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ARTICLES

Apprenticeship Program by Frank Dunmire	4
Corporate Response to	
Fall 2017 WaterWays Articleby Don Craig	6
Water Treatment Plant	
Nears Completionby Mark Mitchell	10
Where in Illinois?	10
Operator Certification by Chuck Woodworth	17
36th Annual Technical Conference	18
Conference Information	19
Conference Registration	20
Conference At-A-Glance	21
Conference At-A-Glance continued	22
Well Levels	23
Member Services	
IRWA Handout Information	14
Have You Heard?	16
Chrysler Fleet Program	7
Ford Fleet Program	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 picture was taken by Heather McLeod, IRWA Membership Services Assistant at Lake Taylorville Marina in Taylorville, Illinois

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 ilrwa.org.





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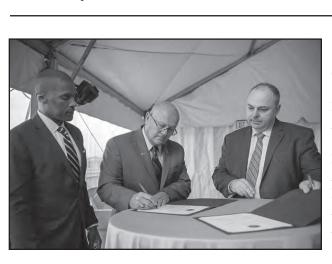
Apprenticeship Program

by Frank Dunmire, IRWA Executive Director

Every time I stand in front of an audience of Water/Wastewater Operations Specialists I do a quick mental survey as I look around the room. What I am looking for is to see how many of those that still have hair -what color it is. If it is graying I figure they have 10 - 20 years before retirement and if it has already turned snow white, then I anticipate that retirement is imminent. I then turn my gaze to the "young" ones in the crowd and wonder to myself if they will be there next year as so many of them tend to move on to better paying and less demanding careers. Either way, I am always left with the same question. Who will be left to operate and maintain the water and wastewater systems throughout the state of Illinois?

It is estimated that approximately 50% of the Water/Wastewater Operations Specialists across the country will be retiring within the next 5-10 years and, from my observations, I find this to be a fairly accurate estimate. Furthermore, it has been reported that it takes more

than 380,000 highly-skilled water and wastewater personnel working together to ensure that the water consumed by the public is safe and that the water returned to the environment from wastewater treatment facilities is clean. Us "seasoned" veterans well know that the many advancements have been made in both the treatment and distribution of potable water, as well as the collection and treatment of wastewater. These advancements have created a need for a workforce that requires a whole new set of skills. As water and wastewater professionals, it is our responsibility to meet ever tighter regulatory standards; try to convince Councils and Boards to replace the most critical portions of an aging infrastructure; recruit and train new operators; respond to disasters; and whatever other duties assigned. Obviously, we can only do so much – ultimately it is up to the administration and hopefully they will look to their water and wastewater operations specialists for guidance as they make those difficult decisions.



(L-R) Ondre Harris,
Senior Policy Advisor for
Employment and Training
Administration in the DOL;
Steve Fletcher, NRWA
President; John Ladd,
Administrator at DOL,
Employment and Training
Administration, Office of
Apprenticeship



The DOL will provide support for

the NRWA as it continues to build the WaterPro Apprenticeship Program, which is set to become a nationally-recognized standard. It will be up to each individual state to register their programs containing the NRWA's national guideline standards to their state DOL for approval. Illinois Rural Water Association is currently in the process of registering its program with Illinois' Department of Labor. Once completed, the apprentice will enroll in IRWA's Registered Apprenticeship program (ideally prior to employment at a system, to maximize benefits from the federal Workforce Development system). Registered Apprenticeship is an earn-while-you-learn program, that is comparable to a 2-year degree in a handson industry like electrical line workers, welders, and hopefully now water/ wastewater. One of the main differences between Registered Apprenticeship and traditional college-oriented programs is that apprentices get a job (or already have one) while they are learning, and when they are finished they have a job at a higher wage than they would otherwise.

