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Spring 2024- Issue 133

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The Association

Wyoming Association of Rural Water Systems is a non-profit association that provides on-site, one-on-one technical assistance and training to small municipalities under 10,000 population and all water and wastewater systems throughout the state. Equal Opportunity Provider.

Cover Photo – Crow Reservoir between Cheyenne and Laramie. Photo by Mark Court

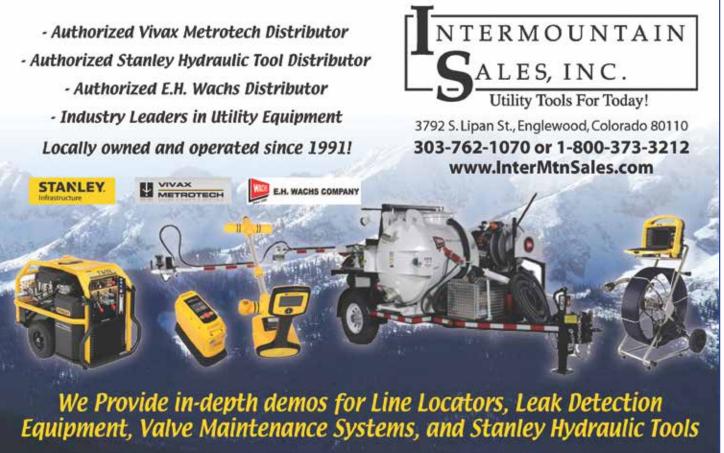


WARWS' Mission:

To provide the assistance necessary to meet the needs of our membership and to ensure the protection of Wyoming's water ~ our most precious resource.









Spring Thoughts – or Random Thoughts of an Aging ED

As you read this, our 33rd Annual Spring Training Conference and Industry Trade Show will be in the books. The numbers are impressive. 2,681 individual training records from 247 licensed water and wastewater operators representing over 6,000 man hours of continuing education training received. 60 industry exhibitors so that you all can see all the new products and services to help you maintain your system and comply with the Safe Drinking Water Act, the Clean Water Act, and the myriad of rules and regulations promulgated to enact those federal laws.

Your association decided years ago that we would bring the regulators or other agencies that affect your daily routine and or operations directly to you, no getting info second hand from someone who "interprets" the regs, rules or laws. During this conference, you heard directly from EPA, DEQ, SLIB, USDA, FBI, WOHS, CISA, NRCS, Wyoming Climate Office, NOAA and Wyoming Workers Comp. These agencies presented information to you on the actual regulations, rules and information that you need to know. If you hear differently from someone about "what they heard", well..... In addition to hearing from the horse's mouth, you have their direct email and phone numbers to ask follow up questions and get answers from those who know.

We make every effort to build in time for you to ask questions of the exhibitors or each other. Those times are really where you learn. Many of you may not know that I did not come from a water system background. My background is governmental accounting, auditing, agricultural and food processing as well as high tech commercialization and venture capital consulting.

While a couple of those stops prior to Rural Water had heavy water components, I can honestly say that everything I have learned about this industry has come from you, the operators. Being able to understand your issues through conversations and tours has allowed me to make sense of the rules, regulations and legislation that affect you and or proposed rules, regulations and legislation that might affect you if I don't do my job.

Many new federal regulations are coming or are in effect, the lead line inventory requirement, PFAS and others. A few state laws will go into effect on July 1 and the legislative interim committee season is underway. A few items may come from these committee meetings and your association staff and federal association staff are attending, monitoring and participating in these meetings.

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The objective is to fill in the empty squares so each row, each column, and each 3x3 block contains the numbers 1-9 with no repeats.

Hope you had a good conference and will have a good summer. If you need anything, just give us a call or feel free to ask any field staff members when they visit your system! Mr. P.

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Spring 2024

Building Capacity One Block at a Time

Our 33rd Annual Spring Training Conference held April 16th-19th was successful by all measures. Thank you to all involved. The theme of Capacity Development held up with cyber, funding, aging infrastructure replacement and lab work. Let's just say the info was current!!

Attendance was up significantly from the COVID years. We had over 250 registered along with a sold-out exhibitor area with 60 exhibitors. The Ramkota did a remarkable job as always. The classes, I believe, made this one of our best conferences since I have been around. Casper also performed pretty well I hear. I was almost sorry that I had to herd people back to class as the networking and visiting was quite evident, we were enjoying being OUT in force again!!!

I hope you all feel that you received full value for your registration dollar. The classes were outstanding, currently topical and useful in this environment. A member from the staffs of our three of our Congressional Delegation attended and participated in several sessions and the taste test. Our Congressional Delegation is strong, engaged, educated on industry issues and I am very glad to work with them and their staff.

All things cyber included EPA, CISA, Wyoming Office of Homeland Security, the FBI, Au2mation, SannerIT. Hopefully we all know who to call when we need help with cyber, physical, OT or IT help. Elected official training, a full day of rate structuring and asset management and all that was the pre-conference!! Of course, the EPA discussed PFAS, lead line inventories, ERP updates, who can forget Rod Miller and the political extreme pendulum and a full afternoon of where to find the money from SLIB and USDA. Yellowstone National Park gave us a master class in how to recover from a disaster.

120Water presented their services to get the lead line inventories done and HDR Engineering presented resources available from the State of Wyoming to assist you in completing this requirement. All of our water systems should know what they need to get done and who to call to complete the requirement and file by October 16.

The Energy Lab tour, leak detection, hydrants, sludge profiling, SCADA, Hydro generation, NOAA resources, case studies, line locates, USGS resources, source water planning, climate updates, make Glendo Great, solid waste updates and the ever popular Operator Roundtables!! We had it all for you.

