



Water Ways

Volume XVIII — Winter 2021



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



Illinois Rural Water Association



BOARD OF DIRECTORS

PRESIDENT
GREG BATES

Jersey County Water Company

VICE PRESIDENT

DALE HANNER
City of Oakland

SECRETARY

JAY BELL
City of Chenoa

TREASURER

BOARD MEMBERS

WAYNE DIXON
City of Mason City

STEVE FLETCHER
Washington County Water Company

CASEY JOHNSON
Anna-Jonesboro Water Commission

VINCE NEWTON
City of Geneseo

JACQUE PLESE
City of Wilmington

STAFF

FRANK DUNMIRE
Executive Director
dunmire@ilrwa.org • 217-820-4626

DON CRAIG
Deputy Director
craig@ilrwa.org • 217-561-1061

HEATHER MCLEOD
Membership Services Assistant
ilrwahm@ilrwa.org

DENISE BURKE
Administrative/Program Assistant
ilrwadb@ilrwa.org

CLARK CAMERON
State Circuit Rider
cameron@ilrwa.org • 217-820-3814

BRANDON WINDELL
Energy Efficiency Circuit Rider
windell@ilrwa.org • 217-820-1560

EVAN JONES
Circuit Rider
jones@ilrwa.org • 217-820-5508

ROGER NOE
Circuit Rider
noe@ilrwa.org • 217-820-1564

CHUCK WOODWORTH
Circuit Rider
ilrwacw@ilrwa.org • 217-820-1569

MARC LEMRISE
Circuit Rider
lemrise@ilrwa.org • 217-820-0222

DAVE McMILLAN
EPA Program Specialist
mcmillan@ilrwa.org • 217-370-6485

JOHN BELL
Wastewater Technician
ilrwajb@ilrwa.org • 217-820-1568

JEFF MCCREADY
Wastewater Technician
mccready@ilrwa.org • 217-870-4754

MARK MITCHELL
USDA Source Water Specialist
mitchell@ilrwa.org • 217-820-1565

JEFF TUMIATI
Apprenticeship Coordinator
tumiati@ilrwa.org • 217-820-2220

ARTICLES

Circuit Rider Changes	by Frank Dunmire	4
Leaking Service Line	by Chuck Woodworth	5
It's All About Time (Or the Lack of)	by Mark E. Mitchell	7
The Next Generation - A Solution	by Jeff Tumiati	8
Don't Get Left Out in the Cold: Enhance Winter Weather Resilience with Mitigation.....	by Gabrielle Minton	9
Repairing Water Lines by Freezing.....	by Evan Jones	19
Time Goes by Fast	by Steve Fletcher	21
You Can't Make This Stuff Up!	by Wayne Nelson	23
Free Rate Study.....		18
Where in Illinois is this Located?		18
Member Services		
Annual Conference		17
Safe Lifting Guidelines.....		22
The ABC's of ILRWA.org		25
GPS/GIS Mapping Services		26
Video Inspection Services.....		26

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 scenic photo was taken by Jeff McCready, IRWA Wastewater Technician, from an overlook area between Galena and Elizabeth.

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.



LIST OF ADVERTISERS

Aqua-Aerobic Systems, Inc.....	16
Cady Aquastore.....	14
Coe Equipment, Inc.....	27
Curry & Associates Engineers, Inc..	15
Hawkins Water Treatment Group. .	15
Heneghan & Associates, P.C.....	6
LOCIS, Inc.	27
Maguire Iron	27
MECO Engineering Co. Inc.	27
Pittsburg Tank & Tower Maint.	13
Putnam County Painting, Inc.....	13
Ressler & Associates	24
Schulte Supply, Inc.....	2
Suez Advanced Water Solutions (Utility Service Co., Inc.) . . .	12
Taylor Coating Sales, Inc	11
The Ford Meter Box Co., Inc.	24
United Systems & Software	13
USA Bluebook	28
Water Treat Technology.....	15

Circuit Rider Changes


*by Frank Dunmire,
IRWA Executive Director*

As most of you are aware, Illinois Rural Water Association was awarded a fourth Circuit Rider (CR) through the National Rural Water Association late last spring. The funding for this position was provided through the USDA's Rural Utility Services and was sufficient to place additional CRs in 12 states and place 3 special CRs in Puerto Rico. Originally, IRWA had coaxed Kevin Plate out of retirement to fill the position of CR4 for IRWA. Kevin ensured that all requirements of the CR4 were not only met but exceeded. At the end of October, the new five-year CR contract was awarded to NRWA, but it did not contain funding for the additional CR positions. Kevin was quite relieved that the CR4 position was not funded as he was really wanting to get back to the retired life. Thank you, Kevin, for a job well done!

Not wanting State Associations to lose any programs, NRWA immediately set about trying to get the funds reinstated. It did not take long and funding for those positions was reinstated effective December 1, 2020. IRWA quickly advertised for Kevin's replacement and received resumes from several qualified candidates. After the interview process it was apparent that one applicant was heads and shoulders above the others. I am pleased to announce that Marc Lemrise of Tonica, Illinois will begin his new career as IRWA's CR4 beginning January 4, 2021.

Marc began his career in the water and wastewater field on the industrial side working for Del Monte Foods in Mendota, Illinois. While at Del Monte, Marc was responsible for the maintenance and operation of a 1.5 million gallon per day 1300 horsepower three cell aerated lagoon system incorporating surface aerators, solids removal equipment, pumping stations, field irrigators and all related equipment and personnel. Marc also operated and maintained three deep well systems powered by 100 H.P. five-stage turbine pumps feeding a 250,000-gallon water tower. Disinfection was achieved with the use of a gas chlorination system and was followed by further treatment of process waters by ion-exchange softening, manganese greensand and /or carbon filtration. In 2001, Marc left Del Monte to enter the public sector and began work at the Village of Tonica.

Marc was the Superintendent of Public Works for the village for 19 years and was responsible for maintaining all compliance issues with IEPA, operation and maintenance of water and wastewater treatment plants, building maintenance, collection and distribution systems, public relations, management, and supervision of personnel. Marc holds both a Class A water license and a Class 1 wastewater license. Welcome aboard Marc!