continued on page 5

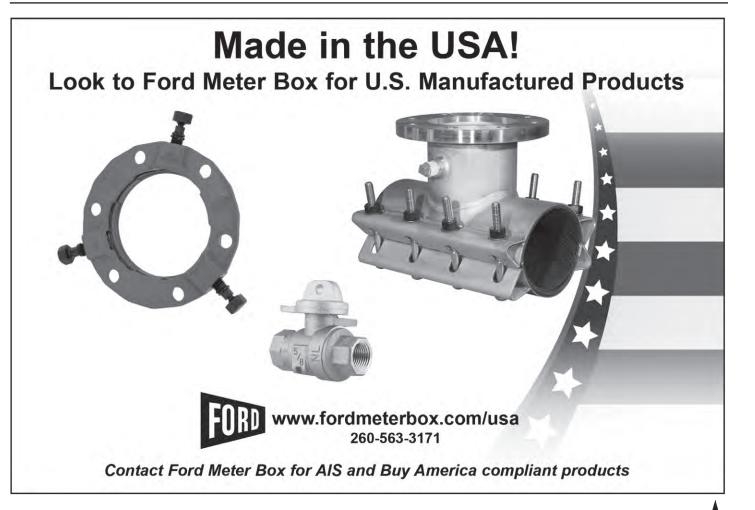
The WaterPro Apprenticeship program will be tailored to the specific needs of Water System Operations Specialists and Wastewater System Operations Specialists and will contain wage requirements for apprentices and employers to participate in the program. In return, employers will benefit from having a highly trained (288 classroomtype hours), experienced (2 years with onsite assistance with hands-on learning) System Operations Specialists. Employers (systems) may also have access to federal funds to subsidize this workforce development and apprentices and program sponsors can receive assistance with training costs.



(L-R) Matt Holmes, NRWA Deputy CEO; Sam Wade NRWA CEO; President Fletcher; Ondre Harris: Anne Hazlett, USDA Assistant Secretary for Rural Development; John Ladd; Chris Shaffner, CoBank

As the state registration process proceeds I will provide updates in future articles. Hopefully, this program will

answer the question: "where are the future System Operations Specialists going to come from".



Corporate Response to Fall 2017 WaterWays Article

by Don Craig IRWA Deputy Executive Director

*** Below the asterisk line, is a 'rebuttal' response letter/article drafted by two corporate, private water company presidents, in regard to the article in the Fall 2017 issue of the Water Ways magazine, entitled "Corporate Control of Systems...Understand the Possible Consequences". The letter was emailed to IRWA by Kristin Elder of Hill & Knowlton Strategies of Washington D.C. for the two entities.

If you do not have a copy of that issue of the magazine, and would like to see it, to make reference to statements given below, you can access it on our website at: www.ilrwa.org under the "Publications" link near the top of the homepage. If you have not previously read that article, we would strongly suggest you take the time to do so.

It is important to understand, that the bottom line in all of this, is that each public water and/or wastewater system should thoroughly research and evaluate the pros and cons for either keeping their existing system(s), or having a private, investor driven entity engage in the process to purchase it from them.

In the end, the decision rests with the system board and its customers... and is one, that may affect the utility, good or bad, not only for the present, but for years to come.***

Don Craig,

Deputy Executive Director, IRWA

We were thankful to see the major caveat placed on the piece, "Corporate Control of Systems...Understand the Possible Consequences," (Water Ways, Fall 2017) which was almost wholly excerpted from a Food & Water Watch (FWW) blog post from 2015. The Water Ways editors rightfully warned that the claims about private water were the "expressed facts and opinions" of FWW and that readers should "make their own opinions."

Calling the claims made by FWW "facts" is a stretch. As leaders within the Illinois Chapter of the National Association of Water Companies, we have spent a lot of time correcting the many inaccurate statements and claims put forward



by this group. In fact, the private water smear campaign got so out of hand that the National Association of Water Companies launched a fact check campaign – Truth from the Tap – so that decision makers and concerned citizens would have a resource to use when groups like FWW began pushing their false and misleading agenda in local communities.

FWW is an activist group that is ideologically opposed to private sector participation in almost everything.

Funded by millions in anonymous donations, the group goes town to town, using false claims and scare tactics to convince continued on page 8



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Member utilities should contact their State Rural Water Association to access the Rural Water Fleet Program. Vehicles may be purchased at your local dealer or through the national fleet auto group, details are online at: www.nrwafleet.com. Incentive discount pricing is available on Jeep SUVs and Ram trucks. Systems can save up to \$7,500 off factory invoice per vehicle. Happy shopping!

2018 Program Details:

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 $[*]Example\ incentives\ only.$

Many other option or powertrain items can be utilized under the VIP program.

Corporate Response to Fall 2017 WaterWays Article

residents that a government-only approach is the only option for their water operations. The group has no interest in a conversation about what's actually the best solution for a particular community facing urgent water infrastructure and operations challenges.

