilities in some areas to reach out to smaller systems is the significant downturn in consumption that many are experiencing. Reduced water usage can be attributed, in part, to the loss of large water users such as major manufacturing facilities that have closed or relocated. Less consumption translates to a loss of revenue – bad news in an industry in which fixed costs constitute a significant portion of operating expenses. Therefore, many larger utilities need to find ways of generating additional revenue, which may provide an incentive to reach out to neighboring smaller systems.

**Barriers to regionalization**

Regionalization in a broad sense involves restructuring administrative functions or pursuing cooperative ventures, and at this level, there appears to be a trend toward regionalization. The number of contracts for operation of publicly owned systems

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**System Partnership Spectrum**

<table>
<thead>
<tr>
<th>Informal Cooperation</th>
<th>Contractual Assistance</th>
<th>Joint Powers Agencies</th>
<th>Ownership Transfer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordinate with other systems, but without contractual obligations</td>
<td>Utilities contract with another system or service provider, but contract is under the system’s control</td>
<td>Creation of a new entity designed to serve the systems that form it</td>
<td>Takeover by an existing entity or a newly created entity</td>
</tr>
</tbody>
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Source: System Partnership Solutions to Improve Public Health Protection, USEPA, 2002

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tripled between 1997 and 2002. Even so, this represents a relatively small number of systems. There are many reasons for this.

Loss of local control
Local leaders often fear that loss of control of the system will be detrimental to the community. Such concerns can often be addressed by the creation of regional entities that allow for shared control, with representation from all of the communities served.

Lack of knowledge about regionalization and absence of a coordinating entity
Many small systems lack awareness about possible types of cooperation and its benefits.

Lack of state leadership and support for regionalization
Many states have done little to encourage regionalization, other than making it a stated goal and assigning a few extra points in various funding programs for regional projects.

Large upfront capital costs for regional systems
This is another significant barrier to restructuring, particularly where it involves the physical consolidation of systems, because large, high-cost regional systems in areas of low population density require a large infusion of grant funds to be even marginally feasible.

Geography
Systems in remote areas are unlikely candidates for consolidation but could benefit from other cooperative purchasing, sharing an operator, and/or contracting functions such as billing.

Condition and size of existing small systems
Larger systems are reluctant to take on a deteriorating small system, which can be a liability. In addition, if a system is too small, the revenue potential is insignificant. Similarly, the comparative condition of multiple small systems considering consolidation can be a barrier.

Recommendations to support regional solutions
Regionalization is complex and multi-faceted. It is not a panacea to the problems of small systems. However, flexibility and cooperation can lead to cost savings, and the options on the spectrum of regional cooperation should be more broadly considered. To that end, a number of steps can be taken to encourage greater cooperation among systems.

Recommendations for Congress
Congress authorizes numerous programs that fund infrastructure improvements, such as the EPA State Revolving Fund programs, USDA Rural Development, the Community Development Block Grant Program, and others. As part of these authorizations, Congress should:

- require states to develop a mechanism for coordinating funding programs, and require federal agencies to participate;
- require serious consideration of regional alternatives by applicants that serve populations under 10,000 as a condition of receiving funding; and
- provide funding to educate communities on the benefits and forms of regional cooperation.

Recommendations for federal and/or state agencies
- Effectively implement statutory requirements regarding the consideration of regionalization for small systems that request funding. Systems must be required to thoroughly investigate regional solutions. Funding should be denied to any project where a regional solution is possible and cost-effective but not pursued.
- Establish a statewide mechanism to coordinate among funders so that all have the same information when making decisions about projects. All funding agencies should participate.
- Create incentives for larger systems to provide service to neighboring small systems. For example, funds could be provided to help small systems in emergencies.
- State primacy agencies should facilitate meetings between systems that are struggling and neighboring systems that could potentially serve or partner with them. A regionalization coordinator could help systems
consider and initiate alternatives that enhance their capacity.

- Provide funds for education and outreach to small systems regarding the benefits of regionalization and methods of overcoming barriers at the local level.

