IRWA
ILLINOIS RURAL WATER ASSOCIATION

Water Ways

Volume XX – Spring 2023

Proven Expertise Delivered Locally

Asset Management

steel & concrete tanks | treatment plants
pipes | meters

Water Quality in Distribution Systems

in-tank water mixers
trihalomethane removal systems
disinfectant residual control systems

Smart Metering Services

Advanced Metering Infrastructure (AMI)
smart meters | managed services
performance guarantees

Contact Your Local Water System Consultant

Chad Johnson | Bill Murfree
855-526-4413
usgwater.com

USG WATER SOLUTIONS

An ISO 9001:2015 Quality Assured Company

Illinois Rural Water Association

Articles

MISSION STATEMENT

"Protecting and preserving the water and wastewater resources of Rural Illinois through education, representation and on-site technical assistance".

On the Cover:

This photo was taken by Don Craig, IRWA Deputy Director, in Roseville, Illinois in Warren County.

Water Ways is the official publication of the Illinois Rural Water Association, P.O. Box 49, Taylorville, Illinois 62568, and is published quarterly for distribution to members as well as other industry associations and friends. Our website is www.ilrwa.org. Articles and photographs are encouraged. Advertising and submissions should be mailed to the above address or e-mail us at ilrwadb@ilrwa.org.

Quality On Tap!
Our Commitment Our Profession

Like us on Facebook
Find us under Illinois Rural Water Association

List of Advertisers

The "Impact" of a Utility Website

by Don Craig, IRWA Deputy Director

A municipal or rural water/wastewater system's online presence can have a good impact on its success. In this day and age, some utilities still don't realize the importance of implementing a good and informative website for their customers and community residents.

One of the main reasons you should have a website for your community or rural water and/or wastewater system is to increase your utility's credibility. One way you can stand out is by having a website that looks good and clearly communicates quality information to your customers and residents. Having a website is an opportunity to make a great first impression and give people comfort that you're managing and operating a real "business".

Showcasing your "brand" to those you serve is one of the most important things that you can do. By clearly establishing who you are, what you represent and what you stand for, you increase the aspect of good and continued open relations and communications with those people within your system or community. Without a website it can be incredibly challenging to do this… because people may not easily find quality and reliable information about the utility, otherwise.

Many system offices get calls from existing or potential new customers asking such simple questions about location and hours of operation. If you miss a call, the customer is left unhappy. Calls can also distract your staff from focusing on the most important parts of your utility's operation and management. A website can reduce these calls and increase internal productivity. At the same time, it helps customers find useful information without needing to call, which ultimately provides an all-around better user experience.

Since websites are online 24/7, it's easy to post updates and announcements to those you serve. It's a way to keep them up to date on everything that you're doing concerning the water and wastewater systems, and/or other matters of the community. When something is particularly relevant to them, it increases the chance of the utility being able to resolve many of the issues or questions they may have through the website, without taking specific time out of your busy day.

In some cases, rural systems or municipalities are hesitant to get a site online because they feel they are not tech-savvy enough and don't understand how to manage a website…or are concerned about the overall price to implement one.

Having a strong online presence, particularly a website, can be very important for adding stability and public relations on to the overall administration and operation of the utility systems and other departments or activities of the community system.

The bottom line is…the quality of your website impacts administration and operational results, as well as good communications to your customers and residents.

Over ten years ago, the National Rural Water Association, and its state affiliate associations, such as IRWA; started working with a company to offer rural water and wastewater system utilities and municipalities the ability to design and implement good, efficient and cost effective websites. The provider of two variations for rural systems and/or municipalities is Municipal Impact and Rural Water Impact.

We are proud to say, that in Illinois, over 60 rural utilities have taken advantage of this cost effective website source. You can see a listing of those on our site at: https://www.ilrwa.org/Websites.html

Below is information from Municipal Impact's website at: MunicipalImpact.com. Or you can see similar information for rural water and/or wastewater systems on Rural Water Impact's site at: RuralWaterImpact.com

****

MUNICIPAL IMPACT'S MISSION IS TO SMALLER CITIES AND TOWNS WITH A TURNKEY, PROFESSIONAL WEBSITE AND COMMUNICATION SOLUTION THAT SAVES TIME AND MONEY.

Municipal Impact offers custom, cutting edge, search engine optimized website solutions at an incredibly affordable price point. Hundreds of small cities and towns across North America are already taking advantage of this state-of-the-art solution!

continued on page 10

What?? Another New Requirement!

by Kent Cox,
IRWA Clean Water Act Training & Technical Assistance

It seems like I am always delivering bad news these days. I'm always sharing information about the latest new requirements that are coming. I know that you are thinking that enough is enough. We have enough to do between the lead service inventories, the nitrification action planning, the source water protection plans, and the emerging contaminants, so now what? The topic of this new regulation, cybersecurity, is something which you're likely already dealing with in your personal life and at work.

Most of us are dealing with cybersecurity in some way in our daily lives whether we think about it or not. Nearly everything we do online requires a password which includes a set of rules. These rules likely tell us to include ten digits, one upper case letter, one lower case letter, a number, and a symbol. Those of us who enter DMR data each month are required to change our password every ninety days. Can you remember your childhood phone number, but not your most current eDMR password like me? How often have you been prompted lately to have a code text to you which you have to enter to verify that it is you? How often do you have to check the boxes on a "Captcha" to verify that you are a human? What a pain in the _ _ _. Unfortunately, these are the multi-factor verification times which we are living in.

It's no secret that cyberattacks are increasing. There have been several utilities including some, like Quincy, right here in West-Central Illinois who have fallen victim to ransom-ware attacks. Do you remember the water supply in Florida which was attacked two days before Super Bowl 2021 in an attempt to poison the water supply by overfeeding sodium hydroxide? I'll bet that you can name a few more incidents as well.