With the addition of the fourth CR, some changes will be made to the areas they will be servicing. Marc will be servicing the Northern most part of Illinois while Evan will now be covering the West Central part of the state. Chuck will be servicing the East Central part of the state and Roger the Southern part of Illinois. We will be developing a map in the near future and post it on our website. 



Leaking Service Line

by Chuck Woodworth,
IRWA Circuit Rider

It's that time of the year to hear that four-letter word that no one likes to hear or say. I have to say it in order to be able to continue this article, ready or not here it comes...leak. This past fall, most of the leaks that I have located have not been coming to the surface. I get asked often why it doesn't come to the surface. The most logical answer I can give is when the leak starts out small and the soil conditions are right the water leaving the pipe or joint saturates the area. When the saturated area gets big enough to surround a field tile, the water starts seeping into the tile and the longer that it seeps into the tile the more soil it starts to take with the water. Before long, it has a void area directly

from the water main to the tile. Over time the leak becomes bigger, taking more soil with it while making the void bigger. Recently I was called for a leak on a copper service line where no water was coming to the surface and the customer had low pressure.

When the actual leak spot was dug up there was a void area large enough that I could put the entire shovel in the void and twist it around and only touch the copper service line. I should have taken a picture of the void but I didn't think about it. The leaking water was still going down following the voided area to wherever it was going, more than likely a field tile. What caused the leak?

A few years ago, the Village released bids for a contractor to install a sewer collection system. The current water operator was not the operator during the construction of the new sewer system. At this point, we can only guess what took place back then according to what we found during digging up this leak. The water main is on the north side of the street and the service line feeds a customer on the south side of the street. The new sewer was installed down the middle of the street. What we found was a $\frac{3}{4}$ inch copper service line leaving the water main almost to the center of the street and the service line changed to 1 inch. At this



continued on page 6

¾ to 1-inch fitting is where the leak was, and the fitting was about 3 feet from the new sewer pipe. We assume the contractor cut the service line in order to install the sewer pipe below the service line. As to why it changed to 1 inch, we don't know. As you can see in the picture, the fitting was not installed all the way on the copper pipe, the fitting was only on about ¼ inch. We also think it started leaking sometime soon after the hole was backfilled. The water blowing out from the fitting wore the other two holes into the copper pipe. Most people do not realize how much force spraying water has when it is under pressure. If you are one of those people you should check out some YouTube videos of water jet cutting. The operator dug to the other side of street and replaced the copper line from grass area to grass area so there would be no fittings under the street, making sure that the new fittings were installed all the way on the copper, like they are supposed to be.

Another town this past fall knew they had a water leak and it was coming to the surface. When the sewer collection system was installed, the engineering specs called for the pipe to be

bedded and covered with CA7 rock. Anytime they have a leak where the contractor crossed water mains, where do you think the water goes? That's right, to the CA7 rock leach field that is all over town. Good luck waiting for those to come to the surface. Most of the water mains are cast iron and they do have some AC pipe as well. Then, my most recent leak location was at a spot where the clay tile was about an inch away from the water main. You guessed that right- the leak was going directly into the tile. The leak was on cast iron pipe. Other leaks that don't come to the surface when you think they should, I can't give you a reason why they don't other than it just decides not to. Water is lazy and it will follow the path of least resistance. Wayne Nelson told me that when I first started locating leaks for IRWA somewhere around 1999. For you newer operators who might not recognize that name, Wayne was one of the Association's long-time employees who retired from the Association a few years ago. He held several positions within the Association ending with being the training specialist. 💧



HENEGHAN & ASSOCIATES, P.C.

Engineering Solutions Since 1986
www.haengr.com
888-291-7615

Water Treatment Plants
Ground Storage Tanks
Elevated Tanks
Pump Stations

Storm Water
Conceptual Design
Permitting
Grant Writing

"Dedicating Our Services to Strengthen Client Trust"

Centralia ♦ Columbia ♦ Jerseyville ♦ Arnold, MO



It's All About Time (Or the Lack of)

*by Mark E. Mitchell,
Source Water Protection Specialist*

How many times have you wished that your days could have more hours, your weeks have more days, and more weeks in a year, to get everything done that is required and expected from you?

Another year's end is fast approaching and by the time you are reading this, another year will be underway. How many times this past year did you say, "When I get all caught up with all that is required of me, I want to take some time to do some things that I have needed to do, but have not had the time"? I know that has been the case all too often for me. Unfortunately, it seems like "getting all caught up" seldom arrives and when it occasionally does, it doesn't last very long. Some pressing issue comes up and another fire must be put out. So, the best intentions go out the window, and another year passes and we never got those little extras completed that we had such high hopes for. I have also found that the things that I make my highest priority, I somehow find the time for them. I find time to do the things I enjoy doing but those things that are unknown, mundane or require my personal time are easier to "postpone" for a day when I have more time. We don't get more time. Now we have one more thing we must do, but thankfully IRWA remains focused on assisting small public water supplies develop and implement Source Water Protection Plans.

I think one of the hardest things for me to do, with all the distractions we all have around us, is to stay focused on JOB 1. The distractions are legitimate work items, but without focus on JOB 1, it doesn't matter. Emails come in and I try to answer it quickly and it might produce a day of distractions trying to track down that elusive answer. I guess the lesson here for me, is that I need to prioritize my responsibilities on those things I must accomplish and make sure the things that are most important, are not always the things that are fun or easy, are given the highest priority.

My thoughts, of course, as always, are centering on finding or making the time to protect Illinois' source waters. I have said it before and will say it again, all those rules and regulations won't mean a thing if you

do not have a good and protected source of potable water. If you no longer have a viable source for water, then a lot of the responsibilities that are piled on you now will be gone. Will you become an unnecessary liability as well?

Also, I need to remind everyone about keeping Emergency Operating Plans updated, and for those of you with Special Exceptions Permits and utilize unconfined aquifer wells, you have spent the better part of the last 9 – 12 months developing and/or updating a Source Water Protection Plan. A program, in Illinois, that from inception, had always been a voluntary program, has now become a mandate largely due to lack of participation in a voluntary program.