More than 73 million Americans enjoy reliable water and wastewater service thanks to a private water company. These companies bring experience and expertise that is nearly impossible to match in the public sector. After all, delivering great water service is a private water company's one concern. Here in Illinois there are numerous examples of private water companies acquiring municipal utilities on the basis that private utilities can just do it better and more cost effectively.

The main claim put forward by Mr. Craig is that working with a private water company results in a loss of control over water. For starters, the claim that private water companies take over "control of water" is a scare tactic not grounded in facts. No matter the model of utility operation – public or private – the water source remains in public hands as a public good.

But beyond this basic misrepresentation, while "local control" may sound desirable to the casual observer, it doesn't tell the full story. What "local control" actually means is "under the control of local government" – an entity run by politicians and bureaucrats with many competing interests and priorities.

Typically, local politicians are under intense pressure to keep water rates low, a point that Mr. Craig alludes to when he cites the chronic underinvestment in

municipal water systems. Indeed, low rates that fail to generate enough revenue to properly operate, maintain and invest in a water system end up putting drinking water and public health in danger.

Studies show this phenomenon in action. An analysis of EPA data found that government-owned utilities (those under "local control") are 24% more likely to have violations of the Safe Drinking Water Act (SDWA) compared to privately-owned utilities. And the study authors effectively point to "local control" as the culprit, finding that because rate increases are politically challenging for local officials, it is difficult for government-run utilities to generate the revenue necessary for crucial upgrades and routine maintenance. These deferred investments caused by a lack of revenue correlate directly with a higher rate of SDWA violations.

An often-overlooked benefit of working with a private water company is that water rates and utility operations are taken out of the hands of local politicians, and professional operators can focus solely on running an efficient utility that delivers safe drinking water. Water treatment and delivery operations are extremely complex, requiring a high level of expertise. And the consequences of mismanagement are severe. "Local control" may sound appealing, but it is not a model that ensures proper water utility investment and operation.

The FWW blog post Mr. Craig includes in his piece also makes several faulty claims about rates. According to FWW, private water companies take over water systems so they can increase rates with no restrictions or accountability. This narrative is wrong on so many lev-

els, and not just because water rates for private utilities are set and regulated by the state government through public utility commissions. But beyond this basic error of omission, the truth is that water rates are going up across the board – for both public and private water systems – in order to fund much-needed water infrastructure investments.

FWW often criticizes private utilities by saying that water rates increase about three times the rate of inflation under private operation. What they fail to note and what was evidenced in a recent Bluefield Research report is that the largest publicly-owned utilities are increasing water rates at 5.7% annually, which is exactly three times the current rate of inflation. While FWW criticizes private utilities for increasing water rates at three times the rate of inflation, they say nothing about public utilities that are increasing rates at the exact same pace.

If FWW wants to blindly criticize rate increases – including those that fund infrastructure investments to protect against major public health disasters – then they should at least be consistent and criticize both private and public water systems. Because as the Bluefield data proves, rate increases are not just a private water phenomenon.

But, fundamentally, it is shortsighted for FWW to applaud low rates when the consequence of under-funding a water system is that it eventually will fail. Communities and utilities that ensure their water rates support the necessary investments in their water systems should be commended.

Within its blog post, FWW makes a continued on page 9



Corporate Response to Fall 2017 WaterWays Article

variety of other unsubstantiated claims about private water, including about service quality. These claims are made without a single case study or piece of supporting evidence and ignore the many accolades that continue to come in for Illinois' private water operators. In June, Aqua Illinois' Kankakee Plant came out top in the state in the American Water Works Association's "Best of the Best" Tap Water Taste Test. Also this year, the well-respected JD Power awarded Illinois American Water with the highest customer satisfaction score in the state, while the company's Oak Valley Water Reclamation Facility in Homer Glen was named the "Best Operated Class 1 Wastewater Treatment Plant" in the State of Illinois.

Here's what all of this really comes down to. On the one hand, you have a group like FWW that offers no solutions to water system challenges other than to hope that a mythical pot of free federal money is going to magically appear to enable urgent and critical investments. On the other hand, you have private water companies that have the expertise, capital and an over 200-year record of success all ready to be leveraged today under a model that is proven to meet a community's water system needs.