- Use public venues such as conferences and meetings to invite speakers to discuss creative approaches to regionalization. Presenters who have implemented regional solutions would be especially effective, because such messages are better delivered by peers.

- EPA should expand its community awards program to include recognition of systems – both large and small – that implement regional solutions.

These recommendations are not new. Many have been proposed by other groups, including the National Research Council, the National Council for Public-Private Partnerships, and the EPA National Drinking Water Advisory Group Affordability Work Group, among others. RCAP is joining the chorus of voices promoting regionalization in the hope that solutions can be incorporated into the work of funding and primacy agencies for the benefit of all small systems.

Small systems should not be penalized if they opt against a regional solution in their situation. However, in cases where a regional solution is clearly feasible but is not pursued, those systems should not expect to receive government-subsidized funding. Small systems have every right to maintain their independence, but their users must be willing to pay for it. Conversely, when a system is pursuing a regional alternative that has large capital costs but will provide a better long-term solution, that project should be made a high priority by funding and primacy agencies.

Martin is director of Great Lakes RCAP. This article is adapted from a white paper she wrote.

Mayor Frank Foster of Buckeye Lake Village, Ohio, located about 30 miles southeast of Columbus, says it was a day 20 years in the making.

On June 24, ground was broken on the village’s project to bring clean drinking water from Millersport, on the opposite side of the lake where the village sits. Buckeye Lake officials had tried many times over the years to find a way to bring safe drinking water to their community.

With more than 3,000 residents, the community is the largest in Ohio without a public water system. Many of the community’s private wells had high levels of bacterial contamination, and some had high arsenic levels.

Despite the clear need for a water system, the development of the project had been very divisive for the community, and affordability for the users of the system was critical. Pursuing a regional solution through the purchase of treated water from an existing system that has the capacity to serve the village will save Buckeye Lake a considerable amount of money in upfront capital and operating costs and in complying with regulations over the long term.

The project that broke ground in June is to construct a $7 million distribution system, which will be operational in July 2010. The village will then purchase treated water from Millersport. The biggest part of the project will be laying 67,000 feet of water lines, and the installation of a water tank and pump will follow.

RCAP assisted the village with many aspects of obtaining funding for the project, including development of a financing plan, preparation of its applications, determining user rates, and holding public meetings to explain the plan to residents. RCAP staff also provided its project development course to village officials, which helps small communities understand how to plan, design and construct infrastructure projects.

“You’ve come a long way,” John Rauch, RCAP’s Field Agent Coordinator for Ohio, was quoted as saying in The Buckeye Lake Beacon.
Large systems are critical to making regional solutions work

A model of regionalization, one carried out on a large scale, is showing great signs of success in Ohio’s third-largest city and the surrounding area.

Debra Martin, Great Lakes RCAP, contributed to this article, with additional reporting by RCAP staff.

Photos courtesy of Great Lakes RCAP

Debra Martin, Great Lakes RCAP, contributed to this article, with additional reporting by RCAP staff.

Photos courtesy of Great Lakes RCAP

A case of successful regionalization in Greater Cincinnati

Larger water and wastewater systems are usually in a position to lead and encourage regionalization with the smaller systems around them, but few have made it a priority. Greater Cincinnati Water Works (GCWW) in southwest Ohio is one large system that has done an extraordinary job of promoting cooperation in creative ways.

GCWW serves more than 90 percent of Hamilton County and sections of Butler and Warren Counties, as well as areas of northern Kentucky. GCWW operates a state-of-the-art granular-activated carbon-treatment facility, the first of its kind in the U.S., and has won numerous awards for the excellence of its operations. U.S. Environmental Protection Agency official Robert Clark was quoted in the Portland Sunday Oregonian about GCWW: “It’s as good as it gets…It’s a proven success story and a good model for others.”