Well because of these ever-increasing attacks, and a 2021 Water ISAC survey and report regarding public water systems failure to adopt basic cybersecurity practices; on March 3, 2023, the USEPA released a Memorandum: "Addressing PWS Cybersecurity in Sanitary Surveys or an Alternate Process." In summary, EPA is requiring that cybersecurity assessments be included as a part of the sanitary surveys (you know the inspections that the folks from IEPA come out and do every few years). I will stop there with the summary of the 13 pages, and just leave you the link to the document. https://www.epa.gov/system/files/documents/202303/Addressing%20PWS%20Cybersecurity%20in%20Sanitary%20Surveys%20Memo_March%202023.pdf

It isn't known yet how quickly the Illinois EPA will be incorporating this into the sanitary surveys which they perform for our water or wastewater systems but be assured that this requirement is coming. So now you are thinking; oh great, so how am I going to get this done?

Many small systems do not have any Industrial Control Systems or SCADA systems which makes it easy for them for now. These systems (and us old operators) are going to be upgraded or replaced eventually. When that time comes, then cybersecurity and vulnerabilities will have to be considered.

Systems 3,300 population and greater should have already completed the AWIA requirements for completing a risk and resilience assessment and an emergency response plan by June 30, 2021, at the latest depending upon your population served. I'm including a link to the AWIA webpage at the EPA website for reference: https://www.epa.gov/waterresilience/awia-section-2013#CD. The risk and resilience assessment included the assessment of:

1. the risk to the system from malevolent acts and natural hazards.
2. the resilience of the pipes and constructed conveyances, physical barriers, source water, water collection and intake, pretreatment, treatment, storage and distribution facilities, electronic, computer, or other automated systems (including the security of such systems) which are utilized by the system.
3. the monitoring practices of the system.
4. the financial infrastructure of the system.
5. the use, storage, or handling of various chemicals by the system.
6. the operation and maintenance of the system.

If your assessment included cybersecurity, then according to the memorandum "you may use these documents to support the evaluation of cybersecurity during a sanitary survey". It also states that cybersecurity assessments (like the risk and resiliency assessment and emergency response plan) will need to be repeated every three to five years. If you found vulnerabilities, then you should begin addressing these if you haven't yet.

Please don't stop there. This does not mean that you don't need to do anything if you have already completed your AWIA requirements. Cybersecurity awareness and training needs to be ongoing in your systems just as it is in your daily life. I guess that this is the price we pay for the conveniences of being able to access alarms, check processes, and start pumps without having to physically go to there.

I encourage you to go to the EPA Cybersecurity of the Water Sector webpage whether you have done a cybersecurity assessment yet or not. There are options for performing self-assessments or having a third-party assessment performed. This website has resources for both options plus checklists, technical assistance providers, resources, tools, funding options, upcoming trainings, and more. The link to the EPA cybersecurity website is included below.
https://www.epa.gov/waterriskassessment/epa-cybersecurity-water-sector

Change is Difficult

by Clark Cameron, IRWA Circuit Rider

In today's high speed world, things seem to change in the blink of an eye and the choices often times are to adapt or be left behind. If you are like me then neither one is a comfortable choice, but as they say, you must do what you must do. Change is never easy in life, especially when you are happy and satisfied with the way things have been. But as water operators know change is happening and happening fast in the world of water systems regulations, size, and technology.

The days of the small towns and small one operator systems are slowly passing as aging of both the systems and the operators become bigger factors. Too many times those operators are being overwhelmed by the many new regulations and reporting standards of today. A lot of these operators are not familiar with computers and the technology needed to keep up with the reporting, some by design and some simply because they think they are too old to learn a new trick, so to speak. Unfortunately, the EPA doesn't take an operators age into consideration when it comes time to send out violation notices for non-reporting.

Operators now is the time to adapt. It can be done. I can use my own situation as an example of that. In April of 2018 the system that I had worked at for nearly 18 years decided to contract with a private company and turn control of the system over to that company at the cost of 8 jobs locally. The new company offered most of the employees an opportunity to apply for positions with them to do a job we had all done for many years but that now was vastly different. Different hours, different treatment process, different everything. It was time to adapt or be passed by. I lasted 18 days with the new company because I could not adapt to the new way and was in danger of my water career passing me by. Fortunately Frank Dunmire and IRWA gave me another opportunity to adapt and grow with them and I haven't looked back.

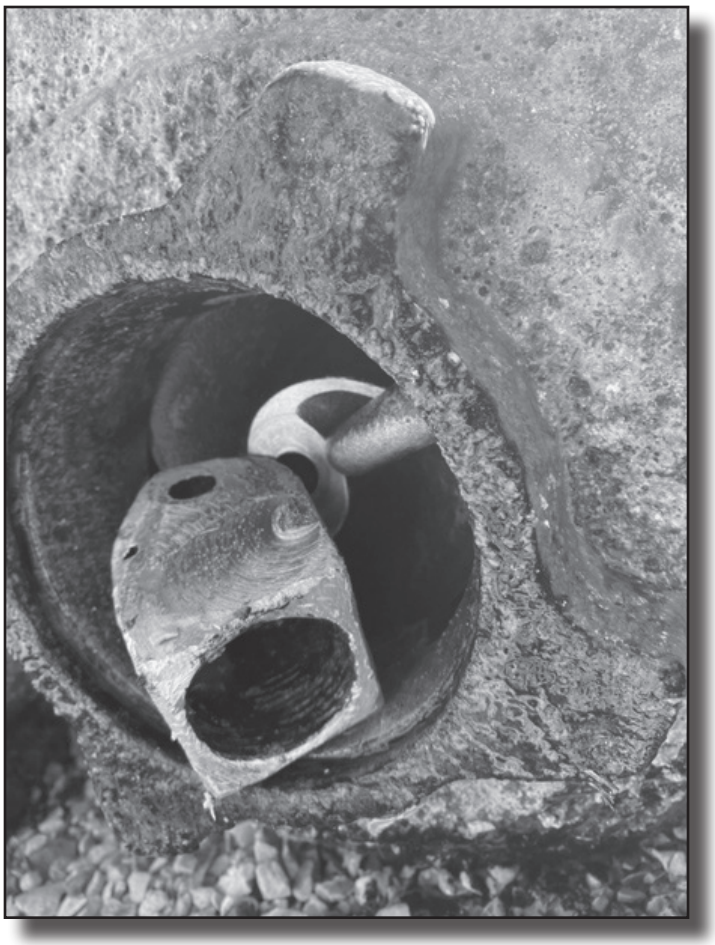
The bottom line for today's water operator is that you must be open minded enough to step out of your comfort zone and accept the challenge of learning a new way to do what you have been doing for all these years. It can be done. Don't be too scared or too proud to ask for help. IRWA has many resources to help operators and systems and the EPA is always there to answer your questions. Adapting is not easy, but if you are willing to try it can be done. I am proof of that. As the old saying goes, adapt and you can overcome.