Craig Blanchette, President, Aqua Illinois

Bruce Hauk, President, Illinois American Water ***********

***Note from IRWA: The letter/
article response above is the expressed
points and opinions of the two signed
and represented private entities, and is
included by IRWA in this magazine edition, at their request and as a courtesy
to them... for the purpose of each rural
system's administrators, employees,
customers, etc. to make their own opinion
upon, per its review.

We respect the right of both companies to express their corporate viewpoints...***

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Water Treatment Plant Nears Completion

by Nick Draper, ndraper@myjournalcourier.com Submitted by Mark Mitchell, USDA Source Water Specialist

A new multi-million dollar water treatment plant will begin treating Jacksonville's water in a few months.

Should all go as planned, customers will be none the wiser when the switch happens.

With many aspects of the \$35 million project completed, the finishing touches are being put into place before the facility begins treating and supplying Jacksonville residents with water.

Jamie Headen, project engineer for Benton and Associates, said the change will happen in the first quarter of 2018.

"The water treatment plant is to the point now where we're bringing in untreated water to the plant, as of (Wednesday)," Headen said. "We did some equipment startups and operations, we'll be doing filter startups ... and we'll be treating water, at least in a testing mode, within the next 30 days."

The plant initially was expected to begin operation at the end of November or beginning of December, but construction delays pushed back that schedule slightly, something Headen said was not unusual. Financially speaking, Headen has said that the project basically has stayed within its budget despite an

unexpected but necessary water main replacement along Superior Avenue.

Jack Cosner, superintendent of municipal utilities for the city, said his employees have been training and are excited to begin work at the new facility. When the new facility begins supplying water, customers should notice no change to their water service, he said.

"They shouldn't even know that it happened," Cosner said. "We're not changing the way we treat the water. We're not changing out the source water. Everything should be seamless, they shouldn't even notice it."

When the project is complete, the existing water plant will continue to operate as a backup until it is demolished sometime in spring. The only thing left of the original plant will be the lagoons and grass; there are no plans for construction projects because the site is in a flood zone.

Cosner said the original plant must remain in operation for a while because of Environmental Protection Agency regulations.

A ribbon-cutting for the new plant is being planned for the second week of May. That plan is tentative, but the

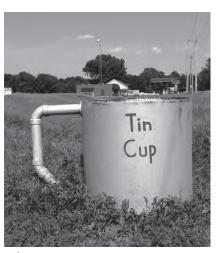


date will coincide with the American Waterworks Association's Drinking Water Week.

Cosner and Headen said they're pleased with the results of the project at this point and are excited to move forward with the new plant.

"We're very happy," Cosner said.
"We're very happy with the way things have turned out. We've had some change orders but that's part of any normal construction. The way the building is built and laid out, it's just gonna be great. It'll work out great for us."

Nick Draper can be reached at 217-245-6121, ext. 1223, or on Twitter @ nick_draper.



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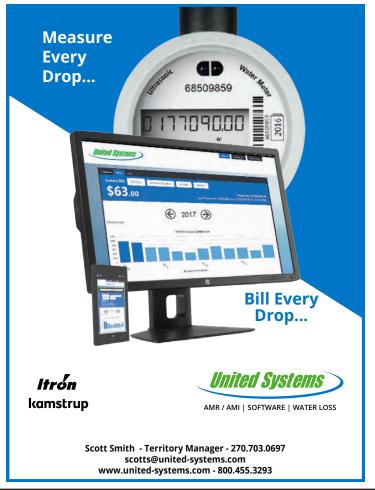
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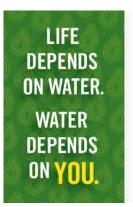
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Only 2 (or more) employees are needed to take advantage of this plan.

For a look at some sample plans, go to ww.ilrwa.org and click on Services at the top of the home page to find the link for Lifestyle Health Plans.

To learn more about how Lifestyle Health Plans can work for you and take advantage of our program-negotiated pricing, contact Brian Jablonski with CBIZ at 630-505-3616 or via email at bjablonski@cbiz.com.





by Chuck Woodworth, IRWA Circuit Rider

Operator Certification

Hello everyone, welcome to January 2018. Another year closer to retirement or maybe another month closer for those of you on the short list that will be retiring this year. So that brings me to the subject of this article, Operator Certification.

When you retire is there someone currently employed by your system that is certified? If so the switch over will be easy, just fill out and submit to IEPA a new ROIC form and once that person is approved by IEPA everything continues. If your system does not have a current employee that is certified, someone needs to step up and begin the process of becoming certified. It's never too early for someone to begin the process to become certified but sometimes it is too late. Better early than late. The system may need to look at hiring someone already certified from the outside. If you are a non-certified employee reading this, think about that for a moment, you never know who might be your next boss.