Those of you who have been wanting to start a Source Water Protection Program, yet just can't seem to find the time to do so, your time to shine is approaching because a one year roll in of public water supplies in Illinois being required to develop and implement SWP Plans is almost one year in; and there is likely another group of you that are possibly wondering how to proceed...may I suggest contacting IRWA for assistance. 💧



The Next Generation - A Solution

*by Jeff Tumiati,
Apprenticeship Coordinator*

I would like to introduce, or reintroduce myself to some, and let you know about a brand new, much needed and exciting program that will be starting soon here at Illinois Rural Water Association. USDA's Rural Development, through Water Association. USDA's Rural Development, through National Rural Water Association, has awarded funding to start Apprenticeship Training Programs nationwide. IRWA was recently awarded a grant through NRWA and I am proud to say that I am now the first Apprenticeship Coordinator for Illinois Rural Water Association. For those of you that know me, you will remember me as the guy that was always asking who is going to take over for us when we ride off into the sunset. Who will be able to safely operate and maintain our communities' water and wastewater systems? After serving on the IRWA Board of Directors for sixteen years and working as a water and wastewater operations specialist for my hometown for thirty-three years I have been blessed with this great opportunity.

Several years ago, I wrote an article for IRWA's magazine and that story's title was "The Next Generation". That article was based on one great Saturday where I was able to play a small part by taking the IRWA's mobile training unit (MTU) to a local school in southern Illinois. We had groups of children from the surrounding area come through the MTU to learn about water and wastewater in their communities and what it took to provide such a necessary service. The children brought water samples from their homes and we helped them preform testing on the samples at laboratory stations we had set up in the MTU. As I watched the youngsters eagerly run their tests and answer all their questions, I could not help but think about all of the training sessions, operator meetings, and conferences that I have attended over the years. You have probably guessed where I am going with this – all those gatherings where you look around the room

and realize that there are not very many (if any) young folks in attendance. That is when you begin asking – where is the next generation of water/wastewater operations specialists coming from.



During the last several weeks we have been extremely busy developing our Standards of Apprenticeship, which is just one component in gaining approval for being a part of a nationally recognized apprenticeship program. When we first started working on our standards, this old dog was forced to learn some new tricks as most of the work has been through webinars, Go to Meetings and Zoom Meetings. I am not a professional at it, but I can at least find my way around the remote meeting apps now.

The next step is the review process before finally submitting the standards to the Illinois Department of Labor for final approval. Once we get that approval, we will actively be seeking apprentices and employers and trying to match them up. There will be a separate apprenticeship program for water and wastewater operations specialists. Each of the water and wastewater apprenticeship programs will take two years to complete and consist of a great mix of curriculum consisting of in person sessions with some being instructor lead and others being hands on type training. We have also included required home study and self-paced online training courses dealing with safety and technical knowledge for each of the four six-month

continued on page 11

Don't Get Left Out in the Cold: Enhance Winter Weather Resilience with Mitigation

by Gabrielle Minton,
Physical Scientist
U.S. Environmental Protection Agency

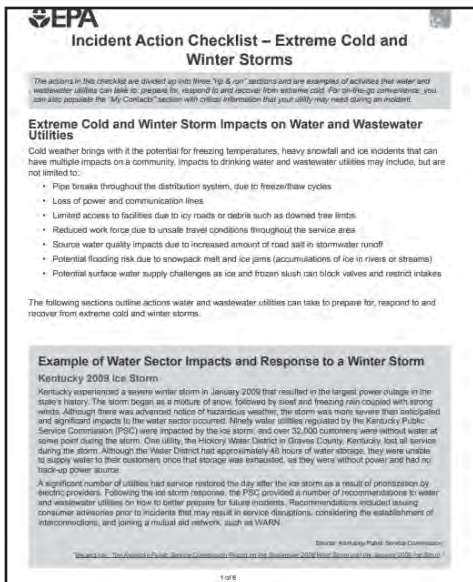
The services provided by drinking water and wastewater utilities are vital to the health and resilience of a community. However, extreme winter weather, including floods, blizzards, and ice storms, can present challenges to maintaining drinking water and wastewater services, underscoring the need for long-term resilience solutions in the water sector.

The National Oceanic and Atmospheric Administration's (NOAA) forecast for the 2020-2021 winter season predicts warmer, drier conditions in the southern tier of the United States and colder, wetter weather across the northern tier, due in part to an ongoing La Niña. To better prepare for the upcoming winter season, your utility can take steps before, during and after winter weather events using the U.S. Environmental Protection Agency's (EPA) suite of easy-to-use tools and resources.

Prioritize Your Utility

The winter season can bring freezing temperatures, heavy snowfall, ice, and flooding. These conditions can cause power loss and infrastructure damage, such as pipe breaks and flooded facilities.

The EPA has developed the Extreme Cold and Winter Storms Incident Action Checklist (IAC) to help utilities prepare for, respond to and recover from extreme winter weather events.

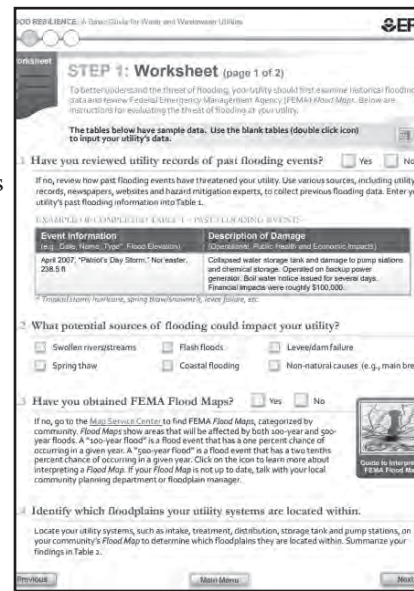


The planning measures outlined in the Extreme Cold and Winter Storm IAC encourage utilities and community partners to work together before potential incidents to plan for power restoration, plowing, and road salting or sanding. Making sure your utility has priority can keep your staff safe and ensure

customers have a reliable source of water before, during, and after a disaster. Similarly, confirming your utility's response access credentials with local law enforcement before an incident can make all the difference when staff are urgently needed to restore facility operations.

Steps Toward Resilience: Understand Threats, Identify Vulnerabilities, and Determine Consequences

Floods are one of the most common and widespread weather-related incidents. They can be caused by a variety of weather events, including rains that follow significant snow and ice accumulation. EPA developed the Flood Resilience Guide: A Basic Guide for Water and Wastewater Utilities for your utility to use to minimize damage and rapidly recover from disruptions to service. The Flood Resilience Guide presents a four-step process for building resilience to winter-related flooding emergencies.