We also had a great Best Tasting Drinking Water in Wyoming contest and one of the closest. Grand Targhee Resort made another visit to the finals (12th) while The Town of Ten Sleep made its 4th trip to the finals, The Town of Cowley made its 2nd, and the City of Rawlins made its 3rd trip. Congratulations to Grand Targhee Resort for their 3rd win

in 16 years. I look forward to the trip to Washington, DC in February 2025 to watch Grand Targhee Resort compete in the Great American Taste Test. A reminder that The Town of Saratoga made it to the National Finals this past February and finished in the Top 5.

Again, Thank you too all. Hope you enjoyed your week and even learned something. See you at one of the "mini conferences", virtual trainings or next year for our 34th Spring Training Conference scheduled for April 2025. Mr. P.



Ms. Ally Garner, Casper Field Staff for US Sen. Cynthia Lummis joined by Ms. Erica Wenzel, Lead and Copper Rule support with Region 8 US EPA; Mikki Munson, Cyber Security Analyst stationed in Wyoming with the US Cyber Infrastructure Security Agency (CISA) and Mr. Tom Goulette, City Administrator for the City of West Point, Nebraska, President of Nebraska Rural Water Association and member of the Executive Board of National Rural Water Association.



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Illogical Reasoning

It's that time of year again... snow is melting, rivers are thawing, and salespeople are beginning to travel. Budgets are being developed, reviewed, and set, so these folks know that it is imperative that they get out and meet potential clientele before the decision makers set a budget that doesn't allow for additional spending.

Don't get me wrong. We have some phenomenal vendors in Wyoming, and they are great at bringing systems the products and technologies that we need to get the job done. They are a valuable part of our industry, and this is in no way about them. This is about those... other... vendors. The ones who have products that appear to be silver bullets, turn septic waste into sparking rainbows and generally create world peace. Many of these vendors use arguments that sound so convincing, but when we begin to dive a bit deeper, the argument just isn't logical, or the data just doesn't give the results that they are showing. Vendors aren't the only folks to use poor logic. It could be members of the public, decision makers, or politicians. Some people say that if anything sounds too good to be true, you should shoot it in the foot and find out if it's really that great. Don't do that. Instead, here's a list of illogical arguments, what they look like, why they don't hold water, and better ways to argue your point (should you be trying to convince a decision maker to increase your budget, rate structure or make other changes).

Ad Hominem

This happens when the person who is presenting the idea is attacked, not the idea. Remember, humans aren't necessarily bad, even though they come up with some pretty terrible ideas. Conversely, just because the person is "good" doesn't mean all their ideas are good. The idea should stand on its own, regardless of who is bringing it up. Finally, if somebody must resort to attacking the person, but leaves the idea alone, that may mean that the idea isn't the worst one and could be worth a closer look. Keep this in mind, especially when dealing with members of the public.

Appeal to Authority

Ah, the interwebs has given us so many examples of this. Just because somebody is an expert in a particular subject, doesn't make them an expert in everything. While I would trust a sports dietician to give me a nutrition plan on a race, I am going to take any recommendations they give me about drinking water quality with a heavy grain of salt and some third-party research. Don't be fooled by the shiny letters behind someone's name. Check to see what those letters mean, and if those letters contribute to the validity of their position. (Doctorates in physiology do not make good ecologists)

Appeal to Ignorance

This fallacy relies on just because the fact that it hasn't been proven, therefore it could be true. This leaves any scenario as a plausible possibility. "We don't have water quality issues, nobody has died." "Try (magical product); there's nothing to say that it won't help!" When faced with arguments of this ilk, ask yourself, "Has there been adequate testing?" "Am I using this product in lieu of basic maintenance/training/activities?" If the product is provided by a reputable company, they will be able to supply data that is statistically meaningful, not just some emotionally riveting anecdotes.

Bandwagon Appeal

How many times have we heard, "If everyone jumped off a cliff, would you?" (I don't know, is there a river or large body of water below and it's 90 degrees outside? Then maybe?) Water sports aside, just because there is a majority of the populace doing something, or making decisions a certain way, doesn't mean it is correct. Remember big, ratted out, over hair sprayed bangs? Sometimes we make decisions we'd like to be forgiven for later. Do your own research of credible sources, make your own decisions, and stick to them.

Correlation vs Causation

Just because two or more things happen at the same time, does not mean that one causes the other. For example, just because a customer smells a rotten egg odor when she turns on her hot water doesn't mean that the water supplied from the town is bad. It could mean that the hot water heater needs flushed, the p-trap on the sink needs cleaned, or the plumbing venting is needing repaired. Or it could be an issue with stale water from the distribution system, but you won't know until you do the leg work to figure it out. Be very careful with this line of reasoning and make sure you have an adequate amount of data to back it up.

Generalization

This variety of poor logic occurs when a conclusion is reached with insufficient research or data. It states that because a statement is true about a small (maybe one) portion of a group, it must be true for the entire group. This argument is often used in conjunction with the ad hominem fallacy. Examples of this includes "All operators are lazy" or "All engineers design floor drains that don't work." Oh wait... These are just some examples of poor logic. You can identify poor logic by carefully reviewing a statement or position and asking questions.

Look at both sides of the statement, both the premise and the conclusion. Have all possible conclusions been considered? Is a specific position being carefully excluded? Is there adequate evidence that supports the conclusion? Is the evidence provided by a credible source? Is there a reasonable connection between the premise, evidence, and conclusion? This is a difficult, time-consuming process. Even if it irritates your customers or decision makers tell them, "Thank you. I will research the problem fully and return with some possible solutions." It will deliver the best possible outcome for you and your system.