You might be asking how can you become certified, good question. There

is plenty of resources out there that can help, information online, Environmental Resource Training Center, Certified friend and IRWA.

IRWA has a certification overview that comes with study material and a Circuit Rider will visit your system to go over the material, offer tips and spend some extra time going over the certification math. When I visit a system for this, I normally plan to spend 3 or 4 hours on-site. We have had several people use the certification overview and most have found it to be very helpful. I have noticed that after a person does this and I have explained the math formulas that they are more confident of working the math when the its time to take the exam.

Several people worry about being able to pass the exam to the point that they are more focused on a pass or fail situation. When people do that they become focused on only failing. Just relax and do the best you can. If you study the material, read each question twice, know what the question is asking, use the scratch paper



to show your math so that you don't miss a step and I would be safe in saying that you will pass. If you don't pass on the first attempt, the ONLY thing that means is that you are average and there is nothing wrong with that.

Next month while you are attending IRWA's annual conference in Effingham February 20-22 be sure to check out the training session in the breakout room on the 21st named Math 101.

If you have any questions, ask your Circuit Rider the next time he stops by or call the office. Stay safe out there and keep warm.

THE ILLINOIS RURAL WATER ASSOCIATION WISHES YOU AND YOURS A WONDERFUL 2018!



36th Annual Technical Conference February 20-22, 2018



ONE CALL AWAY

Keller Convention Center, Ettingham, IL Attendee Imformation



Host Hotel

Holiday Inn (formerly Hilton Garden Inn) 1301 Ave. of Mid-America Effingham, IL Phone 5000 \$9550000 \$955000 \$9550000 \$955000 \$955000 \$955000 \$955000 \$9550000 \$955000 \$955000 \$9550000



Auxiliary Hotel

LaQuinta (formerly Baymont Inn) 1103 Ave of Mid America Phone: 217-540-1111 \$85.00 + tax per night

Auxiliary Hotel

Country Inn & Suites 1200 N. Raney St. Phone: 217-540-5555 \$90.00 + tax/night

Auxiliary Hotel

Lexington Inn 1604 Fayette Ave (exit 159) 217-994-9949

Auxiliary Hotel

Fairfield Inn & Suites 1111 N. Henrietta St. (I 57 & I 70) 217-540-5454

REGISTRATION

Registration & badges are required for all conference attendees. Please register each attendee using the registration form included in this packet. Include the attendee's full name on the registration form as it should appear on his or her badge.

Pre-Registration:

To pre-register complete the registration form and mail with payment to:

IRWA PO Box 49 Taylorville, IL 62568

Or pay on-line with your credit card at www.ilrwa.org.

Pre-registration must be postmarked by February 9th, 2018.

On-Site Registration:

All conference attendees must obtain a name badge and conference material at the registration desk. If you do not pre-register, please make sure that you register as soon as possible after you arrive at the Keller Convention Center. **Please note that on-site registration is \$25.00 higher than pre-registration.***



Registration Hours

PRE-REGISTRATION PICKUP ONLY!

Monday, February 19 4:00 p.m.—6:00 p.m.

REGULAR REGISTRATION HOURS

Tuesday, February 20 8:00 a.m.-4:00 p.m. Wednesday, February 21 8:00 a.m.-3:00 p.m.

Cancellation & Refunds

Refunds only in the event of emergencies. We must have a written notice of cancellation to issue a refund.

EXHIBIT HALL

Professionals from all areas of the water and wastewater industry will be on hand to help solve your problems and provide you with the information you need to make those crucial decisions. 115 companies will be bringing their products and services to you at this year's conference.

The exhibit hall will be open during the following hours:

Tuesday February 20 10:00 a.m.-4:00 p.m. Wednesday, February 21 8:00 a.m.-3:00 p.m.

EXHIBITORS HOSPITALITY NIGHT

Tuesday, February 20

5:30 p.m.- 8:00 p.m.

All food and beverages for the evening provided by our exhibitors.

PUB CRAWL

Tuesday, February 20 7:00 p.m.

Buses will be available again this year for those who wish to go on a pub crawl.

CASINO NIGHT

Wednesday February 21 6:00 p.m.-8:30 p.m.