Flexible partnerships
GCWW has found numerous ways to partner with smaller water systems in its area, and one of the keys to its success is the flexibility it offers these systems. GCWW offers a full spectrum of services.
that allows smaller systems to choose what best meets their needs. For example, if a small community wants to buy treated water wholesale, but retain control over its own water distribution system and billing, GCWW will work with the community. On the other hand, if a small community wants to get out of the water business altogether, GCWW can assume responsibility for the entire system. Other services that GCWW offers to systems include:

- **Lab-testing services**: The advantage for small systems is that GCWW personnel are able to provide a higher level of analysis for water-quality problems than a typical lab and to help the system deal with problematic test results.

- **Billing services and call-center operations**: GCWW can provide billing services, providing the customers of small systems with conveniences such as online bill payment. GCWW also staffs call centers to deal with customers, providing greater customer access than small systems can typically offer.

- **A source of project financing**: GCWW can bundle small-systems’ debt with their own, thereby allowing small systems to take advantage of GCWW’s greater bonding capacity and better rating.

- **Providing engineering and construction-management services**.

In addition, GCWW views itself as a “good neighbor” by offering an emergency water supply to other systems in the area and a “react team” to help small systems with everything from a backhoe operator, to detecting leaks, to helping operators deal with water quality issues. This assistance is even available to small systems that do not have any contracts with GCWW.

### How a little sibling feels

One of the smaller water systems that has partnered with GCWW is Western Water Company. Its service area east of Cincinnati includes parts of four counties (Clermont, Clinton, Warren and Brown), which encompasses more than 400 square miles and 23 townships.

Foreseeing growth in its service area, the system established an agreement to purchase bulk water from GCWW more than a decade ago. Western Water retains treatment oversight of the water it purchases, and today it obtains an average of a million gallons a day, which is about 40 percent of its usage.

“We’ve been very happy with the reliability and the quality of the water we get from them,” says Scott Kirk, Western Water’s General Manager.

Kirk adds that there have been no problems with the agreement, which is long-term but reviewed annually. Western Water reports to its customers on the source of its waters, and Kirk says there have been no complaints from users either.

### Good for large and small alike

The GCWW model works because its leadership had the vision to understand, long before others, that what is good for the area’s water systems is generally good for GCWW and the water industry as a whole, and that the primary mission of any public water system is public service.

David Rager, GCWW’s director, says he believes that large water systems need to take the long view and figure out what they can do to help small systems be successful. He says that even small utilities can have an impact on their own customers’ perceptions. For example, if there is a waterborne disease outbreak in a system near Cincinnati, the negative press might make GCWW customers question the safety of their own supply.

Rager believes that large systems can best reach out to smaller systems by understanding that regionalization is an evolutionary process. It is important to work constantly on building relationships and trust with smaller systems. By starting small and offering critical services to small systems, they begin to see the benefits of cooperation and may feel comfortable obtaining more services later.

Rager acknowledges that many small systems fear a loss of autonomy and that the larger system might raise their rates or curtail supply in an emergency. One of the ways GCWW helps to allay fears is by including provisions in service contracts that address those issues. For example, small systems can choose to have their rates tied to either the Consumer Price Index or to GCWW’s rate increases. The contract may also specify that from a supply standpoint, water will be distributed equally to all customers as commercially feasible as possible. The willingness to discuss and consider the needs of the smaller community leads to solutions that work for both sides.

Few large systems have been as proactive in incorporating or serving smaller systems, although Rager acknowledges other large systems, such as Columbus, Ga., and Beaufort County, S.C., which have adopted similar approaches and gone above and beyond to help small systems. The key is to get other large systems to act with the vision and the flexible leadership that GCWW has in order to encourage others to follow.

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Debra Martin, Great Lakes RCAP, contributed to this article, with additional reporting by RCAP staff.
The small town of Guion, Ark., was facing a big problem.

The town was using an aging well system, and officials with the Arkansas Department of Health told residents their water source could be contaminated by surface water.

“The tests never really showed it, but we still had to do something about it,” says Lynn Pittman, the town’s mayor. Exactly what that “something” should be was the problem. But the town soon got help from Community Resource Group (CRG), the Southern RCAP.

