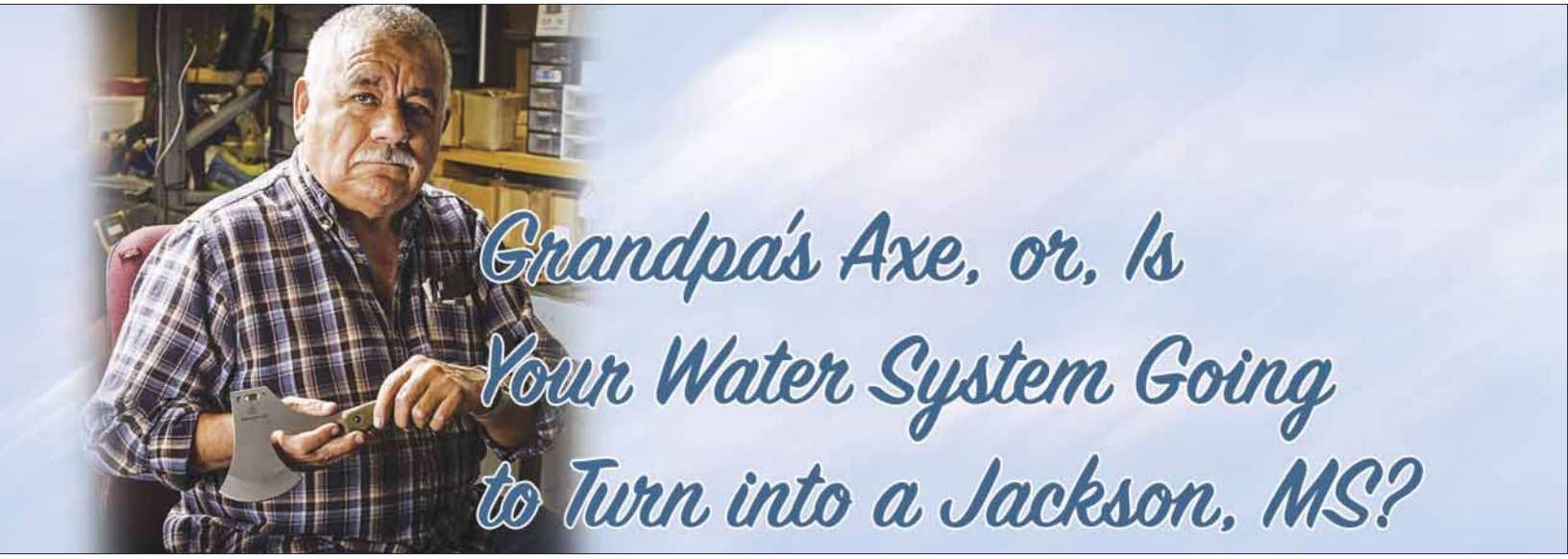
By Elizabeth Dietzmann, JD



Grandpa's Axe, or, Is Your Water System Going to Turn into a Jackson, MS?

Have you ever heard the old riddle about Grandpa's Axe? The one where a man proudly proclaims, "This was my grandfather's axe. Of course, through the years it has required some repairs. My father had to replace the handle and I had to replace the head." The riddle is: once all the parts are replaced, is it really the same axe? Or is it a whole new axe?

I have always thought that the more important question is whether or not you can still chop wood? But I am convinced that plenty of RWDs must be afraid of losing "Grandpa's Axe" by updating their system, because they pride themselves on NOT raising rates, only replacing equipment when it is beyond the point of repair, and not borrowing any money after their initial RWD loan is paid off. This type of RWD thinks that this is good, conservative fiscal management. However, keeping a RWD frozen in time is NOT good management even though it seems safe and conscientious. Do you know the best time to plan on replacing a brand-new well pump? Right after you install it. Do you know the best time to plan your next rate increase? Right after you raise rates. A RWD cannot just maintain the status quo and delay repairs for as long as possible and hope to continue to exist indefinitely. Management through deferred maintenance is what the City of Jackson, MS, the capital city, was forced to do for many years and it turned out to be a disaster. A "call the White House, bring in FEMA, start hauling water" disaster.