For each step, the Guide provides worksheets outlining actions your utility can take to prepare for, respond to, and recover from winter season floods. These actions can include reviewing utility records of past flooding events to determine the magnitude of threat to your utility and identifying the specific causes of past flooding incidents, such as ice jams or snow melt. These steps will ensure the mitigation measures are economical, practical, and effective at protecting your utility and customers.

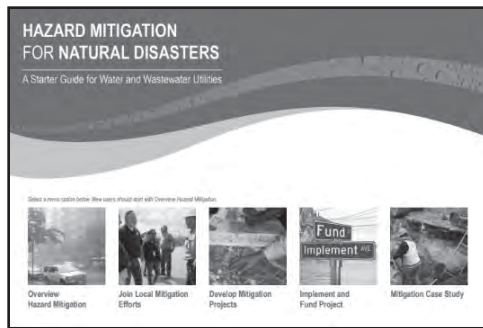
continued on page 10

Don't Get Left Out in the Cold: Enhance Winter Weather Resilience with Mitigation

continued from page 9

Transform Preparedness into Mitigation

While preparedness measures can strengthen your utility's resilience to extreme winter weather, putting long-term mitigation planning for incidents into practice is the most effective way to ensure your utility and community can better withstand and recover from disasters. To assist planning for long-term mitigation projects, EPA's Hazard Mitigation Guide for Natural Disasters provides examples of mitigation projects for disaster scenarios that drinking water and wastewater utilities may encounter during a winter storm, such as purchasing or renting a generator to prepare for winter season power outages and elevating wellheads to mitigate the impacts of flooding from snow melt or ice jams. The Guide encourages drinking water and wastewater utilities to work with their local mitigation planners to execute priority projects that are consistent with the overall community strategy.



The Hazard Mitigation for Natural Disasters Guide also includes information on eligibility for funding, such as federal grants or loans, to support mitigation work. This includes the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Grant Program (HMGP) which can be used by communities to implement hazard mitigation projects following a Presidential Disaster Declaration.

Identify Federal Funding Opportunities for Mitigation

There are several federal programs, including HMGP to help utilities understand and obtain federal disaster and mitigation funding. EPA developed the Federal Funding for Water and Wastewater Utilities in National Disasters (Fed FUNDS) tool so that utilities can quickly screen funding programs from U.S. Department of Housing and Urban Development, U.S.

Department of Agriculture, Small Business Association, FEMA and EPA to identify those that are applicable to your utility. It also provides examples of successful utility applications and tips for funding.

Consolidate Information in an Emergency Response Plan

Another key aspect in planning for and responding to winter weather incidents is developing a robust Emergency Response Plan (ERP). An ERP describes strategies, resources, plans, and procedures to prepare for and respond to a natural occurring or man-made incident. Under America's Water Infrastructure of 2018 (AWIA) Section 2013, community water systems serving over 3,300 people are required to develop or update an ERP. The information, plans and procedures developed when utilizing the Extreme Cold and Winter Storms IAC, Flood Resilience Guide and Hazard Mitigation Guide for Natural Disasters contribute to the foundation of your ERP. Compiling this information provides a clear and concise process for emergencies and fosters a culture of preparedness at your utility.

Interested in Learning More?

To learn more, visit www.epa.gov/waterresilience or join the What's Going On newsletter email list by contacting WSD-outreach@epa.gov. With the help of EPA's free water resilience resources, you can help ensure that your utility continues to provide safe and reliable services to your customers during emergencies. 💧

"U.S. Winter Outlook: Cooler North, Warmer South with Ongoing La Nina." U.S. Winter Outlook: Cooler North, Warmer South with Ongoing La Nina | National Oceanic and Atmospheric Administration, 15 Oct. 2020, www.noaa.gov/media-release/us-winter-outlook-cooler-north-warmer-south-with-ongoing-la-nina.

The Next Generation - A Solution


continued from page 8

training periods. The two-year program requires successful completion of 288 hours of curriculum and 4000 hours of documented on the job training. This is a systematic training program which means as the apprentice successfully completes the necessary training, testing and documented on the job training hours for each period they would proceed into the next 1000-hour period. Included in that progression to the next period would be a required wage increase.

After successful completion of

all requirements of the program, an apprentice would be awarded a Certificate of Completion of the Apprenticeship Program. This Certification is provided by the United States Department of Labor, Office of Apprenticeship and it will be accepted throughout the nation.

In closing, I would like to say how extremely excited I am about being able to promote this new program. Be proud of what you do each day as you are working in the water and wastewater field and know that you do make a difference

by providing safe potable water and/or properly treating wastewater before returning it to the waterways of Illinois. Until we meet again, stay healthy, work safe and best wishes. 



ProTuff™
**LESS DOWNTIME.
MORE PERFORMANCE.**

ProTuff surface-tolerant epoxy coatings from Tnemec allow projects to continue even when coating conditions are not perfect. These unique coatings are formulated for overcoating and adhering to the substrate when the ideal surface preparation is not achievable, surfaces are damp or temperatures are below the dew point. For more information about these products, or to discuss your project, contact your local Tnemec representative today.

Northern Illinois

Erik Otten

Taylor Coating Sales, Inc.
(708) 387-0305
eotten@tnemec.com

Western Illinois

Keith Kennett

Taylor Coating Sales, Inc.
(309) 945-2094
kkennett@tnemec.com

Southern Illinois

Mike Cerutti

Coating Solutions, LLC
(314) 703-8042
mcerutti@tnemec.com



+1 816-483-3400
tnemec.com



global expertise
delivered locally

**services to help you
manage your system**

- ▶ **asset management**
steel & concrete tanks | treatment plants |
pipes | meters | water wells
- ▶ **water quality in
distribution systems**
in-tank water mixers | trihalomethane removal
systems | disinfectant residual control system
- ▶ **smart metering services**
- ▶ **water wells management**
well & pump rehabilitation & maintenance |
water well drilling



An ISO 9001:2015 Quality Assured Company

Contact Us:

Bill Murfree (Northern IL)
Ben Roberson (Northcentral IL)
Phil Knight (Southern IL)

855-526-4413

ask@suez.com

Utility Service Co., Inc.

www.suez-na.com

Putnam County Painting, Inc.