Sewer Collection Surprises

by Kaleb Kahl, IRWA Board Member

You have to love a surprise! Nobody likes surprises. Well, I guess there are exceptions. Most people outside our line of work may look forward to a surprise or consider them to be a good thing. Fair enough, I guess they are not all bad. However I must say that when the work phone rings, I'm NOT looking for surprises. Regardless, they do happen and in turn they must be dealt with.

Let me elaborate a bit on a couple surprises that have happened in our sewer collection system. One neighborhood in our village had all the sewer lines replaced a few years prior to my starting with the village. All sewer mains except for about two blocks worth. Those last two blocks were the last stretch before the pump station. All the other streets flowed into a lift station and then took a short trip in a force main and dumped into these last two blocks of gravity sewer. Whenever we would experience large rain events which would lead to significant inflow and infiltration, our only issue would be the homes on those last two blocks. We would receive calls that their pipes were slow draining, and one home would be right on the brink of a basement drain back flowing.



Pretty easy decision to start with, jet the mains and bring in a camera, so that's what we did. When we were jetting, we did bring back some rock so we assumed that we would find a broken pipe or joint somewhere that allowed this rock into the system.

Now for the camera part. First off, one of those two blocks was fine so it can be taken out of the equation. However, the other block had an issue. Running the camera in from the downstream manhole we found rock. It appeared to go on for some distance though it was hard to tell from the camera view. So, we went in from upstream and after a while we again found rock, clean 1" rock like would be used for backfill. Apparently when we brought back rock with the sewer jet, we only brought back a small portion of it. Well that settles it, somewhere in that rocky area there is a hole in the main. Right?

We again jetted and jetted and jetted and jetted, until no more rock was retrieved. Ok, back in with the camera, and what did we find? A perfectly clean, perfectly unbroken pipe. No place any rock could have entered the pipe. So where did it come from? Here's our best guess. I had mentioned that all the rest of the neighborhood had been replaced. So, either the rock had gotten in through the old mains somewhere or during construction of the new. Each time a stick of pipe or manhole section was set in place as well as each time a service connection was made there

continued on page 22

ANOTHER BIG YEAR FOR THE ANNUAL CONFERENCE

by Heather McLeod, IRWA Membership Services Assistant

This was another record setting year in Effingham at our Annual Technical Conference in February. Final attendee numbers were 553. 12.75 water and 11 wastewater credits were available over the 2 1/2 days and 72 people took their water or wastewater exams on Thursday. A full house of 115 exhibitor booth spaces were filled. Thanks to everyone who supported the conference for another great year! We appreciate all of the feedback and will be working on a few things that were mentioned on your feedback cards and discussed in the exhibitors meeting so we can give you a better experience next year.

Congratulations!

Grand Prize Winner—Barb Matthews
Gun Raffle—Blaine Middleton
Best Tasting Water—Village of Greenup
Water System of the Year – Kinkaid Area Water System
Water System Operations Specialist of the Year – Dave Dollinger; City of Toluca
Wastewater System of the Year - City of Mason City
Wastewater System Operations Specialist of the Year – John Schoenhard; Village of Lena
Runner Up Water Systems of the Year – Village of Ohio and Village of Tremont
Runner Up Water System Operations Specialists of the Year – Cory Hassell; Village of Patoka and Tim Hamilton; Village of Onarga
Runner Up Wastewater Systems of the Year – City of Polo and City of Altamont
Runner Up Wastewater Systems Operations Specialists of the Year - Steve Kunz; Village of Murrayville and Tyler Turner; Village of Clay City
Associate Member of the Year—Hawkins, Inc.

THANK YOU FOR SUPPORTING THE 41ST ANNUAL TECHNICAL CONFERENCE!

Lunch Sponsors

Cahoy Pump Service
CORE & MAIN
Pace

Lanyard Sponsors

Maguire Iron, Inc.

Pub Crawl and General Sponsor

Effingham
The City of Effingham Illinois

Spotlight on Scholarship Winners

The Illinois Rural Water Association Associate Member Scholarship Fund was created in 1997 to promote further education for an eligible family member of any active voting member of IRWA. Each year we present two $1,000 scholarships (one to a boy and one to a girl). Any current Associate Member of the Illinois Rural Water Association can contribute to this fund. The winners are announced during the awards ceremony on Tuesday morning of the conference.

Each year the applicants must write an essay on a topic of the scholarship committee's choosing and submit it with their application. This year the essay topic was "The benefits and challenges of a mutual aid agreement: sharing equipment, personnel, and knowledge".

The winners chosen for 2023 were: Kylie Rose Smith and Logan Tate Miller.

Kylie is the daughter of James Smith who is the water operator for the Village of Chebanse. Kylie attends Clifton Central High School in Clifton, IL. She has been the recipient of the SAR Award and the Kiwanis Student Leadership Award. She will be attending college in the Fall to study Physical Therapy.

Logan is the son of Julie Miller who is the Village Administrator for the Village of Mt. Zion. He is pursuing a degree in Mechanical Engineering at Bradley University. His awards include being on the Deans list and being the social chairman and pledge class representative for Sigma Chi.

continued from page 8

THANK YOU FOR SUPPORTING THE 41ST ANNUAL TECHNICAL CONFERENCE!