**Background**

Guion sits among the rolling foothills of the Ozark Mountains and next to the White River. The town is on the site where a ferry serviced those wanting to cross the river until the late 1980s, when the state built a bridge across the river. The town is home to a trucking corporation and a sand mine, which has supported the town since it was opened in 1919.

The town had a population of about 95 people, but its water system served several people outside the town, for a total of about 240 customers.

When the problem with the health department arose in 1998, the town began working with Jerry Honey of the regional U.S. Department of Agriculture Rural Development office and Mitzi Hargan of the White River Planning and Development District. Honey soon referred the case to Jerry Kopke, now the Arkansas RCAP State Coordinator at CRG.

Kopke started with a feasibility study for Guion. Should it drill a new well or partner with the nearby towns of Pleasant Grove or Melbourne? Either option, the study showed, was going to cost...
the town about $300,000, which meant a significant rate increase, Mayor Pittman says.

The study determined that Melbourne lacked the resources to supply Guion as well, which left only the options of working out an agreement with Pleasant Grove or drilling a new well.

“We found out either way, we were out $300,000,” Pittman says. “We went with Pleasant Grove. That way, we were guaranteed water.

“If you don’t hit water (when drilling a new well), you’re out the money, and you still have to turn around and spend another $300,000 drilling another well,” he explains.

Taking care of business
It took a couple of years to narrow down the details. Kopke worked with both Guion and Pleasant Grove officials to determine what services would be covered by which town. He also helped them decide on rate plans and figure out how much water would be needed by Guion.

Kopke kept the health department officials informed of Guion’s progress, preventing more warnings and possible fines from the state. He even went with town officials to the department’s headquarters in Little Rock and spoke for them before the department’s officials.

“He helped us a whole lot as far as what we needed to do,” the mayor says.

Kenny Swafford, manager of the Pleasant Grove Water Association, says the process of creating the agreement was a smooth one.

“It went quickly,” he says. “Probably only a couple of meetings, and that was it.”

In the end, it was decided that Pleasant Grove would supply up to 1 million gallons per month to Guion’s customers, and Guion would maintain its own water lines. The state even agreed to let Guion’s water lines cross the river by tying the pipes to the bridge.

Mayor Pittman says the arrangement CRG helped Guion forge with Pleasant Grove has worked out very well for his town.

“We've had a good relationship with Pleasant Grove,” he says. “The only time we're out of water is when the power goes out and we can't pump it over the hill.”

The last time that happened was in late January, when a massive ice storm swept over the state. Some areas near Guion were without power for two weeks, the mayor says.

“We were only out three days. That's it,” he says. He added that Pleasant Grove had done a good job of keeping the water flowing to the town.

Pleasant Grove’s Swafford says there have been no problems since the agreement with Guion was signed in 2000. Today, the town averages about 600,000 gallons a month during the winter, and peaks around 750,000 gallons in the summer, well below its limit.

Pleasant Grove handles the billing for Guion’s water customers, while Guion continues to maintain the system. Guion’s mayor says Pleasant Grove officials agreed to let Guion continue to use its part-time water-maintenance staff member.

“He knows where the lines are already,” the mayor says. “So when we have a leak, he comes in.”

Pittman says the water system should continue to flourish under its agreement with Pleasant Grove.

“I’ve been dealing with this system since 1991,” he says. “The system is doing better than it’s ever done. One hundred percent better.”

Jones works for Community Resource Group.
Photos by Heath Vaughan, CRG
“Any RCAP or MAP staff person knows [that] small communities struggle with building, then operating and maintaining their water and wastewater systems,” says H.B. Calvert, Resource Development Adviser for Midwest Assistance Program (MAP), the Midwest RCAP. “When you have so few resources, it’s easy for things to get beyond them.”

Staff in RCAP’s Midwest region have worked with three different approaches to regionalization, which is one solution for small, rural communities facing the challenges of too little time, too few people and too little money for their systems. All approaches show promise for easing small-system struggles.

Consolidating construction, operation, maintenance
Throughout Iowa, several groups of counties have decided to regionalize the construction, maintenance and management of new and some existing systems. These efforts have been encouraged by Iowa’s Utility Management Organization statute.