Taking the Dys out of Dysfunction

I can count on one hand the systems that I have visited this year that I have not heard issues of dysfunction with their board and councils. To be fair, these people, for the most part, are volunteers. Many of them have full time jobs and are serving because they truly care about their community. Others have specific issues that they would like resolved.

The most often displayed dysfunction amongst boards is poor communication. This should come as no surprise since communication seems to be the weakest leak in all of our human interactions. A lack of open and transparent communication can lead to misunderstandings and conflicts. Ineffective communication also may hinder the flow of information between members. Don't forget that communication requires listening and actually hearing what others are saying. Too often we listen without hearing.

Lack of Trust can stop effective collaboration in its tracks. If members do not trust each other or their staff, it can lead to breakdown in teamwork and decision-making.

Personal agendas and hidden motives can erode trust within the group. This goes both ways. Your decision-makers will not trust you if they believe you have an agenda that goes beyond operating the best water and wastewater system you possibly can.

Inadequate Leadership can contribute to dysfunction. Leaders need to have a clear vision of where they want the system to be moving towards. The effective leader will guide staff and other decision-makers to milestones along the path of where they want the system to be in the future.

Effective leaders also address conflicts, not hide from them. Conflict is a part of life and if handled well can be a way of moving the system forward. Leaders who try to take the path of least resistance or ignore conflict altogether do so at their own peril and the peril of the system.

Personal or professional conflicts of interest among members can lead to biased decision making and undermine the overall integrity of the board and the public's perception of the system.

In very small towns, conflicts of interest are difficult to avoid. Transparency is the key. The conflict should be openly addressed, and board members may have to recuse themselves from making decisions about matters where the conflict exists.

We have all been to Unproductive Meetings and these meetings can make any board dysfunctional. Having the shortest meeting on record should not be the goal. Meetings should have structure, clear objectives, and meaningful discussion. It is not a healthy plan and can lead to group think and poor decision-making.

Sometimes boards and councils are dysfunctional because they have an inadequate skill set. It really is difficult to know what you don't know. Not knowing how a system should work makes it difficult to make informed decisions.

Too often board and council members will be unwilling to get training, whether because of time constraints or because they believe they know everything they need to know. As an operator, you are required to get 24 hours of training every three years for every license that you hold. Unfortunately, even though the board or council is the owner of the system, they are not required to get that sort of training. They do have to get six hours of financial training to meet Wyoming 3735813677 Department of Audit Requirements. The more diverse in skills and background the council or board is, the better decisions they will be able to make.

Change is hard, but a board or council that is resistant to change, keeps a system doing the same old thing even when it isn't working. Some of these new ideas and technologies can not only make the system more efficient, they can save you money. That is one of the important things about attending conferences. You get to hear and see the newest ideas and find out about equipment that may not have even existed 5 years ago. Fear of change or a rigid organizational structure can stifle innovation.

Ineffective Conflict Resolution can lead to long-lasting dysfunction. Ignoring or denial is not a good way of managing conflict. There needs to be effective mechanisms for resolving issues between board and council members, staff or even those we serve.

Lack of Accountability can lead to decisions and actions that are not in the best interest of the system. Everybody makes mistakes. Admit them, regroup, and move on. However, being accountable means everybody plays by the same rules and takes responsibility for their actions.

Addressing dysfunction with boards and councils requires a combination of strong leadership, open communication, conflict resolution skills and a commitment to the system's mission and values.

The hardest part of all of this is that often-dysfunctional board and councils do not know that they are dysfunctional. The easy part is that you have Wyoming Rural Water. If you think your board or council is dysfunctional, give us a call. We can help. We have training that we can provide to get clear objectives and priorities established and everybody rowing in the same direction. Don't give up. Give us a call.



About the Program

This program provides funding for clean and reliable drinking water systems, sanitary sewage disposal, sanitary solid waste disposal, and storm water drainage to households and businesses in eligible rural areas.

Funding

Long-term, low-interest loan funding is available. If funds are available, a grant may be combined with a loan if necessary to keep user costs reasonable.



USE YOUR FUNDS TO FINANCE THE ACQUISTION, CONSTRUCTION, OR IMPROVEMENT OF:

- Drinking water sourcing, treatment, storage, and distribution
- Sewer collection, transmission, treatment, and disposal
- Solid waste collection, disposal, and closure
- Storm water collection, transmission, and disposal
- Other related activities such as permits and legal fees





Scan the QR code to view more information and start your application.



rick.nansen@warws.com 307-251-2803

The View From Here

As the snow melts and the mud bloom begins... the projects we've saved for spring are now come due.

As we've gotten through routine operations and the ongoing service line inventory haunts our daily dreams, we move forth. Now that things will begin drying up and we can see what we're up to, the process of prioritization begins. Whether it's a funding issue, parts, or just waiting on regulatory entities to make final determinations, we're ready for the most part, to begin the active construction season. For some, the long-awaited process upgrades, for others, just routine maintenance and those wants and wishes rearing their heads again. Summer begins.

First off, let me make a mention here, of the next projected deadline for the service line inventory program... 2027 ... dealing with connectors on service lines. Let me step back and say, currently, connections are on the requested inventory platforms...but not necessarily required at this time. This same information will be required by 2027, per the guidelines.

Simply put, get ahead of the game and make sure you include it now, then you're on top of it. Any lead and/or copper in these connections will have to be identified and/or replaced where found. And, like the service line itself, if even suspected, they must be replaced in time. So, include them now, and you'll be ready for the 2027 deadline.