Associate Member Scholarship Contributors

Brenntag Mid-South, Inc.
Durkin Equipment Co.
ESI
G.A. Rich & Sons
IMCO Utility Supply
Municipal Equipment Co.
Pace Labs
Sidener Environmental Services, Inc.
Water Treat Technology

Sportsman's Raffle Donations

American Flow Control
Aquaflo Technologies, Inc.
Chastain & Associates, LLC
Coe Equipment, Inc.
Core & Main
Corrosion Illinois Network
Dixon Engineering, Inc.
Durkin Equipment Co.
Frank Dunmire
Hawkins Water Treatment Group
Hoerr Construction, Inc.
Illinois Electric Works
IMCO Utility Supply
Kamstrup
JULIE, Inc.
Key Equipment and Supply Company
KLM Engineering, Inc.
Leak Detection Services, Inc.
LOCiS
M.E. Simpson Co., Inc.
MECO Engineering Compan
Metropolitan Industries, Inc.
Midwest Meter
Missouri Machinery & Engineering Co.
Municipal Equipment Co.
My Utility Claim, Inc.
National Wash Authority
Pace Labs
R.E. Pedrotti Company, Inc.
Ressler & Associates
Richards Electric Motor Co.
Sensus
Sidener Environmental Services, Inc.
Smith Ecological Systems Co.
Stewart Spreading
Teklab
Utility Pipe Sales Co., Inc.
VEGA Americas
Water Well Solutions

Cash Prize Donations

Aquaflo Technologies, Inc.
Brenntag Mid-South, Inc.
Durkin Equipment Co.
G.A. Rich & Sons
Hoerr Construction, Inc.
Key Equipment and Supply Company
Metropolitan Industries, Inc.
Missouri Machinery & Engineering Co.
Municipal Equipment Co.
Pace Labs
Ressler & Associates
R.E. Pedrotti Company, Inc.
Sensus
Tnemec/Taylor Coating Sales, Inc.
Vandevanter Engineering Co.
VEGA Americas
Water Treat Technology

The "Impact" of a Utility Website

continued from page 4

Rural Water Impact, (Municipal Impact's sister company) launched in 2011 and has since established a proven track record of quality service and integrity in the rural water industry. Municipal Impact was launched in 2015, and we are proud that both services are officially recommended by the National Rural Water Association and most of the state rural water associations.

The Municipal Impact team is a unique family of seasoned professionals with combined experience totaling over 30 years in the web/technology industry, over 35 years in the municipal water works industry, and almost 40 years in sales and service… Now that's a lot of experience!

Our web solutions utilize tried and true principles of web design and usability standards, enabling municipalities to be more efficient, effective and professional in servicing their community. Of course, towns benefit from a professional web presence as their site provides residents and visitors with a greater level of information, service and – increasing their overall satisfaction and confidence in their town.

Choosing Municipal Impact eliminates the hassle of trying to determine the ins and outs of designing, building and hosting a website – saving time, money and frustration. In turn, your residents receive a greater level of service and confidence when doing business with their town or city.

Let Municipal Impact simplify your internet experience through our personalized service and support so your staff can focus its energies on what it does best – providing relevant public services – Not building and maintaining a website. Think of Municipal Impact as a one-stop-shop for all your municipal website solution needs.

What are you looking for? - The ABC's of ilrwa.org

Advertising in Water Ways information (Ad agreement and links) - Publications > Advertising Information

Apprenticeship—Resources > Apprenticeship

Becoming a Certified Water or Wastewater Operator—Resources > Becoming a Certified Operator in Illinois

Boil Order Notice—Resources > Downloads

CCR—Services > e-CCR Hosting

Certification Overview from IRWA—Training > Certification

Certified Water Operator Contract—Resources > Downloads

CEU Forms from webinars or conferences—Training > CEU Form Archives

CEU's from CD training—Training > CD's

Compliance Assistance—Services > Compliance Assistance

Cross Connection (manual, survey & ordinance) - Resources > Cross Connection

Current hot topics and upcoming events - Home

Energy Efficiency Assessment—Services > Energy Efficiency

For Sale/Wanted—Services > For Sale/Wanted

Forming a new water district—Resources > Downloads

GPS/GIS—Services > GPS/GIS Mapping

Industry Organizations—Resources > Links

Job Board—Resources > Job Board

Lead Information —Resources > Lead Information

Leak checklist and how much am I losing flyers—Resources > Downloads

Legislative Information – (Who is my rep?, Bills that IRWA is following)—Resources > Legislative

Mutual Aid—Resources > Downloads

Nitrification Action Plan Information—Resources > NAP

NFP Tax Forms — Resources > Downloads

NRWA Fleet - Membership > Benefits—click on the NRWA logo

Operator Groups—Resources > Links

PFAS—Home

Rate Study— Services > Rate Study

Red Flag Act—Resources > Downloads

Speaker Request Form for Conference —Training > Conferences

Tracer Wire Specs—Resources > Downloads

ERP/Contingency Plans—Resources > Emergency Preparedness Planning

Video Inspection Services—Services > Video Inspection

Wastewater CEU information—Training > Wastewater > under table

Water Loss Handouts—Resources > Downloads

IRWA
ILLINOIS RURAL WATER ASSOCIATION

Quality On Tap!
Our Commitment Our Profession

Coe EQUIPMENT INC

Who Are We?

Coe Equipment has been in business for over 30 years, serving customers in Illinois and Missouri. We continue to supply parts and service for ALL makes of sewer and vacuum excavation equipment.

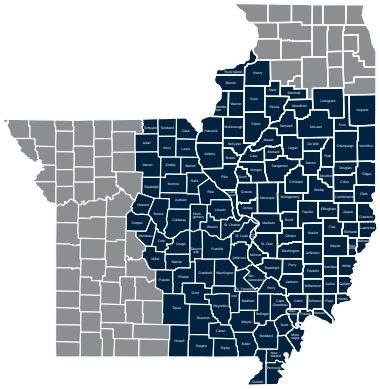
We are family owned and operated in Central Illinois. Our sales and service team has combined experience of over 100 years.

Our customers are our number one priority. We look forward to earning and continuing to be worthy of your business.