One of the newest groups Calvert has worked with is ADLM, which was started about 10 years ago by two county sanitarians to address environmental concerns in four counties — Appanoose, Davis, Lucas and Monroe. That group now is moving into managing utilities in the counties and is starting on its first project.

The largest group Calvert works with is RUSS — Regional Utility Service Systems — which was formed by 11 counties. It is governed by a board of one representative from each of the counties’ board of supervisors. RUSS has hired CEO Kelly Lewiston and has two operators on contract. Currently RUSS is funded by stipends from the participating counties, but eventually hopes to be self-supporting.

To date, RUSS has built six systems and has two under construction. RUSS recently received funding for systems in Rubio and Argyle, Iowa.

“RUSS does everything a community that’s building a new system struggles with,” Calvert says. “They handle finding the funding, getting the proper reports done, hiring an engineer, supervising the construction and then overseeing the operations and maintenance. RUSS actually owns the facility and is paid through user fees.”

Calvert has been serving as a mentor for Lewiston for the past two years. Together they perform site visits and inspections twice a year and meet on a regular basis to discuss any questions or concerns.

“RUSS hopes to streamline the whole process from construction through maintenance. By providing operators, each community doesn’t have to hire its own. It’s also adding a level of accountability because communities know RUSS is making inspections,” Calvert says. “That helps prolong the life of the system and ensure that it’s operating as efficiently as possible.”

RUSS has a sibling called EIRUSS — Eastern Iowa Rural Service Systems — that currently works with five counties — Cedar, Clinton, Delaware, Jackson and Jones. EIRUSS was created to plan, design, develop, finance, construct, own, operate and maintain facilities and services including water and wastewater treatment systems. It operates under the auspices of the East Central Intergovernmental Association, a
body through which local governments share resources.

One system, five towns
Nearly four years ago, five communities in northeastern Nebraska formed the WAU-COL Regional Water Board to address their water quality and quantity issues. Together, Wausa, Magnet, McClean, Coleridge and Belden comprise about 1,300 residents as well as numerous farming operations in the area. Several of these small communities, which range in size from 60 to 600 people, have severe problems with water quantity, which affects their ability to provide fire protection. Others are experiencing contamination with nitrates and selenium.

Harold Reynolds, MAP Resource Development Adviser in Nebraska, has been working with the governing board of the water district as well as the boards of the communities to secure funding for a regionalized system that would bring the distribution and storage capacity up to required standards and meet the communities’ needs.

“None of these communities could do this project on their own,” Reynolds says. “The water district also is waiting for approval to add rural customers to the system, which would increase its capacity and help spread the costs.” The system also has been designed to accommodate two more communities. With the go-ahead from Nebraska’s U.S. Department of Agriculture-Rural Development office, plans for the system will be finalized and the district can start the construction process.

“With this new system in place, these communities and rural customers will have a safe, dependable water supply,” Reynolds says.

System expanding to serve others
Last year, Rapid Valley (S.D.) Sanitary District’s state-of-the-art microfiltration water treatment plant went online to much fanfare. Two neighboring sanitary districts, Longview and Green Valley, cheered on the construction. After more than a decade of planning, Rapid Valley had the capacity to supply drinking water to these two adjacent systems.

A year of putting the new plant through its paces showed Rapid Valley that for optimum service, capacity and efficiency, it would need to add another microfiltration unit in order to supply water during peak periods to the two other districts.

“In August, when the temperature hits 104, and there’s been no rain in the Black Hills since May, the plant will be running at full bore,” says Jay Larson, MAP Resource Development Adviser. Larson and his fellow adviser R.J. Inskeep have been working with Rapid Valley and the two other districts to build and expand the water-treatment facility and extend its service area.

Larson explains that drilling wells was not an option for Longview and Green Valley.
“It’s not unusual in that area to drill wells more than 3,400 feet deep,” he says. “And once you get water, you can’t be guaranteed that it will be good water. You may be able to smell it a mile away, thanks to the hydrogen sulfide in the rock formations.”