And don't forget to keep an eye on the ever changing/updated Lead and Copper Rule... I swear that changes weekly and will affect many systems with repeated testing and even more concise reporting. So, monitor that closely. And stay alert for any updates to the Service Line Replacement program. Every system in the country is doing this, so you are not unique or alone in struggling through as we get it done.

Systems are at many different levels of completion...from having it done and submitted, to not even started...it's time to get moving towards the October 16, 2024, deadline. Resources are available through EPA, DEQ, WARWS and many other programs, but the main thing is doing it. It's a basic inventory of your system, with notations on the service line at each hookup. Not that difficult once you get past the start.

Many systems have taken advantage and added GIS and other components to their programs. Often, it falls under the description of financial assistance to help pull it off, but you won't know what you're eligible for until you apply...

and many of these are on the waning side of completion/acceptance on assistance. You'll find most of what you need right in your own system...clerks, secretaries, the old timers' brain...much is already known, you must get it in the proper template and get it going. The age of construction helps by knowing anything past /since 1986 was required to be lead and copper free. And let's not forget PFAS...more to come there as well. Treatment solutions are in their infancy.

As I travel around the state, I look for those needing assistance, trends, training needs... and in general, find most systems up to speed. Just to share, many are networking and combining needs and resources when it comes to training. Working with those of like needs in your area can solve the problem of having to travel and spend the night elsewhere. This has always prevented many systems from getting the CEU's they need for staff.

Besides working together regionally and locally, many are finding the CEU's they need through mutual cooperation. By bringing a trainer in, and sharing associated costs, systems are pooling their resources and putting on their own classes. Many suppliers can assist her as well. And don't forget, WARWS's own Kathy W. tries to put on Mini conferences throughout the year, in addition to the annual conference. Next one in July in Kemmerer. Check our webpage for any and all updates regarding training.

Sanitary Surveys are another common issue. As EPA is undergoing review of its Sanitary Surveys taken, they send out an Administrative Order or similar to advise of significant deficiencies needing attention. This is most easily answered by the simple evaluation and your response indicating what, when and how you will deal with them. Simply put, responding writing your intended timeframe and suggested fix. They, in turn, will respond as acceptable or give you additional information to help meet the end results or accept your solution in total. Its mostly about a timely response and corrective action intended, followed by a project timeline... Easy peasy. You can also respond with any questions. Just remember, writing to the requesting party will give you the best results.

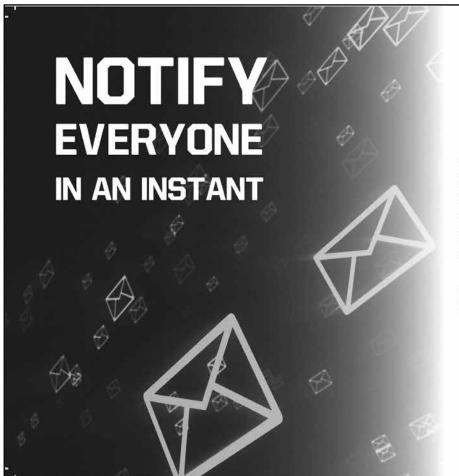


As with most of what we do, recording it, written responses and records must always be retained. The bulk of issues systems are having right now...not responding to authentic requests from primacy agencies (DEQ, EPA), in a timely manner. Once again, don't let it go. If you have questions, ask them, don't hold your response up. This is getting more systems in trouble than anything else.

Lastly, I'd just like to add, for those that haven't figured it out yet, its all about a written inventory. What you have on hand, what your system is ultimately worth. Once you have this, you can move forward with financial requests, grants, loans and have an overall bird's eye view of your system. Gone are the days of guessing. Today's bean counters require a thorough asset management program before you can even request an application. An IUP (Intended Use Plan) also requires a thorough review and transcribed version of these assets... you must show proven Capacity Development and the means to pay back borrowed funding. It also shows your net worth and a snapshot of just how effectively your system is being run, and the prospect for a viable future.

Maintaining staffing, recruitment. Ongoing training and supply and equipment needs... just some other considerations as we move into summer. Do it right, do it smart...and most importantly...have a great summer and enjoy Wyoming... Cheers...see you soon. Rick







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WHAT "STATE" ARE YOU IN?

Well, of course I know you are in wonderful Wyoming! What I am asking is what "state of mind" are you in as it applies to your water system position. In my short time as a Circuit Rider, I've traveled over seven thousand miles to over a hundred different water systems. During my brief visits, I have sensed a varied range of attitudes that operators have toward their responsibilities. The foremost of these responsibilities is safeguarding public health by ensuring that drinking water is safe for consumption.

I realize that every system is different, and each has its own unique treatment issues. That's why we have varying levels of certification and hopefully the competency to fulfill the responsibilities for that system. We will continue to have more stringent rules and regulations to protect our consumers. It does not matter that operators don't like the new regulations; they MUST adhere to them.

Let's go back to our state of mind or "attitude" towards our job-related responsibilities. Has your system received an administrative order or notice of significant deficiencies? If so, has there been any corrective action taken by you or your staff? Finally, is someone communicating with the regulatory authority concerning the matter? If not, there is an attitude problem. You should not ignore the issue at hand. I've seen heavy punitive fines administered and certificates rescinded due to such negative inactions.

Let's review a couple of workplace attitude issues. First, there's the disengaged employee who is unhappy at work and probably aware of problems in their system. This individual needs a positive change in their work environment or will continue to be unproductive and unhappy. Unfortunately, a career change may be the only answer for this dysfunctional attitude.