210 Mark Industrial Park
Mark, IL 61340
815-339-2587



Pressure Tank Rentals
6,000-10,000 Gallon Tanker
Tank Cleaning/Inspection
Riser Pipe and Expansion Joint - Repair/Replacement
We have Riser Pipe and Expansion Joints in Stock, 6"-12"
Complete Replacement, Fast Turn Around

STRUCTURE. & INTEGRITY.

**PITTSBURG
TANK & TOWER
GROUP**
An ESOP Company Since 1919

"100 years and still climbing"

**CREWS
AVAILABLE
GLOBALLY**



WWW.PTTG.COM



INSPECTIONS REPAIR TANKS



Wet	Code	Elevated
Dry	Updates	Ground
ROV	Paint	Relocation
In-Service Cleaning	Insulation	Erection Dismantles

NEW TANKS – Rick DiZinno
(270) 826-9000 ext. 2601

EXISTING TANKS – Jordan Pyles
(270) 826-9000 ext. 4601



Water Loss Management | Remote Disconnect
Itron AMR / AMI | Kamstrup Water Meters
Utility Billing & Financial Software

The area's exclusive Itron Water solution distributor!

Scott Smith, Region Manager
Mobile: (270) 703-0697

Email: scotts@united-systems.com

Toll Free 1.800.455.3293 | www.united-systems.com

United Systems



AQUASTORE®

WHAT'S INSIDE MATTERS

DON'T SETTLE FOR LESS THAN THE BEST

SPECIFY VITRIUM™ PREMIUM TiO₂ TECHNOLOGY

The interior of ALL Aquastore® tanks feature proprietary Vitrium™ coating technology enhanced with titanium dioxide for the toughest glass available.

GET THE QUALITY YOU DESERVE

- Tough TiO₂ glass formulation provides longer life
- White interior is easier to inspect than darker coatings
- Electrostatically applied base coat application ensures consistent quality
- Factory certified "holiday-free" sheets
- Designed for use in both cold and hot climates
- Designed, fabricated, shipped and supported within the USA



Call today (815) 899-5678
or visit cadyaquastore.com

©2016 Cady Aquastore, Inc. Aquastore is a registered trademark and Vitrium is a trademark of CST Industries, Inc.

Represented in Northern Illinois
Peterson & Matz Inc., Elgin, IL
Ph: (847) 844-4405

Represented in Southern Illinois
Municipal Equipment Co., Inc., St Louis, MO
Ph: (314) 645-2400



Chemicals, Equipment and Service for Safe, Clean Water



Celebrating over 80 years of serving our customers!

WATER TREATMENT

- Potable Water
- Raw Water Clarification
- Swimming Pools
- Wastewater Treatment
- Bioaugmentation Solutions
- Sludge De-Watering
- Waste Settling Aids
- Collection Systems

EQUIPMENT

- Chemical Injection Pumps
- Control and Monitoring Systems
- Chlorination Control Systems
- Chemical Feed Equipment

Centralia, IL
618.545.3775

Peotone, IL
708.258.3797

Havana, IL
309.543.2152

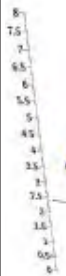
www.hawkinsinc.com
800.328.5460

Water Treat Technology

Robert Risley, Class 1 WWTP Operator

www.water-treat-tech.com

Phone: (618) 923-0520



WWTP Support, Consulting
& Solutions

RC Boat *Sludge Surveys*





General Municipal & Industrial
Water Plants & Distribution Systems
Pump Stations & Water Storage Tanks
Wastewater Plants & Collection Facilities
Site Development & Stormwater Mgmt

P.O. Box 246
243 East Elm
Nashville, IL 62263

Telephone: 618.327.8841 www.curryassociates.com
Telefax: 618.327.3576 Email: info@curryassociates.com

MAKE THE SWITCH IMPROVE YOUR DITCH



OXYSTAR® ASPIRATING AERATOR

Wastewater operators across the country are seeking more efficient aeration technology to improve or upgrade their oxidation ditch process in an effort to reduce operation and maintenance costs, increase treatment capacity and improve equipment reliability.

The **OxyStar**® aspirating aerator is the ideal solution that provides these and other advantages compared to brush (rotor) and disc type aerators, which are typically less efficient and more costly to maintain.

- No gear boxes or submerged bearings
- Minimal maintenance due to very few moving parts
- Simple installation without disrupting treatment
- Robust design for a variety of basin types
- No splashing or misting
- Low noise and odor



Float-mount units also available.

New Plant Construction | Existing Plant Upgrades and **Retrofits** | Plant Expansions



AQUA-AEROBIC SYSTEMS, INC.
A Metawater Company

www.oxy staraerator.com | 815-654-2501



Due to the current climate of the COVID-19 pandemic, IRWA has decided to move to “Plan C” and postpone the Annual Conference to June 15 & 16, 2021. The location will still be the Keller Convention Center in Effingham, IL.

All room reservations for the hotels listed in the agenda have been notified of the new dates, but please call them to transfer your rooms.

We will still be following CDC guidelines and limiting the number of attendees and exhibitors. For complete details of guidelines and updates go to www.ilrwa.org and click on the conference link under the upcoming events on the home page.

All activities that are usually held with the conference will also be postponed until this time (Best Tasting Water Contest, Scholarship, Annual Meeting and At-Large Caucus). Look for attendee information in your mailbox in April.

Until then stay healthy rural water! We look forward to seeing your faces again!

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.

Repairing Water Lines by Freezing

by Evan Jones,
IRWA Circuit Rider

So, not too long ago, I ran across something that I have not seen done in a while, and that I do not really hear about a lot of guys doing it much. This would be freezing water lines to stop the flow to fix leaks. When I first started in the industry, I had heard a lot of talk from some old timers on freezing water leaks. One of the best stories I heard was from my dad, who for those that do not know, is a plumber and pump installer. Anyway, here is his story that I will always remember.