Until now, the two districts have been getting by with shallow wells that are basically charged throughout the growing season with leakage from irrigation ditches in the area. When the irrigation water supply is turned off for the winter, residents nearly pump the aquifer dry.

In contrast, Rapid Valley has water rights on Rapid Creek, which is supplied by natural percolation in the Black Hills, giving the district a reliable, quality water source. In 2001 and 2004, Rapid Valley received awards for the “best drinking water in South Dakota.”

At the end of June, Rapid Valley received a zero-percent interest, 100-percent forgivable loan of more than $680,000 from the South Dakota Board of Water and Natural Resources, the citizen board that allocates State Revolving Fund money. The loan will be used to expand the facility.

“This expansion will give Longview and Green Valley an assured water supply,” Larson says. It also will allow Rapid Valley to backwash its filters more efficiently and provide backup when maintenance is needed on the filtration system.

The project is supported by the Rapid Valley board, and especially the state, which recognizes and promotes the value of regionalization.

“Rapid Valley Manager Jim Jester, Field Operations Supervisor Rusty Schmidt, Cetec Engineering Services, and Advanced Engineering worked like crazy to make this project happen,” Larson says. “It’s been a real cooperative effort, and I can’t give them — or the board — enough credit.”

Miller is a communications specialist for Midwest Assistance Program, Inc.
In 1990 the Saluda County Water & Sewer Authority (SCW&SA) became a local governmental entity (special-purpose district) with the responsibility for providing water and wastewater services to the unincorporated areas of Saluda County. Situated in west central South Carolina, the county is very rural. In the 2000 census, the population was 19,181.

In 1994 the SCW&SA began construction on its water-distribution system. The City of Newberry, 20-some miles from the county seat of Saluda, handled the water supply. This arrangement worked for the initial phase of Saluda’s distribution system, but it was not a long-term solution.

Beginning in 1999 the SCW&SA commissioned a study to find a long-term solution for its water supply. The study offered several solutions. One was to construct its own water-treatment facility using the waters of Lake Murray. This solution seemed to be obvious from a public point of view because the lake borders Saluda County. Lake Murray encompasses 78 square miles and is estimated to hold 763 billion gallons of water. It was formed in 1930 as a reservoir for hydroelectric power and at the time had the world’s largest earthen dam.

In a series of meetings with other small water systems and public officials in late 1999 and early 2000, the SCW&SA committed to building a water-treatment facility on Lake Murray. It was to become a facility that could supply Saluda County and the region.

In principle, all parties were in support of the project, but no one would commit any funding toward it. So the SCW&SA decided to build the facility by itself, a huge financial commitment. SCW&SA was charged with the daunting task of obtaining permits and putting together financial arrangements.

In 2006, with everything in place and the project ready to accept bids, disaster hit. As a result of increases in the price of fuel and supplies, the cost of the project became more than the SCW&SA could afford.

In meetings with area water providers, only one provider that was willing to commit to the project as a joint partner came forward – the Town of Batesburg-Leesville, population 5,517, in a neighboring county that also borders Lake Murray. The town was able to provide capital for the water-treatment facility while SCW&SA was able to keep the rates it charged its customers at a reasonable level. Regionalizing the treatment facility benefited both partners, which gained from the economies of increased production and lower costs it created.

Each entity remains autonomous but is rewarded by working together to achieve the lowest possible production costs. This concept was so advantageous to the partners that Batesburg-Leesville invited SCW&SA to participate in the expansion of its existing wastewater treatment facility. Construction of this project is expected to begin in late 2009.

Burgess is General Manager of the Saluda County Water & Sewer Authority.
How the State of New Mexico has encouraged regionalization

Through various actions, the government has led consolidation efforts among small systems

By Ramon Lucero, Jr.

In 1965, New Mexico’s Department of Health implemented its first water-resource management plan, which came from the first Sanitary Projects Act. The purpose of the Sanitary Projects Act “is to improve the public health of rural communities in New Mexico by providing for the establishment and maintenance of a political subdivision of the state that is empowered by the state to receive public funds for acquisition, construction and improvement of water supply, reuse, storm drainage and wastewater facilities in communities, and to operate and maintain such facilities for the public good.”