Maybe one of the most reoccurring attitudes is the complacent employee. This individual is content with the status quo. They are often comfortable and familiar with their duties. This then leads to shortcuts and poorer quality of work. Eventually, this behavior can lead to less than acceptable water quality in the system. Not only could there be poor water quality, but there is also a greater risk of workplace accidents. This is why complacency is often called the "silent killer" due to our minds not being on the task at hand or the hazards that exist. If there are leaders or supervisors that can review work performance, this problem could be curtailed before it has gone too far.

Unfortunately, in Wyoming, there are many systems that only have one operator with very little leadership or on-site supervision. This is the instance where I'm asking you as an operator to take a long hard look at yourself to see if you're doing your job to meet the standards that ensure public health and safety.

For all operators, there are resources that can assist you. Reach out to DEQ, EPA, WARWS, or MAP. We are available if you would just ask. As I recall, there were very few operators with questions when I stopped by. If one of our groups doesn't have an answer to your issue, I'm sure we can put our heads together to resolve a question or problem.

Many of you attend our conferences and there is always an abundance of information available. In some instances, it seems evident that much of this wealth of knowledge does NOT make it back to the workplace. Please take advantage of all your resources. The internet is a great source of information that is easily accessible. Just check out the training websites and you'll discover a world of articles or webinars that cover nearly every topic imaginable. Remember, you can get continuing education credits for many of these.

Remember that YOU have a vital role with public health and welfare. Hopefully, with a little more effort, we can all become part of the solution and not part of the problem.







The NRWA Rural Water Loan Fund (RWLF) is a funding program specifically designed to meet the unique needs of small water and wastewater utilities. The RWLF provides low-cost loans for short-term repair costs, small capital projects, or pre-development costs associated with larger projects. The RWLF was established through a grant from the USDA/RUS, and repaid funds used to replenish the fund and make new loans.

Reasons to apply

- Reasonable interest rates
- NRWA does not charge administrative or processing fees
- Straightforward application process
- Quick turnaround

Eligible Projects Include

- Pre-development (planning) costs for infrastructure projects
- Replacement equipment, system upgrades, maintenance and small capital projects
- Energy efficiency projects to lower costs and improve sustainability
- Disaster recovery or other emergency loans available

Contact your State Rural Water Association or National Rural Water Association for help with the application process.

For More Information:

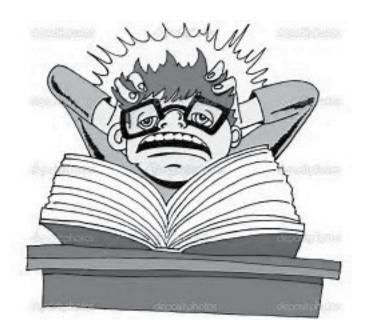
Applications, information and forms can be downloaded from the NRWA website, www.NRWA.org/loans.

Email applications to: nrwarwlf@nrwa.org

Or mail to: Rural Water Loan Funds 2915 South 13th Duncan, OK 73533







Operator's Corner

Water Questions by Michelle Christopher:

- 1. True or false? Vegetation surrounding reservoirs should be controlled to reduce the potential for organics and disinfection byproduct precursors.
 - a. True
 - b. False
- 2. Sludge dewatering may be accomplished by:
 - a. Cleaning the breakroom coffee pot.
 - b. Sand beds.
 - c. Reclamation basins.
 - d. Wash water basins.
- 3. The first layer of backfill compaction that is required for newly installed pipe should:
 - a. Cover the entire pipe.
 - b. Come up to the center line of the pipe.
 - c. Come up to 1" below the pipe.
 - d. Compaction is not necessary for newly installed pipe.
- 4. The lowest point of pressure in a centrifugal pump is:
 - a. At the discharge
 - b. At the intake
 - c. At the eye of the impeller
 - d. At the foot valve
- 5. A 50' diameter tank is being filled by a pump delivering 250 gpm. The usage from the tank is 150 gpm. How many hours will it take for the level of the water tank to reach the shutoff height of 28 feet if the pump turns on when the level of the tank is 20 feet?
 - a. 27.4 hrs
 - b. 32.6 hrs
 - c. 3.33 hrs
 - d. 2.45 hrs



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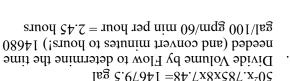
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Manager

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L. Determine the useful information. The height of the overflow is 28 feet, but the pump turns on at 20 feet. 28-20= 8 feet of water that needs to be filled. (Use this as the height). The pump is delivering 250 gpm, but the usage is 150 gpm, so 250-150= 100 gpm. (Use this for the flow).

Determine the volume of water that needs to be pumped. V=D²x.785xhx7.48 gal/cubic foot:

J. A 2.B 3.C 4.D

Water

Answers

Our Western Heritage

by Kathy Weinsaft

Bahhh

I have become obsessed with sheep. I have thought about these wooly creatures all winter.

While many think of Wyoming as cow country, our state has a long and colorful history with sheep. Sheep were first introduced to Wyoming in the 1840's by fur trappers and traders. The early pioneers brought small flocks with them as they settled in the region. Sheep ranching really took off in the late 1800's as more settlers moved into the area. The vast open range provided ample space for large herds to graze.

Ample space is relative. The sheep would hang out by the watering holes and eat the forage down to nothing. This resulted in the historical conflicts involving sheep ranchers and cattle ranchers, culminating in the Johnson County War which occurred in 1892. It was a range war involving conflicts between small ranchers, large cattle ranchers, and the Wyoming Stock Growers Association. The conflict ended in a standoff at the TA Ranch, and the intervention of the U.S. Cavalry. If you scratch a little under the surface there are still hard feelings amongst some sheep and cattle ranchers.