If a RWD wants to keep existing into the future, after its first "cycle" of the useful life of its components, then it should constantly be raising rates and replacing infrastructure and doing all of that pursuant to a long-term plan. That plan should list key system components and identify funding options. This plan and the steps that it will take to accomplish it should be a topic of discussion at every board meeting. And sadly, at most meetings, it doesn't even get discussed at all. The reality is that if you plan on providing drinking water to future generations, every part of your system will eventually have to be replaced – just like Grandpa's Axe.

Larger systems in Kansas seem to have a better grip on sustainability. Wichita is in the middle of building a new water treatment facility that will replace its 80-year-old plant, which still functions. "The expectation is for Wichita to be ahead of the curve when it comes to replacing infrastructure before that infrastructure causes deeper problems," Mayor Brandon Whipple said in an interview with KAKE in August 2022, "We have to do our part as the city to make sure that we're doing our job, which is the basics," Whipple said. He added, "That's community safety, that's infrastructure, that's a water plant, and that's making sure that people have clean drinking water moving forward." According to the city, the old water treatment facility's future is unknown. Once the new plant is completed the old plant could potentially shut down or serve as a backup.

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and this was reinforced by the policy behind initial USDA loans from 50-plus years ago, which only addressed existing needs at the time. The good news is that state and federal funding perspectives have changed since then and even small systems can take small steps towards sustainability. State and federal agencies acknowledge that original systems are nearing the end of their useful life and "sustainability" is the ideal management policy. This means that a loan for the purpose of repairing/upgrading system components is considered good management. Your mission statement is probably something like: "providing safe, high-quality drinking water". Instead, it should be "providing safe, high-quality drinking water now and in the future."

So how do you go about accomplishing this? There are a few interconnected steps that you can take to make sure that your RWD will be around to provide drinking water in another 50 years. Basically, it starts with figuring out what parts of your system to replace, when to do it, and how to find the money to do it.

A long-term plan or what to fix and when

Repair versus replace. That is a good way to think about the mindset needed for a long-term plan. Most RWDs do not have a long-term plan. Instead, they are good at setting aside money for short-term repairs, which are dealt with on an ad hoc basis. It is much more likely to see a RWD repair waterline leaks as they happen rather than see one replace an entire section of the waterline before leaks start appearing. But to many RWDs, a long-term plan is perceived as something that you have to hire an engineer to prepare and that you have to have additional money to implement. The reality is that you do not necessarily have to hire an engineer in order to prepare a long-term plan. You already have most of the information that you need in order to start the process and gathering that information is the first step in figuring out how to fund long-term replacements.

Plus, there are lots of online resources from the EPA, KRWA and USDA, to name a few, that outline the elements of long-term infrastructure planning. You can also look to other larger water systems and review their existing long-term plans. Common sense will get you a long way towards figuring out what you will need to replace in the long term in order to exist in the future. You do not need a fancy binder with glossy maps but your goal should be to identify the key components of your water system, your best guess on when you need to place them, and what it could cost. In fancy terms, your goal is to create a complete and organized inventory of your current system components, life expectancy (condition, age), and replacement cost estimates. Once you know this, you can start with identifying priorities

for system improvements to aid in the allocation of available funds.

The reality is that you can gather the information piece by piece and you can also start long-term improvements one by one. Creating an inventory for a RWD is not complicated. If you look at the frequency and cause of repeat maintenance problems, you can track what you are maintaining and which components are causing the most problems. Those are probably your best candidates for replacement and should rank highest on your capital replacement priority list. Those will be the items that you focus on when you have available funds. A typical water system has a distribution system, wells and pumps, storage and water treatment equipment. Whatever you are currently repairing will have to be replaced someday. Remember, eventually, you will have to replace all the parts of "Grandpa's Axe" if you are going to continue to exist. But funding small annual capital projects that are beyond routine maintenance is a great way to chip away at the process. Replacing every part of your entire water system, which is basically what Jackson, MS now faces, sounds overwhelming – and it is. But remember how you eat an elephant. One bite at a time. So identifying items that can be replaced before they become critical failures and saving money for a single project will start you down that path.

Creating an inventory for a RWD is not complicated.