My father had won a bid shortly after he had gone into business for himself at the local foundry in Havana where we lived. He was still working to build his company and did not quite have all the equipment that he needed to do everything at the time. He and one of his employees were working on the 2 inch drop lines that ran all over the foundry that provided water for heating, cooling and domestic uses. This particular area of the foundry was next to a big door that they ran forklifts through. And as you can guess yes, this drop line from overhead, had been hit more than once during a break time race between the guys. This being the case, management wanted the line removed so that future forklift work (aka. races) would not cause a massive water leak. So ole dad and his employee tracked down the line to the valve, which low and behold did not work.

I guess I should have told you, in this foundry all the main water lines are run overhead, so as you can imagine, there is a lot of water up high...even if you were to shut down the entire building which was not an option to remove one drop pipe. So, they started brainstorming on how they would kill the line with minimum drain-back and without shutting off the water to the

entire facility. They decided to freeze the line. The only thing with that however, was my dad had just started going out on his own and did not have a freezing machine, and he still doesn't for

that matter. So how else, do you ask, do you freeze a line without a freeze machine? Well, you get creative and think outside the box and start collecting CO2 fire extinguishers from all over the building. They devised a plan, after a little practice, that if you



continued on page 20





brand of setup is called Qwik-Freezer portable pipe freezing equipment. Once this is attached and all workers are out of the ditch, the process of freezing the line is to flow CO2 for two minutes, let it rest for one-minute, flow for two minutes, rest for one-minute, and flow for two minutes while moving the pillow attached to the service line so that it does not freeze the copper line. The reason behind flowing CO2 at intervals, is so that the pipe does not freeze too fast causing it to split, and then you would have another leak on your hands.

The gentleman I watched after the freezing was complete, had approximately twenty minutes to cut and install a valve before the ice plug thawed out. This allowed them to work in a relatively dry hole and not have to shut down the water main and

held the extinguisher at the right angle the dry chemicals did not release in a great quantity when you discharged the CO2. So, that being said, you now have an improvised freeze machine. Dad's employee started discharging up near the ceiling from a man-lift as my father cut and threaded the pipe for a cap underneath him about halfway to the floor. It worked, I will give them that, but of course they had a mess. But, the bottom line is, they got it done.

Well now that I have told my little tale from my childhood, I'll get back to telling how I watched two guys freeze a line to fix a copper service line. They started out excavating the line at the leak then dug out about six feet from that point. They cleaned the pipe and secured an insulated pillow that had a rubber line attached to it and the other end was attached to a CO2 tank. This

continued on page 21



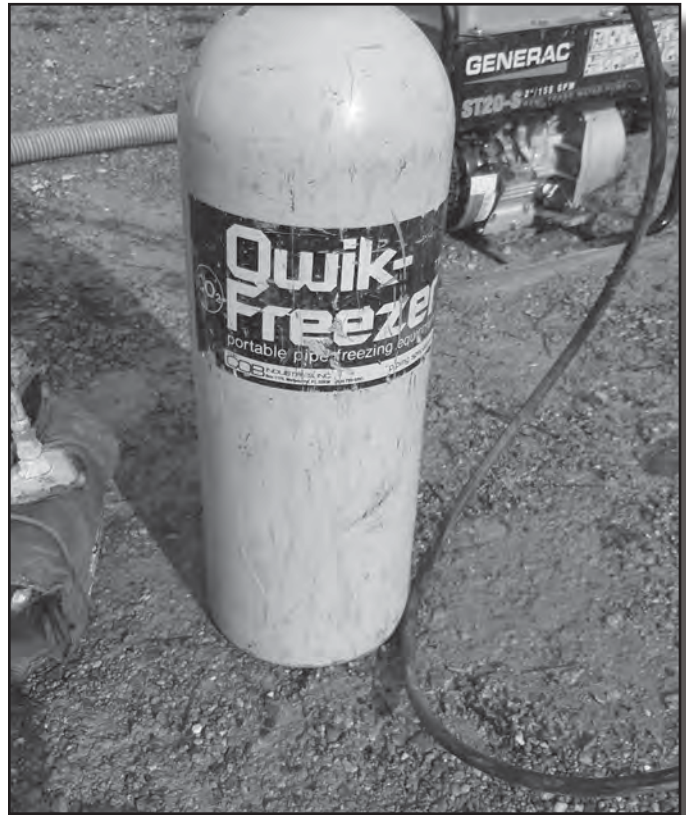
Repairing Water Lines by Freezing

continued from page 20

require a boil order. This process works well and is relatively a cheap solution for slowing or stopping flow to repair service lines. I know many of you out there have been using this method with some brand of equipment or another, but for some of the younger generation that are new to the industry, they may have not have even heard of this process.

There are many ways to stop or slow down the flow on a service line. These range from simply throttling down main line valves, crimping copper or plastic lines off and using insertion plugs to stop the flow. They will all work, but you just have to find the one that you are most comfortable with and what is the best for you. If you have any questions about ways to stop or slow water flow, give your Circuit Rider a call and we will be happy to help.

I hope you all had Happy Holidays, and let's hope this year is better than the last! 💧



Time Goes by Fast

by Steve Fletcher,
National Director

As we get older, our priorities and our personalities change. I have found this to be true in my own life. What used to be important, now may not be so.

As an example, in my younger days, work took time away from my family. Don't get me wrong work provided for my family, but looking back, I missed out on quality time with my wife Jane and two kids. Playing softball several nights a week and weekends, now doesn't seem important at all. I wish I could make that time up!

Now, as my family has gotten older, I try to spend as much time as I can with them and the grandkids as possible, to try to make up for time past. I think as we all get older, we become more melancholy about our past. I believe we regret things that we could of handled differently. Whether it be a task or interacting with someone. Being nicer to people and easier to get along with are traits that we need to improve on. All of us!

I'm not sure if my thoughts are connected or not. But the point is:

1. Remember to spend time with your family. Your kids will remember those times.
2. Most of our worries are never as big as we may think they are. Don't let it affect your life.
3. Be a good person to everyone. A smile may be more important to the receiver than the giver!
4. Take time to smell the roses. Make time to stop by and visit your older relatives and friends. It could be the last time.

I hope 2021 turns out to be a wonderful year for you and your family!

