



As a board member or a manager of a small rural water system, have you asked yourself what the lifespan of your system is. When I say lifespan, I am not talking about the useful life of the system components. I am talking about the actual legal existence of your system. Was your system formed back in the 1960s or 1970s? Is it one of the "original" USDA rural water systems? Or maybe it was formed in the 1980s or even more recently. If you don't even know when your water system was formed, you may not be in a good position to predict whether or not it will continue to exist in the future. Wow! That sounds bleak, but it's true! Boards get focused on the near-term issues of running a water system and often forget to look to the future. Then they can get blind-sided by large-scale, long-term problems that could have been addressed when they were not urgent but are now critical situations. And those situations can have a cascading effect that leads to overall failure of the system and a forced merger or third party operations.

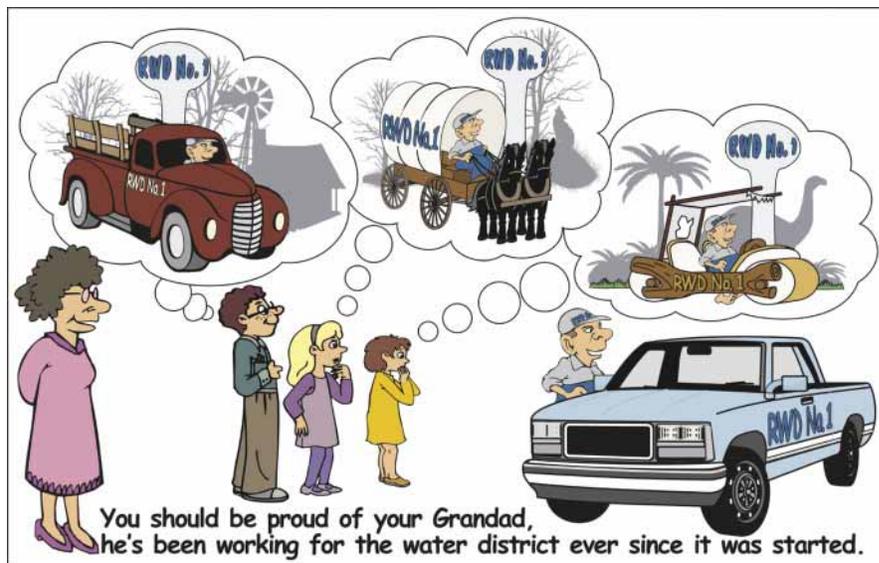
There is an underlying reason that for-profit water companies see public water systems as easy targets. Water systems don't have the same organizational rigor and self-examination as for-profit water companies do. So we are going to walk through five key topics that should be addressed by every

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water system and can help you focus on the long-term. Ideally, a board should have an annual retreat or a working group where no business is voted on. Instead, these topics are kicked around, and possible action items are developed for formal discussion in a regular meeting. However, for smaller systems, this can be tough to accomplish. Everyone on the board is a volunteer and adding more meetings to the roster is not always possible.

Instead, why not take 15 minutes at the end of each regular board meeting and kick around one of these topics? It will keep them in the front of your mind and help you keep one foot in the future and one foot in the present. As the saying goes, "Live for today, but plan for tomorrow." Here is a shorthand way of thinking about this. I call it **CROPS**: Compliance, Revenue, Operations, Projects, Services.

■ **Compliance.** Compliance describes all the water quality issues that a water system must address to provide safe drinking water. The EPA has set legal limits for more than 90 contaminants in drinking water. These include arsenic, lead /copper, coliform, disinfection byproducts, etc. Water system staff know this because compliance requires constant sampling, testing and tracking. The water quality results are reported annually via a consumer confidence report. The problem is that these are immediate actions; the long-term compliance goalposts keep moving. The EPA has a list of unregulated contaminants; the agency constantly collects data for contaminants that do not have health-based standards under the Safe Drinking Water Act. The agency could initiate a rule-making process to develop a drinking-water standard for one of the new contaminants. If so, that will probably impact your system as an unfunded mandate, as in there is a new regulatory requirement but no money provided to meet that requirement. PFAS is the latest and greatest contaminant to make the list, with pending federal legislation in the works. For the future, it is imperative to stay abreast of emerging water quality standards and to have some idea of how you would approach meeting them. Your National Rural Water and KRWA track the contaminant legislation