Forty-four years later, New Mexico has more than 600 public and more than 700 private water systems. Ninety-five percent of these serve fewer than 500 customers. According to the New Mexico Environment Department, a large percentage of these water systems are aging, have limited capacity, have difficulty complying with state and federal clean water policies, lack adequate water rights, experience continuing management and technical problems, have an inadequate financial base, and lack any professional planning.

An order from the top

These technical, managerial, financial and compliance problems and associated health risks were creating increasingly high costs to the state. In response, Governor Bill Richardson signed an executive order in spring 2003 to form the Water Infrastructure Investment Team (WIIT).

WIIT was charged with providing recommendations for systems that could plan, construct and manage water and wastewater facilities that would dependably and economically meet the state’s current and future needs. As a result, WIIT established the following seven goals to ensure that water and wastewater systems would achieve long-term sustainability:

1. To protect the public health and economic vitality of New Mexico through strategic planning and investment in infrastructure for secure and dependable drinking water supplies, sufficient water for business and economic development, and wastewater treatment for environmental and water quality protection.

2. To ensure that New Mexico’s limited infrastructure dollars, including federal funding, are invested in water and wastewater systems that will provide a stable and predictable supply of water for domestic, residential, commercial and industrial use throughout the 21st century.

3. To foster a coordinated, strategic and long-range approach to the development of water and wastewater infrastructure and new water supplies (through technologies such as desalination), thereby realizing economics of scale through regionalization and affording opportunities for public/private partnerships.

4. To protect New Mexico’s investment in water and wastewater infrastructure by requiring management accountability to ensure that assets achieve optimum efficiency and longevity, thereby decreasing the demand for state and federal funding.

5. To ensure comprehensive financial planning and adequate funding for operation and maintenance, and for
emergencies and anticipated repair and replacement of water and wastewater systems.

6. To promote conservation and highly efficient use of the State’s limited water supply.

7. To create water-delivery systems that are hydrologically and fiscally sustainable and meet state and federal statutory and regulatory requirements.

Along with these goals, WIIT established funding requirements, which, when implemented, would help water service providers ensure adequate financial, managerial and technical capacity to consistently meet local, state and federal requirements and ensure the long-term sustainability of their system.

More government mandates for consolidation

Although the Doña Ana Mutual Domestic Water Consumers Association had been consolidating many of the water systems in the surrounding area for approximately five years, during the 2003 legislative session, state lawmakers passed legislation to create the Albuquerque Bernalillo County Water Utility Authority (ABCWUA), the first regional authority established by legislation. Through a memorandum of understanding and several amendments, the City of Albuquerque transferred all functions – city employees; managerial, operations and maintenance responsibilities; appropriations; money; records; and equipment – to the ABCWUA.

During the spring and summer of 2004, WIIT identified ten regions around the state to focus on regional water and wastewater collaboration. The governor’s office provided funding to organizations such as the Rural Community Assistance Corporation (RCAC), the Western RCAP, to conduct planning meetings in the chosen regions. Meetings throughout the state continued on next page

The winter 2006 issue of Rural Matters featured the El Valle Water Alliance (“The El Valle Water Alliance Becomes a Reality: Self-Government for Community Health,” page 8) and explained the beginning steps that volunteers from the 12 systems of the alliance took toward working together as neighbors to form the alliance. The article described a collaborative, area-wide water planning process that demonstrated a highly innovative approach to water-resource planning.

This year, New Mexico’s Departments of Finance and Administration and Environment chose El Valle Water Alliance, along with Rio Arriba County, to take part in a pilot “Circuit Rider Program.” Two of the goals identified during the development of the scope of work were:

1. To develop a team of certified water and wastewater operators to provide services throughout a region in order to maintain efficient water and wastewater systems that promote long-term protection of regional aquifers and safe drinking water for future generations.