RIP Doug Anderton 2020 💧



THE CINCINNATI INSURANCE COMPANIES

□ THE CINCINNATI INSURANCE COMPANY □ THE CINCINNATI INDEMNITY COMPANY
□ THE CINCINNATI CASUALTY COMPANY □ THE CINCINNATI LIFE INSURANCE COMPANY
□ THE CINCINNATI SPECIALTY UNDERWRITERS INSURANCE COMPANY

Loss Control Services Publication

Technical Bulletin

Safe Lifting Guidelines

Injuries from manual lifting occur in every type of work environment. From an office environment to a foundry, the potential for back injuries exist. The best way to reduce the chance of a back injury is to engineer the manual lifting out of the operation. Here are some guidelines to consider when looking to eliminate or reduce the amount of manual lifting in a given task:

- **Eliminate Handling.** Analyze the manual lifting operations. Find ways to eliminate manual handling tasks.
- **Planning.** Details of material handling should be planned before actual work is started. Ensure the area is unobstructed and free from all hazards. Select the correct equipment, identify and analyze steps that can go wrong, and plan procedures to deal with potential problems.
- **Design and Selection.** Material handling equipment must be properly designed and selected for the job. For example, a conveyor that moves material above workers must have overhead protection to protect the worker from falling objects.
- **Use.** Equipment must be used properly and as intended. Loads on material handling equipment must not exceed safe load limits.

When you lift an object, it's important to keep your back in alignment and balance. If you bend at the waist and extend your upper body to lift an object, you upset your back's alignment and the center of balance. Your spine is forced to support the weight of your body and the weight of the object you are lifting. You may avoid "overloading" your back by using good lifting techniques. For example, when you bend at the knees and hug the object close to your body as you lift, you keep your back in alignment and let your thigh muscles do the actual lifting.

When you have exhausted engineering options or found it impossible to engineer manual lifting out of the job, good lifting techniques should be used. Here are some guidelines on safe lifting:

- perform manual lifting between knuckle and shoulder height;
- think each job completely through before beginning;
- get a good grip on the load before lifting;
- test the weight before total lift. If it is too heavy, get help;
- place the load close to the body;
- avoid twisting your back;
- avoid bending sideways while lifting;
- avoid lifting with your arms extended;
- if the load gets too heavy, put it down, do not continue the heavy lift;
- ensure you are in good enough physical shape to perform the task;



Taking into consideration the safe lifting guidelines, here are some basic steps to manual lifting.

1. Place your feet apart, with one foot in front of the other for good balance.
2. Bend your knees, not your waist. This will help you keep your center of balance and let your thigh muscles do the actual lifting.
3. “Hug” the load. Keep the load as close to your body as possible.
4. Lift gradually and smoothly without a jerking motion.
5. Avoid twisting. Twisting can overload your spine and may lead to a more serious injury. Make sure your feet, knees, and torso are pointed in the same direction when lifting.
6. Place the load down exactly as it was lifted.

Train your employees on the safe lifting guidelines and teach them the proper use and limitations of the material handling aides. They should be able to demonstrate proficiency in using the material handling equipment before they are to use it. Employees should be trained to ask these questions before conducting a manual lift.

1. Is it too heavy for me to lift alone?
2. Do I need to get help from a co-worker?
3. Can I use a material handling aide, such as a hand truck, cart, or lift?

Ref: *Safety Leader's Discussion Guide*, Division of Safety & Hygiene Publication, 1997.

For service and additional information, please contact your local independent agent. Our loss control service is advisory only. We assume no responsibility for management or control of customer loss control activities nor for implementation of recommended corrective measures. This report is based on public information. We have not tried to identify all hazards. We do not warrant that this information is consistent with Cincinnati underwriting guidelines or with any federal, state or local law, regulation or ordinance. 6200 South Gilmore Road, Fairfield, Ohio 45014-5141.

You Can't Make This Stuff Up!

by Wayne Nelson

The great philosopher Forrest Gump once said “Stupid is as stupid does.”. These six words say it all when you look at the picture of this fire hydrant with a rather large tree planted between it and the hydrant’s shut off valve.

The crew of a public water supply was conducting its semi-annual flushing program when they came across this situation. The tree is close enough to the hydrant that the steamer nozzle cap cannot be removed. Of course, it is also obvious that the operating nut cannot be smoothly opened. To make a bad situation worse is the fact that the tree is also planted directly on top of the water main hub serving the hydrant. What could happen first? The weight of the tree breaking the pipe or the roots from the tree wrapping around the pipe?

We’ll never know the answer to this since the system sent a letter to the homeowner giving them 14 days to remove the tree. The tree is now in a better place.



Keeping Your Water Safe



**Filter Underdrains
Chlorination Equipment
UV Disinfection
Water Quality Monitors
Mixers/Flocculators
Chemical Feed Pumps
Lime Slakers
Membrane Systems
Aeration
Spare Parts & Replacements**



**P.O. Box 4018
Ballwin, MO 63022
Phone: 636.391.8992
Fax: 636.391.1544
www.resslerassociates.com**



Secura-Lok

Patent Pending

**Ford Meter Box[®]
Locking Ball Valves**



SECURE YOUR DECISION



Lock Open • Lock Closed • Lock Operational

www.fordmeterbox.com • 260-563-3171



What are you looking for?

The ABC's of ilrwa.org

- **Advertising in Water Ways information** (Ad agreement and links) - Publications/Advertising Information
- **Becoming a Certified Water or Wastewater Operator**—Training/Sidebar links
- **Boil Order Notice**—Resources/Downloads
- **Certification Overview from IRWA**—Training/Sidebar link
- **Certified Water Operator Contract**—Resources/Downloads
- **CEU Forms from past conferences**—Resources
- **CEU's from CD training**—Training/Sidebar link
- **Cross Connection** (manual, survey & ordinance) - Resources
- **Current hot topics and upcoming events** - Home
- **E-CCR**—Services
- **Energy Efficiency Assessment**—Services
- **For Sale/Wanted**—Resources/Sidebar link
- **Forming a new water district**—Resources/Downloads
- **GPS/GIS**—Services
- **Industry Organizations**—Resources
- **Lead Testing**—Downloads/Sidebar
- **Leak checklist and how much am I losing flyers**—Resources/Downloads
- **Legislative Information** – Who is my rep?, House and Senate bills that IRWA is following —Resources
- **Mutual Aid**—Resources/Downloads
- **NFP Tax Forms** — Resources/Downloads
- **NRWA Fleet** - Membership (click on the NRWA logo);
- **Operator Groups**—Resources
- **PFAS**—Home
- **Rate Study**— Services
- **Red Flag Act**—Resources/Downloads
- **Revolving Loan Fund**—Services
- **Smoke Testing forms**—Resources/Downloads
- **Speaker Request Form for Conference** —Training/Conferences
- **Tracer Wire Specs**—Resources/Downloads
- **VA/ERP/Contingency Plans**—Resources/Sidebar link
- **Video Inspection Services**—Services
- **Wastewater CEU information**—Home
- **Water Loss Handouts**—Resources/Downloads
- **Water University**—Training/Sidebar link