DOWNSTATE ILLINOIS
& EASTERN MISSOURI'S

Only Authorized VACTOR®
Subsidiary of Federal Signal Corporation

SALES AND SERVICE CENTER



5953 Cherry Street • Rochester, Illinois 62563
217-498-7200
parts@coe-equipment.com
sales@coe-equipment.com
www.coe-equipment.com

We proudly distribute these quality manufacturers:

VACTOR® Subsidiary of Federal Signal Corporation
Sonetics®
TRUVAC® by Vactor Mfg., Inc.
ARIES INDUSTRIES, INC.
STONEAGE ENGINEERING THE POWER OF WATER
FEDERAL SIGNAL® Moves. Cleans. Protects.
RINNOVISION®
GUZZLER® Subsidiary of Federal Signal Corporation
WORK HORSE Nozzles & Tools
HYDRA-FLEX FLUID INNOVATION
VIVAX METROTECH
VANGUARD SYSTEMS
NozzTeq®

ANY and ALL parts and accessories for your industrial or municipal sewer equipment, including...

- Debris & Jetting Hoses
- Pipe & Pipe Clamps
- Hose Guides
- Hose Fittings & Menders
- Nozzles
- Filters & Gaskets
- Reel Repair Parts
- Gauges
- Tools

Plus, the best digging accessories available!

Ask about our equipment rentals!

Video inspection technology for wastewater and storm sewer systems can help you identify and prioritize maintenance issues, while improving service and reducing emergency maintenance costs.

Small jobs (typically two city blocks, or less than 800 feet) has a "Maintenance Fee" charge of $500.00 for our members. Non-member utilities pay $750. There are no additional expenses charged for this type of small project. Larger projects requiring more time and inspection coverage, will be based on the Maintenance Fee (reduced for IRWA members), cost per foot (30% IRWA discount) and expenses.

Due to staffing varied work demands and logistics, IRWA will not undertake inspection jobs exceeding 5,000 feet maximum per project. For more information, or to schedule an inspection of your system, email Deputy Director Don Craig at: craig@ilrwa.org or call him at 217-561-1061.

Our mapping technician will work with your system personnel to develop digital and hardcopy system maps of your water system infrastructure. This is also true for wastewater systems and/or storm sewer features, if needed.

IRWA personnel will first do complete GPS of system features. Attributes on these features can be added when gathering the data, and also added by facility personnel any time after the project is completed.

Incorporating this kind of data allows you to monitor, edit, and evaluate your system at a whole new level, including from computers, cellular based tablets or cell phone. IRWA will input the data from the field, and through the GIS processing stage, add background layers such as aerial photography and road view maps with detailed views of your system. At the end of the project, all data and the maps will be owned by you for use in the future.

Through a project proposal, the cost for services is determined by a charge per each system feature located and mapped; and overall project expenses. These amounts will be discussed with system personnel, and documented before the start of the project. IRWA members receive an automatic 30% discount, and possibly a larger reduction with bigger projects.

For more information, please contact Deputy Director Don Craig via e-mail: craig@ilrwa.org, or via phone: 217-561-1061 or visit our website: https://www.ilrwa.org/Equipment/Asset_Mapping.html.

IPRF

Proven for Public Works

IPRF is the Leader in Workers' Compensation Coverage

Since our inception in 1985, the Illinois Public Risk Fund has invited public entities and government agencies to examine our outstanding record for cost-effective workers' compensation coverage. Today, over 700 risk managers rely on IPRF for:

- 24/7/365 Claim Reporting
- In-house Nurse Case Management
- Dedicated Claims Team
- Prescription Drug Programs
- Aggressive subrogation program which will include members out of pocket expenses
- Loss Control training and support that includes an extensive library of online training courses, simulator training and sample safety guides
- IPRF members can select their own defense counsel subject to IPRF's litigation management process and approval.

IPRF
ILLINOIS PUBLIC RISK FUND

PROUDLY SERVING THE PUBLIC SECTOR

www.IPRF.com (800)289-IPRF (708)429-6300 (708)429-6488 Fax

FREE RATE STUDY

Why Have a Rate Study Conducted?

With the amount of grant dollars available for water and wastewater projects continuing to dwindle, coupled with the aging water and/or wastewater infrastructure, it is increasingly more important that decision makers for systems throughout the state become more educated about system finances. This ***FREE*** rate study takes an in-depth look into the expenses and revenue that a system has. Once all of the data has been gathered and entered into a spreadsheet a detailed report is generated to explain the findings and recommendations. This easy to read report and any rate changes recommended will assist Boards and Councils in mapping out the financial future of their respective systems.

If your system is interested in having a rate study conducted, please contact Clark Cameron at (217) 287-2115(Office) or (217) 820-3814 (Cell).

What Information Will the Rate Study Provide?

- ⇒ Breakdown of expenses
- ⇒ The cost to produce the water (if applicable)
- ⇒ Amount of nonrevenue water
- ⇒ Amount of lost revenue from water loss
- ⇒ Annual gain or shortfall in revenue
- ⇒ Different rate scenarios

What Information Will I Need to Supply For a Rate Study?

- ⇒ Financial statements for the most current fiscal year (audit report preferred)
- ⇒ Amount of water produced and/or purchased during the most current fiscal year
- ⇒ Amount of water sold during the most current fiscal year
- ⇒ Current rate structure
- ⇒ Number of customers in each rate class
- ⇒ Amount of debt (if any)

WHERE IN ILLINOIS IS THIS LOCATED?

Be the first person to identify the location of this picture and you will receive an IRWA hat!

Visit IRWA's Facebook page and if you are the first person to post the correct answer on our wall, we will send you an IRWA hat. You can find the link to our Facebook page on our website at www.ilrwa.org.

(Winners are limited to winning one time per year)

ABOUT DIMOND BROS.