development process and the information is readily available online. The key is to look ahead and think long-term. PFAS, for example, is found in fire-fighting foam commonly used at airports. A water system with wells or surface water sources near an airport, military base, or other industrial areas should be aware of the possibility that PFAS may be regulated and have discussions about how it could impact the system. What if you have a single source of water? A small water system in Maryland ended up having to choose between drilling a new well or building an interconnect and buying water from a nearby town when



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What's the future hold for your system?

CROPS (Compliance, Revenue, Operations and Projects) is supposed to stimulate you to take a large-scale look at your water system's future. It seems daunting, but it is designed to help you focus on discussion areas so that you can eat the elephant one bite at a time. Just start by taking a few minutes at the end of your monthly meetings and asking "what if" questions. Maybe a few board members will be willing to serve on a working group and chat about these topics. The reality is that if you do not think about the future of your water system NOW, then there may not be a water system that exists in the future.

arsenic levels became too high. It would help if you had discussions with your operators and others about what your system might have to do to comply with future compliance requirements. Will you have to buy new equipment? Drill a new well? Blend water sources? Should you set up reserve funds for these types of projects? Explore loans and grants? Compliance is expensive. But it would be best if you had some idea of what is less expensive – redundancy or treatment.

■ **Revenue.** Rates x number of customers = revenue. Without revenue,

you cannot provide water to customers. This is why the USDA awarded loans and grants in the very beginning to set up rural water systems. Without this additional "revenue" in the form of subsidies, there was no way to build the systems because the limited number of customers could not support the debt load. But what happens if you lose customers over time? You have to dive into your customer data and identify trends that will impact revenue. Remember, rural water systems are SIPS – single interest political subdivisions. You have only one revenue stream and that comes from selling water to customers. So you have to keep an eye on all the factors in your community that can impact your customer base. Do you know how many customers you currently have and whether your customer base is increasing? Decreasing? Has a large local employer left the area? Will people move away to find new jobs? Then you will lose customers and revenue will decline. Are customers unable to pay their water bill due to the COVID pandemic?

Do you know how many customers you currently have and whether your customer base is increasing?

Do you have a plan to address that? A downturn in revenue may not be a problem for a large utility that has reserve funds set aside, but it could become a huge problem for a small system without adequate reserve funds. A small Missouri water system was so impacted by the decline in population, and subsequent customer loss, that it ended up having to turn to the MRWA and ask for emergency operations support because it had no money to pay

its employees. Are you also analyzing your rates? I believe that every utility should analyze its rates annually. I didn't say raise them annually. I said analyze them – and compare them to your revenue trends. You should not just be breaking even on your financials. You should be charging enough for water service to cover any outstanding debt repayment, the ongoing operations and O/M and still set aside reserve funds. There are hard questions to be asked. If you have lost customers, do you increase rates? What will be the tipping point – the point at which you no longer have enough customers to operate a water system viably. If you are not asking the hard questions, you may not be around in 20, 30, or 40 years.

■ **Operations.** Do you know where every foot of pipe that has ever been installed in your system is located – or even what the district's boundaries are? Do you know what size the pipes are? Where all the service connections are located? In other words, do you have a comprehensive system map? Not just what your operator and two of the original board members remember. Not just the final drawings from the last new line you had installed taped up on the office wall next to the

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original layout of the system from 1978 with additions marked by hand. How about updated bylaws, customer agreements, loan documents, billing software, rate schedules, policies/procedures? Do you have customer lists both hard copy and digital? If you do not have updated, hard copies of these types of operations documents, plus a backup electronic copy, you really have no idea of how your system is being operated. You may be getting by day-to-day, and you may not have run into an operational crisis like a cyber-attack, natural disaster, or loss of a manager/operator, but your system is fragile and may not stand the test of time. One easy test is to ask yourself whether or not a trained operator with no knowledge of your system could walk into your office and manage operations based on the documents you currently have. If the answer is no, then you have not been doing a good job of maintaining the system's operational infrastructure. This tells me that you probably don't know how many new customers you had last year either, how much payroll is or can easily pinpoint your revenue. This is not as far-fetched as it seems.