GPS/GIS MAPPING SERVICES



Through the implementation of GPS & GIS technology, IRWA can effectively produce hard copy and digital maps. With this service available from IRWA, utilities can attain new and accurate maps to better manage their water, wastewater and storm sewer assets.

The printed maps can be large-scale wall maps up to 36"x48" showing utility features with the desired layers (aerial photos, streets, topography, etc.).

The digital map file on a CD, can be accessed with free software that IRWA will provide and install on a utility computer. The program allows you to view, print and click on system features (such as a valve, hydrant, meter pit, curb stop, manhole, lift station, treatment facility, etc.) and pull up attribute data about each. As well as several other capabilities such as printing, zooming, etc.

IRWA has a working relationship with DiamondMaps.com, to put your IRWA project maps on their server, for mobile viewing with a smartphone or cellular capable tablet - including editing capability. This is at no extra charge to the system for the first year's subscription. Continuance of the Diamond Maps service after the first year is at the utility's discretion.

Payment for services is a set charge per feature, with IRWA members receiving an automatic 30% discount, and even more of a reduction with bigger projects.

For more information, you may download a brochure from IRWA's website: www.ilrwa.org/Equipment/Asset_Mapping.html or contact Don Craig by phone: 217-561-1061 or e-mail: craig@ilrwa.org

VIDEO INSPECTION SERVICES

Video inspection technology can help you identify and prioritize maintenance issues, while improving service and reducing emergency maintenance costs.







IRWA is excited to introduce our new Video Inspection Service to our members. The normal fee for this service is \$350.00 for small projects, larger projects requiring more than 1 day will be based on cost per foot.

A contract must be signed in advance of the inspection. Upon completion, your system will be invoiced for the services and will also receive a detailed report including diagrams of the inspection features, and a DVD for your references.

For more information, or to schedule an inspection of your system, please call our office at 217-287-2115 or visit our website: www.ilrwa.org



(605) 334-9749 | MAGUIREIRON.COM |    

TANK MAINTENANCE & NEW TANKS

- Full-Service and Custom Tank Maintenance Plans
- Interior/Exterior Tank Painting
- Interior/Exterior Sandblasting and Containment
- Interior/Exterior Tank Inspections
- Lead Abatement
- Interior Tank Cleaning and Disinfection
- Custom Tank Logos
- Chemical Cleaning
- Tank Mixing Systems
- 24-Hour Emergency Services
- Tank Parts

EXTEND THE LIFE OF YOUR WATER TANK



DARIN CLARKE
Illinois Water Tower Expert
(217) 381-8566 | clarked@maguireiron.com



DELIVERING ENGINEERING SOLUTIONS THAT WORK.
mecoengineering.com



Coe Equipment Inc.

- Vactor Sewer Cleaners & Trailer Jetters
- TRUVAC Vacuum Excavators
- Aries Sewer Inspection Cameras
- High-Performance Nozzles & Cutters
- Sonetics Wireless Communications
- Rental Equipment Available

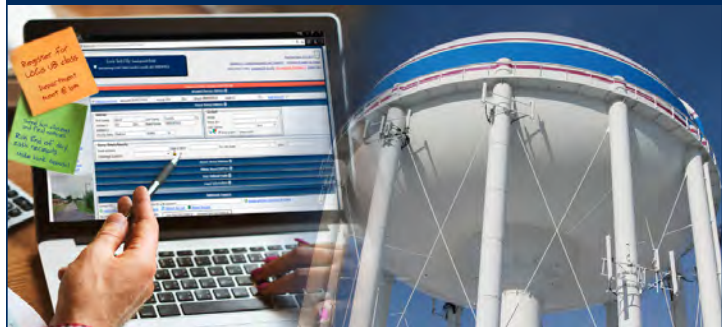
217-498-7200

www.coe-equipment.com | sales@coe-equipment.com

Serving Illinois and Missouri Since 1986
All Sewer Cleaning & Vacuum Excavation Equipment




MAXIMIZE EFFICIENCY AND REVENUE WITH LOCiS CLOUD-BASED UTILITY BILLING



At LOCiS, we're here to make your utility billing simpler by providing a comprehensive, cloud-based utility billing management tool that performs a variety of functions for multiple user-defined services including Utility Billing production of bills and record of payments for water, sewer, gas, electric, refuse and more. LOCiS software is developed, managed and supported in the U.S.

LOCiS PERFORMS FOR YOU

 DIRECT DEBIT AND CREDIT CARDS	 RESIDENT WEB BASED ACCOUNT ACCESS	 BAR CODING	 THIRD-PARTY AUTOMATED READING INTERFACE	 DEBT RECOVERY
----------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------

Learn how LOCiS Cloud-Based Utility Billing can help your organization.

Visit www.locis.com or call 866.LOCiS99





3305 Kennedy Rd.
P.O. Box 49
Taylorville, Illinois 62568

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

Portable pumps for wet work areas

IDEAL FOR STANDING WATER



NEW!

PlantPRO™ Utili-Pump Meter Pit Pumps

make it easy to keep work areas dry – great for meter pits, valve boxes, manholes, excavations and other soggy work areas. They pump 15 gpm and run for an hour per charge on a standard DeWalt® power tool battery (not included).



A USABlueBook Exclusive – Order Today!

18V Utili-Pump	# 365018	\$169.95
20V Utili-Pump	# 365020	\$169.95

plantPRO



WE HAVE MORE! usabluebook.com/portable

USABlueBook®
Get the Best Treatment™

800.548.1234 • usabluebook.com