To minimize over grazing, sheep were driven along established trails, often covering long distances to reach different grazing areas or markets. The trails were essential for moving large flocks and avoiding overgrazing in specific regions. I have been lucky enough to encounter a couple of these drives while I was making my way across the state. The first one I saw was around Kemmer and it took my breath away. Once you see something like that you can't unsee it.

The sheep industry became a crucial component of Wyoming's economy. Wool production and meat provided economic stability to many communities, and the industry played a significant part in shaping the state's agricultural landscape.

It also brought the Basque to Wyoming with their unique culture. I had never heard of the Basque until I moved here. They are a Southwestern European ethnic group. They have their own unique language, a common culture and shared genetic ancestry to ancient Vascones and Aquitanians. They come from both Spain and France in areas bordering the Bay of Biscay and encompassing the western foothills of the Pyrenees Mountains. They know sheep! There are Basque festivals across Wyoming during the spring and summer months. They have dance exhibitions, music, sheep wagon parades and the one in Buffalo run the sheep through town the first morning of the event. It is an absolute sight to behold. Don't forget the food. Oh, my lord, the Basque cheese, burgundy and bread is just good beyond description. The Basque aren't the only ones celebrating. There are a couple of Wool and Sheep festivals throughout the state. A

fairly new one is the Wyoming Sheep and Wool Festival. It moves around the state. Last year it was in Kemmer and this year it will be in Thermopolis July 12-14th. They have live music, sheep trail tours, vendors, lamb dinners and classes for everyone. It is a blast, and it is free.

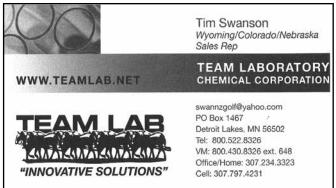
My own hometown of Glenrock has a Sheep Herders Rendezvous every year and I wouldn't miss it for anything. The Rendezvous has traditional sheep wagons on display, Dutch oven cooking, blacksmithing, wool spinning and weaving demonstrations, vendors and Sheep Dog Trials.

The Sheep Dog trials are my favorite. Dogs navigate sheep through the trial course with commands from the sheepherder during their run. They are judged on both their technique and time. It really is a team sport between the dog, the herder, and the sheep. Some of those sheep are just downright ornery. Kaycee, Wyoming also hosts a dog trial and sheep festival towards the end of summer, and they do it up right. Along with the trials they have a lamb barbeque, sheep shearing contest, street dance and other events.

The sheep industry is part of our western heritage. Get out there and celebrate it.

It is, after all, part of our Western Heritage







Scrawny Girl's Croissants

by Michelle Christopher

During the colder portions of the year, I enjoy baking bread. Recently, I've been on a sourdough kick, and it's been working fabulously. Sourdough thrives in cooler temperatures of my kitchen. Another dough that excels in cooler temperatures is croissant dough. My sister introduced me to croissants when we were in high school when she checked out a French cookbook from the local library. I was deputized as the sous chef, and we spent an entire day rolling and folding dough with butter and waiting. So much waiting. I now make croissants annually because I enjoy them, but I also need to remind myself of the effort involved and that I have no business opening a bakery.

The trick to proper croissant dough is temperature. You need to keep the butter cold enough to not melt into the dough but

warm enough to be flexible when folding. You want layers of butter and dough that will bake into flaky croissant goodness. To do this, you keep the thermostat turned down, handle the dough as little as possible, and when it starts to get too warm, pop it in the refrigerator, garage, or other chilly environment. Laminated dough (croissant) is a project best done in combination with another project that can be stopped and started. To up the ante on my annual croissant project this year, I combined my current obsession with sourdough and laminated dough into a sourdough croissant adventure.

Sourdough works well as a croissant base because the dough is set up to rise slowly over long periods of time, and it likes cold temperatures. I let the dough ferment overnight in the refrigerator before starting the lamination process. The lamination process involves making a butter packet that gets wrapped, rolled, and folded into the dough. It's a long process, with a short amount of activity time and a long time of waiting for the dough to rise and the butter to cool back down. Once the lamination process is complete, the dough is rolled out, cut, and rolled into the traditional croissant shape. Then it's time to warm the dough up. It gets proofed (final rise) and baked. My cousin commented that there's two kinds of people in the world: those that make croissants, and those who appreciate the effort that goes into making them. I love making them, I love the process, but most of all, I love eating them and sharing them with people I love. Try 'em, or read the recipe and appreciate the human who made them for you just a little bit more.

Sourdough Croissants

The Dough: you will need ¾ cup of active sourdough starter. The morning of the day before you plan to make croissants, feed your starter and set it on the counter.

Mix 1 cup of water, 1 ½ tsp salt and 1/8 tap of yeast to the active starter.

Stir in 6-ish cups of all-purpose flour and 2 tbsp of melted butter. Add water as necessary to make a stiff dough. Be patient when adding more water. Flour absorbs water slowly, so you will need to work the dough with your hands to check for consistency. You're looking for a smooth non-sticky consistency. Put the dough in a covered container that allows for expansion in the refrigerator overnight. Or 12-ish hours, depending on what your schedule looks like.

The Butter Packet: the next morning, build your butter packet. (In the meantime, get the dough out of the fridge so it can come to room temperature.) To do this, take 4 sticks of butter (1 lb) and place them in a gallon ziplock with 1 Tbsp of flour. You could roll it out on a huge sheet of plastic wrap, but I find the ziplock works better for me. It works the best to place the sticks together and dump the flour over them. Smack the butter with a rolling pin and flatten the sticks together into a sheet of butter about ½" thick and 8"x11" in size (1 sheet of paper). Place the butter packet in the fridge and let it chill for a few minutes. You can let it chill while you're rolling out your dough.