- Dimond Bros. Insurance is an independent insurance agency headquartered in Paris, IL
- 40 Office Locations throughout Illinois, Indiana and Wisconsin with 300+ employees
- One of the Largest Privately Held Insurance Agencies in the United States

OUR CARRIERS

- Carriers will be selected based on the individual risk. Carriers we may utilize include: Cincinnati, Travelers, Selective, Bliss McKnight, OneBeacon, IPRF or ICRMT

OUR COMMITMENT

- Response to members in a timely and professional manner
- Individualize communication style preferences including email, mail, phone, fax
- Attend and Contribute to IRWA Conferences

Dimond Bros.
INSURANCE

John B. Griffith
801 N. Third St., Suite B
Effingham, IL 6240 (217)
347-0584 ext. 3105
john.griffith@dimondbros.com

Sean Griffith
801 N. Third St., Suite B
Effingham, IL 62401
(217) 347-0584 ext. 3104
sean.griffith@dimondbros.com

DimondBros.com

IRWA Support Letters Are Needed

IRWA employees are dedicated in helping the water and wastewater systems throughout the state in making onsite visits and providing technical assistance in helping to ensure your systems have safe and quality water.

Please take a moment to thank any or all of the IRWA employees who have helped your system by writing an appreciation letter on your letter-head and mail to:

Illinois Rural Water Association

P.O. Box 49

Taylorville, IL 62568

IRWA
ILLINOIS RURAL WATER ASSOCIATION

MANHOLE ADJUSTMENT RING

READJUST MANHOLE LIDS TO NEW ELEVATION WHEN RESURFACING

MANHOLE ADJUSTMENT RING

ONLY 4 DIMENSIONS REQUIRED

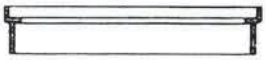
1 - O.D. of existing lid: TOP and BOTTOM

2 - thickness of existing lid

3 - riser height (thickness of asphalt matt*)

*Note: minimum riser must be 1/2" more than thickness of existing lid

* **Full Range of Sizes**
* **Eliminates Digging**
* **Requires *No* Tools**



Company Name _____

Contact Name _____ **Phone #** _____

ORDER FORM

Quantity	Manhole #	Street / Location	Lid O.D. Top / Bottom	Thickness of Lid	Desired Rise

SIMPLE--QUICK--PERMANENT

FREE DELIVERY!

To Order, Please Call:

Schulte Supply, Inc.

(800) 843-3711

or

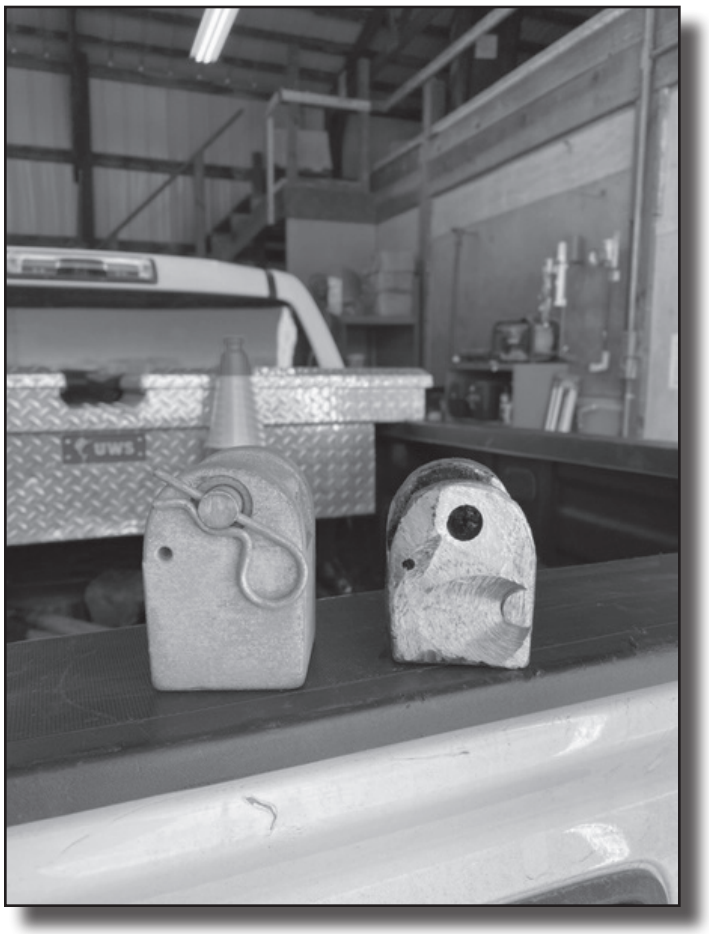
FAX Your Order to: 618-656-8750

Sewer Collection Surprises

continued from page 7

were opportunities for rock to enter the collection system. All that rock made its way to the lift station little by little or all at once, who knows which one. The pumps then pushed it through the force main and into the gravity sewer where it settled out downstream a little ways. There ended up being about a 35-foot stretch of pipe that had about 3 inches of rock lying in the bottom of it. We cleaned the pipe and put it back to design capacity and what do you know? No more issues with slow draining houses. Just because you can jet through a pipe doesn't mean it is clean.

More recently we returned to this neighborhood for an issue at the lift station that feeds that short force main. It wasn't rock we found this time. Keep in mind that is has been several years since any work was performed in these sewer mains. We pulled the pump and when we tried to set it on the concrete it would not set level. We let it lay over on its side and saw that it had a large piece of metal protruding. It didn't take long to figure out what it was. It was a bracket off a remote placement sewer plug. Did it just recently find its way to the lift station, or had it been in there for years? Hard to say. It had been pulled up into the pump multiple times because it had every side worn down from the impeller rubbing on it, it had just finally got caught in the impeller causing the motor to stop. Included are a few photos of the metal bracket, a couple of which are sort of a before and after.



Seems like never a dull moment around this town. Just a couple more exciting stories to add to my memoirs. You gotta love a surprise!

The Madness Continues

by Mary Reed,
IRWA Compliance Assurance Specialist

You have heard it before, but that was back in spring of 2022 and you thought I'll have plenty of time to work on the material inventory…...and then all the demands on you as an operator take over and now it is here. The dreaded deadline. But what you may not have known is that you would be required to fill out a spreadsheet and answer 15 questions about EVERY single service line in your community.