SPORTSMAN RAFFLE

Attendees have the opportunity to purchase raffle tickets for prizes donated by our exhibitors. The winners will be announced at the conclusion of Casino night. It is through the success of this raffle that IRWA is able to ensure that continued funding is secured through Congressional appropriations. It is through those appropriations that IRWA is able to offer free assistance to small systems throughout the state and provide the staff with much needed equipment.

RWA ILLINOIS RURAL WATER ASSOCIATION

36th Annual Technical Conference February 20-22, 2018

REGISTRATION FORM

Must be completed for all attendees

(One form for each attendee, please)



NAME FOR BADGE:		
SYSTEM:		
MAILING ADDRESS:		
CITY:	STATE _	ZIP:
PHONE NUMBER:	E-MAIL ADDRESS:_	
******	******	********
Registrations must be	postmarked by February 9, 2018 t	to receive pre-registration pricing
FULL REGISTRATION: (Includ	es technical sessions, exhibit hall	, meals & activities for all 3 days)
	Spouse—\$175.00	
☐ Non-Member—\$225.00	☐ Non-Member Individual Joining	g as a Member + Conference—\$226.00
ONE DAY REGISTRATION: (Inc	cludes technical sessions, exhibit	hall, meals & activities for 1 day only)
Member—\$145.00	Spouse—\$145.00	
☐ Non-Member—\$195.00	☐ Non-Member Individual Join	ing as a Member + Conference—\$196.00
PLEASE CIRCLE WHI	ICH DAY YOU WILL BE ATTENDIN	IG (for one day registration only)
TUE	SDAY WEDNESDAY	THURSDAY
All fees must be	paid when registering—no purcha	se orders or special billings
	NO REFUNDS AFTER FEBRUAR	RY 9, 2018

Please make check payable to:

Illinois Rural Water Association
P.O. Box 49
Taylorville, IL 62568
You may also pay on-line at www.ilrwa.org with your credit card



Have a Question?

Call 1-800-762-3547



NEERENCE AT A GLAN

9:00 a.m.	February 20th Ope	ening Session/Awards Ceremony/RD	Update
10:00 a.m.			
10.00 0.111.	WATER	WASTEWATER	BREAKOUT
11:00 a.m.	IEPA Regulatory Update	WIISILWIILK	Dillimoot
12:00 p.m.	TEL A regulatory opulate	Lunch Buffet—Ticket Required	KI F TO THE PARTY AND THE PART
1:00 p.m.			
100	Auto Flushers-When, Where & How To		Legal Descriptions 101
1:45 p.m.	Prevention of Harmful Algal Blooms at Surface Water Intakes		Jurisdictional Disputes of Service Area
2:30 p.m.	200 200 200	Break/Exhibitor Drawings	
3:00 p.m.	Lead in Schools		Billing/Disconnect & Reconnect Policie
3:45 p.m.	Directional Flushing		Energy Supply Options
4:30 p.m.	Water Taste Test		Annual Meeting/At Large Caucus
Wednesda	y, February 21st	Registi	ration Open: 8:00 a.m.— 3:00 p.m.
8:00 a.m.		Exhibit Hall Opens	
9:00 a.m.	Turmoil in a Small Town	Suspended Growth vs. Attached Growth Treatment	Lime Sludge Removal & Application
9:45 a.m.	(A case study)	IEPA Water Quality Updates	Chlorine Gas Safety
10:30 a.m.		Break/Exhibitor Drawings	
11:00 a.m.	Improving Your Community's Water System Starts with Accurate Data	IEPA Lab Requirements	Leak Locating
12:00 p.m.		Lunch Buffet—Ticket Required	
1:00 p.m.	Trenchless Construction Options for Your Water/Wastewater System	Phosphorous Reduction in Wastewater	Math 101
1:45 p.m.	Water System Data Collection	Lagoon Diagnostic and Testing & Maintenance	Hydrant Repair & Maintenance
2:30 p.m.	(C. 10)	Break/Exhibitor Drawings	
3:00 p.m.	Water Meters—Past, Present & Future	Using Processing Modeling Software to Improve Cold Weather Nitrification in Lagoon Based Treatment Systems	Fecal Coliform Testing for Wastewater Effluent: Lactose Based Methods Compared to Colilert-18, Enzyme Based Method
3:45 p.m.	Has Your Casing Failed? Full Diameter Stainless Liner Installation	Smoke Testing of Sanitary Sewers	Round Table on Exam Preparation
Thursday,	February 22nd		
7:30 a.m.		Breakfast Buffet—Ticket Require	d
8:30 a.m.	The Big Payback: Importance of Large Meter Analytics	1	
9:15 a.m.	Do's & Don'ts of Tracer Wire		
10:00 a.m.		Break	
10:15 a.m.	Turbidity—What Are We Measuring?		
11:00 a.m.	Basics of pH		
11:45 a.m.		Closing Ceremony/Grand Prize Draw	wing