Dough prep 1.0: roll out the dough on a floured surface. It needs to be about ½" thick, and the size of 2 sheets of paper.

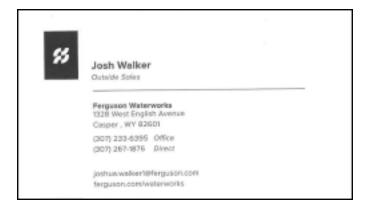
Take the butter packet out of the fridge and remove it from the ziplock. Place the butter packet in the center of the dough and fold the dough over the butter. Seal the dough seam. Roll the butter and dough about twice the size of the original shape and fold it in thirds, one side over the other. Roll it out again to the same size. And fold. Again. Are you starting to pick up a pattern? Watch the dough carefully to make sure butter isn't breaking through. If it does, dust with flour to create a layer when you fold it.

I keep my large cleaver handy to help move the dough around, but you could use a spatula or pancake flipper. You should get 2-3 roll and fold sessions before it needs to chill and rise. Wrap the dough in plastic, place in a large airtight container, basically keep the dough from drying out. Stick the dough in the fridge or similarly cold place for an hour. While you're waiting, occupy yourself with other activities such as running, writing articles, plotting world peace... I do the roll/fold/wait session 3-4 times. It seems to be adequate.

Dough prep 2.0: roll the dough about ½" thick. Then, cut 4-6" wide strips. I cut these strips in half, and then cut those rectangles on the diagonal. It makes right triangles. The original recipe calls for isosceles triangles, but honestly, this is easier, and nobody remembers what an isosceles triangle is. (It's a triangle that has two sides that are equal, for future reference.) Gently roll these triangles a bit thinner. You can stretch the triangle to make it an isosceles if you're fussy. Finally roll up the triangle into the traditional croissant roll.

I place these back into the airtight container and let them sit on the counter for an hour or two. It really depends on the temperature of your kitchen.

Dough prep 3.0: You will want to do a final proof (rise) on your croissants to get them as poofy and flaky as possible. The final proof needs to be in a very warm (100F-ish) environment. Because I have a double oven, I set one on warm while the other one is preheating to 450F. Proofing takes 15-30 minutes and you really need to watch them to make sure they are staying soft and not cooking. Place the croissants on a baking sheet, giving them a bit of expansion room. When they are done proofing, place them in the 450F oven, and let them bake for about 15 minutes. Then, turn the oven down to 350 (leave the croissants in the oven) and let them finish baking until golden brown. Remove from the oven, place on a baking rack so they can cool, and enjoy!





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Rate Setting ROI

Carl Brown, President GettingGreatRates.com

Most water and sewer utilities are owned by local governments – cities and special purpose districts. Many trash services, landfills, electric utilities and others are owned by local governments, too. How do these get funded? How should they get funded?

Maybe you think government should "tighten its belt." Do more with less. Hey, I'm there, too.

But, utilities are not your typical government function. You can downsize parks, downsize the library, even downsize road maintenance. We can stop going to parks, stop reading and buy four-wheel drives with big mudder tires.

But, the limit to which you can downsize utility service is pretty... limited. Folks won't accept half of the water they want. They want it all.

Here are some utility fun facts:

- Utilities are businesses. Regardless of who owns them, they still must function and fund themselves like businesses. If they don't, they go out of business. Some can be subsidized by another source. But, what source? And, is that fair?
- A city or locality can "get by" with bad (underfunded) utility service, for a while. But, run that way for long and you start the "death spiral." New businesses don't want to locate on low-quality, unsustainable utilities. Existing businesses won't expand. New homes will not be built. You don't want your utility to start that chain of events.

From its founding, the Association has worked to make utility services effective, efficient and affordable – which is exactly what you want. In the beginning, that work focused on the technical side – getting the science and engineering right. That is still the mainstay of all the rural water associations.

But, some associations, like yours, have broadened their assistance portfolio. For a long time, WARWS has offered a lot of help on the management and finance side of utility service. One part of that effort is the "Wyoming RATES Program." Read about it here https://gettinggreatrates.com/consulting/WyRATES.pdf.

"RATES" stands for Rate Analysis and Training for Environmental Systems. The Association does basic rate setting assistance and training. Under the watchful eye of the Association, GettingGreatRates.com (my firm), does high-level rate analysis and training. The kicker, membersystems of the Association get a 25 percent discount off our fees.

Ah, fees. Enter the notion of return on investment.

Return on investment (ROI) should drive most of your business investment decisions. You invest in lots of services, products, infrastructure, you name it. Do you know the ROI of each of those investments?

We calculate ROI on our rate analyses. Some of those results appear in the following table.