By now the shock of the information required for the material inventory spreadsheet has hopefully eased a bit. However, this is only the first step in complying with all the requirements that are within the act. Next year the final materials inventory will be due, and if your system has identified lead service lines, your initial lead service line replacement (LSLR) Plan is also due April 15, 2024. WAIT! WHAT! Yes, you read that correctly the same time that your final material inventory is due, your initial LSLR Plan is due, so you need to start working on this prior to April 15, 2024.

To recap, we know that it has been determined by both US EPA and the Centers for Disease Control and Prevention (CDC) that there is no safe level of exposure to lead. Did you also know that according to initial reports, Illinois has more known lead service lines than any other state in our Nation? The true number of lead service lines is not fully known because Illinois is lacking an adequate inventory of the service lines. In an effort to reverse this, effective January 1, 2022, the Lead Service Line Replacement and Notification Act (LSLRNA) (Public Act 102-0613) replaced the former lead materials inventory requirements found in the Illinois Environmental Protection Act at 415 ILCS 5/17.11.

I strongly recommend that you download and read a copy of Public Act 102-0613 if you haven't already done so. https://www.ilga.gov/legislation/publicacts/102/102-0613.htm

Now onto the LSLR Plan and a summary of the requirements. Remember this is based on the material inventory complied by your public water supply where it was determined that there are lead, suspected lead, or galvanized service lines that require replacement.

- Total number of service lines
- Total number of known lead service line (including galvanized downstream of lead)
- Total number of lead service lines replaced each year beginning in 2020

- A proposed lead service line replacement schedule (a minimum replacement schedule is in the act)
- An analysis of costs and financing options for replacing LSLs
- A plan to prioritize high-risk facilities (schools, day-care, hospitals, long-term health care facilities, etc.)
- A map of areas where lead service lines are expected and prioritization plan for replacement
- Measures to be taken regarding public notification of the LSLR Plan
- Measures taken to encourage diversity in hiring to implement the LSLR Plan

You must submit annually by April 15th of each year after the initial plan was submitted, an updated LSLR Plan until the final plan is due April 15, 2027. This final plan will be reviewed by the Agency and is required to be posted on either your systems' website or you may request the Agency post a copy of the plan on their website.

The act also establishes the Lead Service Line Replacement Fund, which is a special fund in the State treasury to be used by the Agency for the financing of activities associated with identifying and replacing lead service lines. There is also a Lead Service Line Grant Program, I highly recommend that you visit the IEPA's website for more information about funding opportunities.

https://epa.illinois.gov/topics/drinking-water/public-water-users/lsli-grant-opportunity.html

And now on to the next task at hand…..Consumer Confidence Reports, which are due to your customers by July 1st and to the Illinois EPA by July 10th.

DESIGN, OPERATION AND MAINTENANCE REGULATIONS - A Continued Discussion

by Dave McMillan, IRWA Training Specialist

As I related in my last article, we are now a few years (July 25, 2019) into the implementation of the Illinois Pollution Control Board's (Board) regulations on the design, operation and maintenance criteria for community public water supplies (TITLE 35, SUBTITLE F, CHAPTER I, PART 604- https://pcb.illinois.gov/SLR/IPCBandIEPAEnvironmentalRegulationsTitle35)

In the last article, I made the case that we all need to be better educated/reminded of the requirements in these regulations. I also highlighted the "Grandfather," source water redundancy, nitrification action plan and source water protection provisions. In this article, I think we should review the disinfection residual provision in the Part 604. So, let's look at what the provision says:

Section 604.725 Residual Chlorine

a) A minimum free chlorine residual of 0.5 mg/L or a minimum combined chlorine residual of 1.0 mg/L must be maintained in all active parts of the distribution system at all times.

b) Community water supplies must monitor chlorine residual to determine the amount and type of residuals existing at different points in the distribution system.

c) Community water supplies must not mix water sources with free chlorine and combined chlorine residual.

For your background (if you haven't heard me drone on in person sometime over the last 10 years), the Part 604 regulations were drafted using a "multiple barriers of protection" concept. In this case, Illinois water systems are required to have redundancy to ensure consumers receive bacteriologically safe water. This is accomplished by utilizing a safe source of water (generally groundwater sources) or treatment of the source water to remove and/or inactivate pathogens (surface water sources) as the first barrier of protection. Following pathogen treatment (where necessary), the second protective barrier is adding sufficient quantities of disinfectant to the water to negate vulnerabilities that may be present in the distribution system.

To prevent pathogens from becoming prevalent in distributed water, I think most of us understand the numerical requirements in "a" (although, some argued before the Board that the value should have been lower). We also understand that to ensure we are achieving this goal, spot checking locations in the distribution system is needed (the monitoring requirements in "b"). However, there are a couple of often overlooked elements in 604.725 that should be considered. First, in "b," there is a requirement for water supplies to determine the type of residual they are establishing. I will not dwell on this item, other than to say this part of the rule plays into the nitrification action plan regulation discussed in my previous article. A system must establish whether it is utilizing a free residual or chloramines as a primary disinfectant. They must then monitor accordingly. If the water system is forming monochloramine as their preferred treatment method, or they have no alternative, then the nitrification action planning is also necessary.

Making a conscious/documented decision on disinfectant type is also very relevant to "c" of the regulation. For water systems with free ammonia in their source water, understanding where the water chemistry falls on the breakpoint curve with respect to meeting chlorine demand should provide insight into the dangers of mixing chloraminated water with water that has a free chlorine residual. As reflected in "c," my experience is that mixing the two disinfectant types (free and total/chloramine) ultimately results in low or nonexistent chlorine residuals somewhere in the distribution system.

Where our discussion gets somewhat contentious is the requirement in "a" that states the minimum residual values "must be maintained in all active parts of the distribution system at all times." As a participant in the development of the Illinois EPA testimony that led to the Board regulation, I would like to shed a little light on the thought process behind this requirement and how it plays with respect to other provisions in the regulations.