One interesting approach is for the water system board to do an imagination session. Ask each board member to imagine what part of the system they would replace if they were given a blank check. It is highly likely that the same few projects will get mentioned by everyone, so that is a great place to focus. Another way to approach this issue is to look at how the Department of Defense (DOD) handles it. Due to the timing of the budget process for military installation repairs, it can take three to five years before funding is available from Congress for large-scale capital improvement projects. However, the bases have to keep up with short-term repairs, so they are allocated a set amount of money annually to use for ongoing repairs. But Congress also has each DOD branch submit a five-year Installation Priority List (IPL). This list captures all the large-scale infrastructure replacement projects that need to occur over a five-year period. As money becomes available, the projects are executed. That list is revisited every year so that shifting priorities can be addressed. You can follow the same sort of process on a much simpler level with a "repair versus replace" list. After enough repairs, you will find that it makes sense to move items over to the "replace" column as part of your long-term plan. In fact, I even know one RWD that treated their large replacement project like a United Way campaign. They kept the customers updated on how close they were to set aside enough funds to install a second well with a colored chart in the office. It served as a great reminder to the board to keep looking ahead.

Increase rates – or how to fund improvements?

Every RWD needs to do its customers a favor and raise rates. Your customers deserve it because they deserve clean drinking water. That is the whole reason the RWDs exist, right? If you do not raise rates, you will never be able to fund a long-term capital replacement plan and someday you will end up like Jackson, MS – unable to provide any drinking water to your customers. If you raise rates, you can do two things: a) build up reserve funds and use them to start replacing older parts of your system under your long-term plan, b) apply for Rural Development loans/grants or other funding options and expand to include new customers.

However, so many RWDs seem frozen in time and happy to stay that way. There is huge a misconception that just doing routine maintenance and small repairs are all that will ever be required, so boards don't look to the future and raise rates. Rates have three basic components: everyday operating costs, debt repayment, and long-term capital improvement. Once the initial USDA loan is paid off, and if no money is spent on long-term replacements,

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then a system like this will generate enough revenue to cover operating costs and there is no motivation to raise rates. This type of RWD proudly keeps rates unchanged. Time and time again I have listened to RWD board members argue against raising rates, as if raising rates somehow indicated a lack of fiscal frugality. The reality is that not raising rates is nothing to be proud of. You should be examining your rates every year and comparing your revenue to the amount left over after debt service and operations so that you can implement your long-term plan. Rate increases do not need to be huge. Just steady. Predictable, annual rate increases, tied to the cost of living increases or some other metric, allow customers to understand why rates are increasing and budget for them. The goal is to set rates that are consistent with community expectations. Municipal water systems often have ordinances in place for automatic rate increases tied to cost of living increases; private water systems routinely get state approval to enact annual rate increases. RWDs should be no different.

So assuming that a RWD can get past that reflexive barrier against raising rates, the increased revenue can be used to implement the system improvements listed in the long-term plan. The additional advantage of raising rates is that keeping rates current is a key part of applying for Rural Development loans/grants. RD loans can be used to expand to include new customers and more customers means a larger rate base. Borrowing money in order to expand a system is definitely not the norm for most RWDs. They pride themselves on paying off their original loan, keeping rates low, and not expanding in order to serve new customers. The logic seems to be that it's not fair to existing customers to raise rates in order to borrow money and expand in order to serve new customers because those new customers get to piggyback on the old system. A better way to think about it is to remember how RWDs were formed. EVERYONE was a new customer and those original rates were subsidized by grants. New RD loans will probably have a grant component as well, so the burden of higher rates will also be subsidized to some extent. If it doesn't seem fair to ask "original" customers to borrow money in order to serve "new" customers, a RWD could set a surcharge for customers located in an expanded service area and earmark that revenue for the payment of a new loan. Basically, you could bundle those expanded customers and charge them a different rate, so that "original" customers would not pay for the expansion. Private water companies routinely do this when they are expanding into new phases of a subdivision or neighborhood.

Funding day-to-day operations is not enough for a water system to continue into the future. Every system component will eventually wear out and have to be replaced. Tracking those replacements and keeping rates high enough to fund those replacements is the only way that a RWD will exist 50 years from now. That is the hidden wisdom from "Grandpa's Axe'. It is NOT whether or not it is the same axe after all those replacements, but whether or not you can still use it to chop wood.

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