I worked with a small water system with four employees: one office person, a manager/operator, and two other field guys. Sadly, the manager had a heart attack and was critically ill for many weeks. Even sadder was the reality that no one really knew how anything worked. The manager from a neighboring system offered to help out but without consolidated, updated operational documents it was challenging for him to step in let alone figure out where the pipes in the ground were located. The office manager had never sent bills out without help from the manager because there was no single unified customer list. The payroll checks had to be signed by the old manager and a previous board member because the bank account signature cards weren't updated. This water system was running fine day-to-day as long as nothing upset the apple cart, but once there was an operational hiccup, it was clear this water system had some underlying issues. Guess what? After limping along for months, the board was exhausted and accepted an offer from a for-profit water company to handle operations. The for-profit water company quickly raised rates, replaced the remaining employees with its own people and started updating all the operational systems. That was the first step towards selling the entire system to them, which happened a few years later after the board had effectively lost control of the system.

■ **Projects.** You may think that you always have projects – but this is a shorthand way of distinguishing immediate O/M projects versus long-term system upgrades or expansions. This is one of the key items that will guarantee that your system lasts "forever," and it is the driver behind your long-term plan. Ideally, after you have addressed Compliance, Revenue and

Operations issues, you would develop the five- or ten-year plan that addresses long term problems. Suppose you know that growth is occurring in a section of your water system or that there have always been water pressure issues in an area or that future water quality compliance mandates will require system upgrades. In that case, it's time to start long-term project planning. It would help if you had an idea of what kinds of major future system upgrades/expansions would need to occur for your system to continue to serve customers. Think of it as a wish list. What would you do to improve your system infrastructure if you had unlimited funds? Once you have identified these projects, you need to develop a timeline or POAM (Plan of Action and Milestones). This is a high-level concept planning document but it will help you identify apparent constraints such as

funding, rate increases, bond elections, engineering studies. It is not written in stone but instead, it is more of a flexible guidance document. Or a reminder that you've just installed a new pump but you can

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expect it to reach the end of its useful life in X years. Or that there is a rumor that a Walmart distribution center may be built, and that will drive up your customer base. Are you prepared, or do you need to consider extending or upgrading a service line? I have even seen water systems just throw ideas up on a whiteboard and take a picture of it. Then if you learn that for example, there is a grant program or funding for small system engineering studies, and you have in the back of your mind that you need to consider an upgrade or expansion, it might make sense to apply for that funding. This is the perfect topic for a discussion at the end of a board meeting.

■ **Services.** We have discussed that water systems do one thing – supply drinking water. But part of your long-term survival plan should include exploring additional ways to provide that service. After you have explored the topics under Compliance, Revenue, Operations and Projects, the final step is to explore long-term collaboration with similarly situated systems or towns. The cost of operating a water system never decreases. Get creative. This requires some outside-of-the-box thinking. What if you could share a billing system or an employee with a neighboring town or adjoining system? Or pay them to do your billing and save

on the cost of a billing clerk. What if you needed a part-time employee and another system needed a part-time employee? Then maybe you could share a full-time equivalent employee. What if you could share the cost of office space or a piece of equipment with another system? Should you explore an emergency interconnect with a town near you? I know one water system that shared the expense of a new well with another system. Another system shared a backhoe.

■ Territorial disputes also do not happen overnight. Before you run pipes into an area that common sense tells you might be a point of contention in the future, should you reach out to the town and discuss the service needs of the area well in advance of having a dispute? No one ever wants to think about giving up autonomy, but what if your customer base is declining and you are facing significant system upgrades that down the road would require rate increases beyond what your customers can afford. Should you start discussing a merger or dissolution? What would that look like? Who could likely partners be? How would it impact your customers? These types of long-term issues will ultimately become critical problems and will ultimately determine whether or not your water system survives the test of time.

What if you could share the cost of office space or a piece of equipment with another system?

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