Again, we need to consider the multiple barriers of protection idea that was paramount in the development of the regulations. Conceptually, if all areas of the distribution system

continued on page 25

DESIGN, OPERATION AND MAINTENANCE REGULATIONS - A Continued Discussion

continued from page 24

do not have adequate disinfectant residuals, there is a potential that a breach in the protection of the distribution system may have occurred (or could be occurring). If these areas then "communicate" with other water in the system, there could be the potential for a spirally concern to arise. However, water industry professionals know that most (all?) water systems have stagnation zones (that may vary in severity and likely temporally and spatially). These areas may sometimes have disinfectant residuals that dip below the desired concentration. In my view, the Board include the "all active parts of the distribution system" standard to place a spotlight on the need to continuously improve water supply distribution systems.

Therefore, the Board regulations attempt to encourage long term mitigation plans. The regulations (and incorporations by reference) encourage these identified problem areas to be addressed through low(er) impact actions like routine flushing or increasing residuals (within regulatory limits). If these actions fail, alternative more capital-intensive options must be considered (e.g., installation of automatic flushing hydrants, mixers in storage tanks and looping of water mains). Additionally, in an attempt to proactively reduce water age in new construction projects, the Board took action to changing the thought process in the sizing water mains (35 IL Adm Code 604.1415(b)), minimizing dead end mains (35 IL Adm Code 604.1415(c)) and limiting the quantity of stored water (35 IL Adm Code 604.1300(b) and 604.1340(a)(1)). What the regulations do not require is the issuance of a boil order as some might think/ contend. Specifically, under 604.135(c)(1), excerpted below, low chlorine residual is not a stated criterion in the Board's boil order requirement.

Section 601.101 General Requirements

c) Emergency Operation

1) Boil Order

A) Whenever microbiological contamination is determined to persist in a community water supply, as demonstrated by microbiological analysis results, the owners or official custodians of the supply must notify all consumers as required by subsection (c)(2) to boil for five minutes all water used for consumption or culinary purposes.

B) This boil order will remain in effect until appropriate corrective action approved by the Agency is taken and microbiological samples demonstrate that the water is safe for domestic use.

C) If the owner or official custodian of the supply fails to take the required action, the Agency may issue a boil order directly to the consumers affected.

D) Issuance of a boil order does not relieve the water supply from making public notification in accordance with 35 Ill. Adm. Code 611.Subpart V.

When water systems document samples that are free of bacteria, a low residual (alone) does not indicate that "microbiological contamination is determined to persist." To further consider this point, issuing and relieving a boil order for a low residual in a portion of a water supply distribution system provides very little confirmation that a breach has or has not occurred. To relieve a boil order a system flushes, collects and analyzes a sample (or several samples). If the sample(s) is negative (and chlorine levels are restored, albeit temporarily) the boil order is lifted. In the case of a stagnant portion of the distribution system, this does nothing to solve the underlying (water age) problem. Issuing and subsequently lifting a boil order only documents that, on the day that the sample was collected, there was no persistent microbiological contamination present. If a water system is following coliform monitoring regulations, this has already been established. Again, as one of the proponents of the current Board regulations, my view (and I believe the view of others that provided Board testimony) is that identifying and providing long term solutions to problematic areas of the distribution system is preferable to the flush, sample and forget approach that some might advise/try to require.

If you have any additional regulatory questions, please contact the Association for assistance (maybe your question will be the subject of the next article).

Energy Efficiency Assessment Program

Will evaluate your energy needs, consumption and costs. It will also recommend measures to reduce energy consumption and identify sources of funding for improvements.

STATISTICS SHOW:

Cost of energy is expected to increase 20% in the next 15 years.

Energy use is the largest controllable cost of providing water and wastewater service to the public.

IRWA
ILLINOIS RURAL WATER ASSOCIATION

Rising energy costs represent a major challenge for water and wastewater facilities also facing challenges of:

1) Aging Infrastructure which needs replaced

2)More stringent regulations

3)Population growth

4)Higher operational costs and budget restrictions

Consider ...

The high cost of operating utilities has gotten to the point where the utility has to look at all options available. Keeping the operational costs to a minimum ensures that your rates are the lowest possible and still ensure safe drinking water and wastewater utilities.

What do we assess?

The Energy Conservation Circuit Rider will assess your electric bills, system assets and operational procedures. They will break it down into a usable format with options to explore which will lower costs and a projection of the time to payback .

Why ...

Most Operators spend their time in operational issues to ensure safe drinking water and maintaining compliance. They often do not have the time to dedicate to energy savings or expertise in doing assessments. We can take the time and figure it out for you.

Key Offerings

Find where your system can save money on energy. Not only can your system be more efficient, it can outline which changes can generate repayment the quickest.

What is requested of the system?
- Provide Tour of Facilities for Circuit Rider
- Copies of Energy Bills for at least one year
- Review and Share Energy Assessment with Operators
- Review Financing Alternatives if Feasible
- Implement an Energy Efficiency Plan

15-30% SAVINGS ARE READILY ACHIEVABLE

HOW??

1) MAKE THE COMMITMENT!
2) ASSESS THE FACILITIES
3) ESTABLISH A PLAN

A Few Findings of Assessments

- **System**-Hot Water Heater- 80 Gallon Electric Heater-24/7 in a Filter Room only for Eye Wash Station-Approximately $2,200/Yr Savings
- **System**-Water Loss 75%, System Improvements Save $3,300/year in Electrical For Wells
- **System**-Aeration running 24/7- $11,300 potential savings. Improvement Recommendations- $34,250. Payback 3 years

How Do I Get A Free Energy Assessment?

Contact Dave Speagle
217-820-1560 – cell phone 217-287-2115 – IRWA office
speagle@ilrwa.org

IRWA
ILLINOIS RURAL WATER ASSOCIATION
3305 Kennedy Rd.
P.O. Box 49
Taylorville, Illinois 62568

PRESORTED
STANDARD
U.S. POSTAGE
PAID
Springfield, IL
Permit No. 500