SESSIONS AT A GLANCE

WATER SESSIONS

Rural Development Update—Mike Wallace; RD- The latest updates to the Rural Development programs will be given.

IEPA Regulatory Update—Dave McMillan; IEPA - One of our most requested sessions! Hear about any changes to rules & regs.

Auto Flushers—When, Where & How To—Dale Biggerstaff; Hamilton County Water District—Rural systems fight stagnant water & CL2 drops in the system due to dead end mains. Learn about the research done to prevent that through auto flushing.

Prevention of Harmful Algal Blooms at Surface Water Intakes - Bruce Smith; C.B. Smith Company, Inc. — What are harmful algal blooms? What detrimental health aspects do they pose? Find out this and how to prevent them.

<u>Lead in the Schools - Kurt Stepping; PDC Laboratories –</u> The hot button topic of the past year! Find out what you are responsible for

<u>Directional Flushing - Carlos Covarrubias; M.E. Simpson—</u>Learn what directional flushing is and how to do it properly.

<u>Turmoil in a Small Town - IRWA Staff</u>— Hear a case study of what happens when small town politics interferes with day to day operations of a system already out of compliance.

Improving Your Community's Water System Starts with Accurate Data—Greg Crowe & Mike Buzicky; MSA Professional Services—Water system solutions identified through water modeling are only as beneficial or effective as the data from which it is supported by. Learn about a unique approach using GPS & GIS with modeling software to create a more accurate & usable tool.

<u>Trenchless Construction Options for Your Water/Wastewater System - Sam Cole; C2 Engineers</u>—Overview of types & applications of trenchless construction, and repairs for water & sewer systems. A discussion of advantages, disadvantages and considerations for both types will be heard.

Water System Data Collection - Tim Foerster & Chris Sosnowski; Waterly Software— Does your community use a clipboard or Microsoft Excel to collect & report monthly data? There is a more efficient way of doing this! Come hear why moving beyond the clipboard & Excel will make you more efficient, as well as ideas on how to do it.

Water Meters - Past, Present & Future - Rich Gardner; Kamstrup & Larry Parker; Irby— Where meters are heading for the future with technology and improvements on accuracy.

Has Your Casing Failed? Full Diameter Stainless Liner
Installation - Mike Nailor & Todd Kerry; Water Well Solutions —
Does your well casing resemble Swiss chees? Wish you could afford
Stainless Casing? We have the answer: a lifelong stainless repair.

The Big Payback: The Importance of Large Meter Analytics— Jacob Jasperson; Badger Meter, Inc.—A case study analyzing how a number of water utilities effectively used the power of advanced metering analytics along with strategically deployed AMI networks to improve the management of their commercial & industrial accounts.

<u>Do's & Don'ts of Tracer Wire - Mike Moore; Copperhead Innovations</u>—Proper installation for a "complete tracer wire system". How it all goes together and what doesn't work.

<u>Turbidity—What Are We Measuring? – Eric Link; LabtronX</u>— One of the most basic tests to determine the cleanliness of water is turbidity. But what are we really measuring with our turbidimeters & how are the science & regs changing around this parameter?

Basics of pH - Eric Link; LabtronX—Gain a better understanding of how to actually take a pH measurement & what we are measuring when we take it. Also learn some practical knowledge to apply to pH calibration & maintenance.

WASTEWATER SESSIONS

Suspended Growth vs. Attached Growth - Jason Bradley;
Covalen Environmental - Learn the basic advantages &
disadvantages of attached growth treatment & suspended growth
treatment. It could help you determine different ways to possibly
expand treatment capacity and/or improve overall treatment with
tougher regs while considering capital & operating budgets.

IEPA Bureau of Water Update—Scott Twait; IEPA—Hear about any changes in IEPA's wastewater programs.