| Wyoming RATES Program Participants | | | | | | | | | | |
|--|--------------|----------------------------|---------------------|--------|--|--|--|--|--|--|
| Entity | Туре | 5-Year Revenue Increase | Cost of Analysis | ROI | | | | | | |
| Cody, WY | Electric | \$9,884,733 | \$17,015 | 58094% | | | | | | |
| | Sewer | \$281,517 | \$4,871 | 5779% | | | | | | |
| Greybull, WY | Trash | \$537,937 | \$3,437 | 15651% | | | | | | |
| | Water | \$602,975 | \$5,349 | 11273% | | | | | | |
| | Sewer | \$3,410,507 | \$4,720 | 72257% | | | | | | |
| Lander, WY | Sewer | | \$1,254 | 0% | | | | | | |
| Lancer, WT | Water | \$337,131 | \$5,427 | 6212% | | | | | | |
| | Water | | \$801 | 0% | | | | | | |
| Mountain View, WY | Sewer | \$1,746,405 | \$5,426 | 32186% | | | | | | |
| Mountain view, wi | Water | \$880,939 | \$4,623 | 19056% | | | | | | |
| Pinedale, WY | Sewer | \$1,655,613 | \$6,058 | 27329% | | | | | | |
| Pilledale, WT | Water | \$1,764,193 | \$6,058 | 29122% | | | | | | |
| | Sewer | \$1,324,121 | \$4,463 | 29669% | | | | | | |
| Powell, WY | Water | \$1,862,979 | \$5,345 | 34855% | | | | | | |
| | Trash | \$1,361,894 | \$4,915 | 27709% | | | | | | |
| Star Valley Ranch, WY | Water | \$566,076 | \$6,987 | 8102% | | | | | | |
| Thermopolis, WY - Engineering Associates | Water | \$1,883,425 | \$5,337 | 35290% | | | | | | |
| | Sewer | \$1,211,056 | \$6,471 | 18715% | | | | | | |
| Taminatan WV | Sewer | \$0 | \$14,684 | 0% | | | | | | |
| Torrington, WY | Water | \$418,904 | \$5,963 | 7025% | | | | | | |
| | Water | \$0 | \$8,515 | 0% | | | | | | |
| WY Totals and | \$29,730,405 | \$127,719 | 23278% | | | | | | | |
| Grand Totals and ROI Average Across All the Participating Associations: \$101,491,336 \$334,451 30346% | | | | | | | | | | |

In Wyoming, the ROI of the analyses done so far has averaged 23,278 percent over a five-year period. Granted, without rate analysis these systems may have gotten, say, half of that ROI on their own. Do-it-yourself is alive and well. And, granted, Cody ran up the score.

Still, think of all the other ways you could invest \$127,000. Will any of them return \$29 million over five years? Five-million? A paltry one-million?

We do the RATES program with five other rural water associations. The total revenue increase for all the systems analyzed through the RATES Programs is now over \$100 million, with an average ROI over 30,000 percent.

How can you picture a twenty-three-thousand percent ROI?

It's like, you pay us 7.8 days' worth of the <u>extra</u> revenues we enable you to collect over five years. Or, we get 0.4

percent of the extra revenues, you get 99.6 percent.

I know, it sounds too-good, even goofy-good. But, ROI is easy math. Like they say, "your results may vary," but you get the idea.

Big picture: one-hundred million EXTRA dollars is going to build a lot of stuff, pay a lot of staff and provide a lot of great service to thousands of customers. That makes us feel good.

Even more satisfying are the unmeasurable returns. Customers like fair rates. Adequate rates make great service possible and sustainable. Customers like that, too. Great rates will help you resolve rate disputes and avoid lawsuits. We work lawsuits. Every lawsuit ends with a loser, and a bigger loser. And, rates that are set right can qualify a system for grants and loans the system otherwise could not get. Ratepayers like using other people's money.

Here are your take-away points:

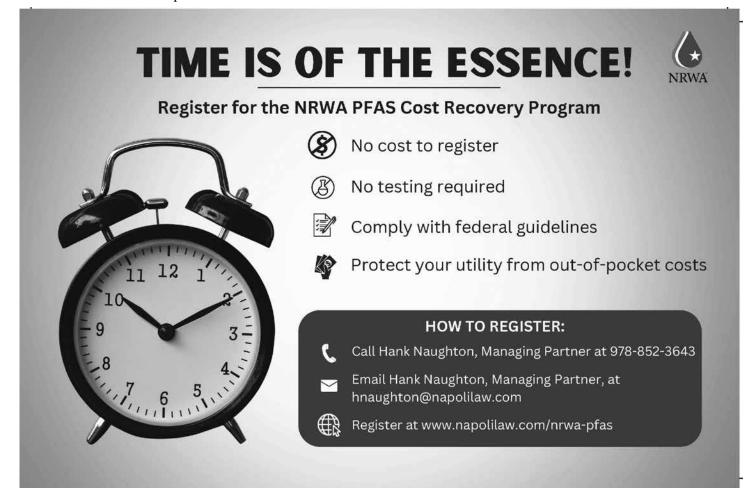
- Seek high rates of return on your investments.
 Sometimes, and that is probably right now, rate analysis is your best investment opportunity.
- Seek sustainability. Don't go anywhere close to the death spiral.

• Seek great service and strong customer approval.

First stop: give Kathy Weinsaft a call. She and the whole WARWS staff want to help you in lots of ways, and they are great at it. If Kathy thinks rate analysis is called for, and you are up for it, we can help you get great rates.

Carl Brown is President of GettingGreatRates.com, which specializes in rate analysis for water, sewer and other utilities. The firm serves as the RATES Program rate analyst for the Colorado, Kansas, New Mexico, North Dakota, Virginia and Wyoming rural water associations. Contact: (573) 619-3411; Carl1@gettinggreatrates.com





Household leaks can waste nearly

900 billion gallons

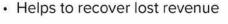
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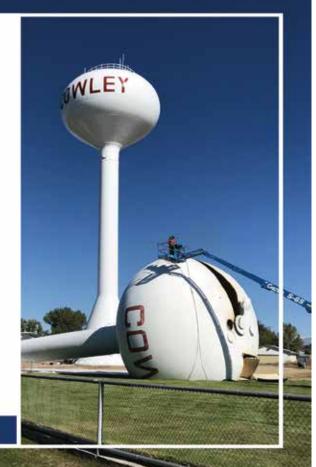
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