2. To develop a management team of administrative professionals to promote and maintain sound business practices of a regional water and wastewater utility.

The Rural Community Assistance Corporation (RCAC), the Western RCAP, has been working with the alliance since December 2004. With RCAC’s continued assistance, the alliance has been able to secure $2.3 million through legislative grants, a Community Development Block Grant, a grant from the Governor’s Innovation Fund and two loan/grant packages from the Water Trust Board.

Since 2006, the alliance has completed preliminary engineering reports for the 12 water associations and design and construction of infrastructure improvements for three of the associations. It is currently working on a 40-year water plan and design of infrastructure improvements for the remaining nine associations. Funding to complete the 40-year water plan is a significant achievement for the alliance as it will help secure water rights previously decreed to each of the associations by courts in the late 1970s.

The El Valle Water Alliance has recently hired a business manager. The announcement for the opening attracted even a few out-of-state applicants, and the one hired comes to the position with an impressive background, including service as a county manager and county chief operating officer.

RCAC continues to assist the alliance with contract negotiations. The alliance is excited to continue its development toward a sustainable regional water authority.
began in fall 2004 and continued through spring 2005.

As a result, the following water associations have formed, or are working toward forming, regional water entities:

- **El Valle Water Alliance:** Twelve Mutual Domestic Water Consumer Associations (MDWCA) with a combined membership of approximately 650, located in the region known as El Valle in San Miguel County along the Pecos River. (See sidebar on previous page.)

- **El Rito Regional Water & Wastewater Association:** Three MDWCA with a combined membership of approximately 300, located in Rio Arriba County

- **Sangre de Cristo Regional:** Five MDWCA with a combined membership of approximately 350, located in Guadalupe County

- **Mora MDWCA:** Three MDWCA with a combined membership of approximately 250, located in Mora County

- **Cerro Regional MDWCA:** Three MDWCA with a combined membership of approximately 150, located in Taos County

Regional water associations are working to combine their assets and liabilities and to bring their operational and management structures under one entity. To date, these five regional water associations have been able to secure more funding as a result of forming regional entities (collectively approximately $10 million) and have begun systematically addressing replacement of their aging infrastructures; increasing their capacity to serve new members; providing additional fire protection; maintaining compliance with state and federal clean water policies; and developing a more secure financial base to establish long-term sustainability.

The New Mexico Environment Department Construction Programs Bureau and Drinking Water Bureau, working in collaboration with funding agencies such as the New Mexico Finance Authority, the Water Trust Board, the Environmental Protection Agency, and USDA–Rural Development, facilitated meetings from spring 2007 through summer 2008 to strategically fund infrastructure projects throughout these regions. Collaboration among these entities has also yielded shared water sources, water rights, water lines and a connection of watershed associations.

**Other legislative attempts**

Lawmakers introduced the Regional Water and Wastewater Authority Act during the 2007 legislative session. The act failed, but its proposed purpose was to create legislation under which water and wastewater facilities could organize to plan, develop, manage, maintain, or coordinate the development of regional water and wastewater facilities.

During the 2009 session, the New Mexico legislature approved the Lower Rio Grande Public Works Authority. It is regionalizing five public water systems that together will have about 3,500 connections. The process has been fully funded with state and Community Development Block Grant funds and involves the interconnection of several systems, the completion of a regional preliminary engineering report, asset management plan, merger plan and dissolution process. RCAC has been contracted to help develop a strategic plan and an implementation plan for the consolidation.

**Conclusion**

There is still unrealized potential for water resource management in New Mexico such as utilizing state and regional water plans, establishing land use policies that correspond with water use planning, and creating and implementing a water education curriculum for schools.

From the first Sanitary Projects Act in 1965 to some of the regional collaboration among local governments, water associations and the State of New Mexico, water system providers are making great strides toward providing safe drinking water for present and future constituents.

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Ramon Lucero, Jr., is a board member of the El Valle Water Alliance and president of the South San Ysidro MDWCA, a member of El Valle Water Alliance.

Photos courtesy of Ramon Lucero, Jr.
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