IEPA Lab Requirements —Michelle Rousy; IEPA—Review of techniques to use for lab testing.

Phosphorous Reduction in Wastewater—Shawn Hire; Brenntag Mid-South—Biological & chemical reduction of phosphorous for wastewater discharges to meet limits.

Lagoon Diagnostic and Testing & Maintenance - John Jacobs; WTR Solutions—Discussion of water dynamics, what is in it, what tools can be used, testing the water & sludge, maintaining lagoon appearance, erosion control algae, and much more!

Using Process Modeling Software to Improve Cold Weather Inspection - Jim Martin; Lemna Environmental Technologies - Hear about a wastewater treatment process simulation model to analyze performance of existing facilities & the expected performance of proposed facilities. This also allows verification of design & performance especially with regards to cold weather lagoon performance.

Smoke Testing of Sanitary Sewers - John Bell; IRWA—See some examples of why you should have your sanitary sewers smoke tested!

BREAKOUT SESSIONS

Legal Descriptions 101, Jurisdictional Disputes of Service Area & Billing/Disconnect & Reconnect Policies - Mike Antoline; The Law Office of Michael Antoline—3 presentations that you have probably had trouble with at one time or another. Find out what your legal rights are when handling these situations.

Energy Supply Options - Jason Schuette; QFB Energy—Is your energy expenditures working toward your long-range goals/plans? Find out how to get help navigate the energy marketplace.

<u>Lime Sludge Removal & Application - Greg Halmagyi & Greg Firrantello; Stewart Spreading—</u>Learn more about this cost effective and sustainable option for your lime sludge.

<u>Chlorine Gas Safety - Geza Ehrentreu; Viking Chemical—</u>How to work safely with a cylinder and some troubleshooting techniques.

<u>Leak Locating - Roger Noe; IRWA</u>—Learn some tips on locating a leak.

Math 101 - Chuck Woodworth; IRWA—Sometimes math is hard. Chuck will teach you some tricks to make your job easier.

Hydrant Repair & Maintenance - Tim Quick; Mueller Company-Fire hydrants are vital to the potable water distribution system and must have preventative maintenance performed each year to maintain working order. Various models, part interchangeability & basic breakdown will be covered.

Fecal Coliform Testing for Wastewater Effluent: Lactose Based Methods Compared to Colilert-18, Enzyme Based Method - Gil Dichter; IDEXX Laboratories — Fecal coliform methods are based on either 15-tube MPN or m-FC lactose base requiring 24-72 hour confirmation. Colilert-18 is an 18 hour test & confirmation not required. Methods will be examined & compared.

Round Table on Exam Prep—Evan Jones, Roger Noe & Chuck Woodworth; IRWA—These guys teach a lot of people on certification overview. Come listen to their secrets on how to successfully prep for your exam.

Static, draw down, pumping, recovery time...these are all important things everyone with a well should know and know how to obtain this information.

Static water level: The static water level is the distance from the land surface (or the measuring point) to the water in the well under non-pumping (static) conditions. Static water levels can be influenced by climatic conditions and pumping of nearby wells and are often measured repeatedly to gain information about how aquifers react to climatic change and development.

Drawdown: The drawdown in a well is the difference between the pumping water level and the static (non-pumping) water level. Drawdown begins when the pump is turned on and increases until the well reaches a "steady state" sometime later. Therefore, drawdown measurements are usually reported along with the amount of time that has elapsed since pumping began. For example, "The drawdown was 10 feet, 1 hour after pumping began."

Pumping water level: The pumping water level is the distance from the land surface (or measuring point) to the water in the well while it is pumping. The time that the pumping water level was measured is usually recorded also. For example, "The pumping water level was 85 feet below land surface, 1 hour after pumping began."

Recovery time: The amount of time it takes a water well to return to its static water level after being pumped for any given time.

This is all part of our well maintenance program and should be checked on a yearly basis at a minimum. There are several different ways of determining these levels.

Most wells had an airline installed when the well was drilled or rehabbed and is a good way to collect this information – as long as the gauge is still functioning, and the airline is intact. The distance from the ground level to the water surface in a well at a fixed location can be easily obtained by the pressurizing the airline and reading the gauge.

In the absence of a permanently installed airline, a small-diameter plastic or copper tube can be suspended in the well, so the bottom of the tube is several feet bellow the lowest expected well drawdown. The distance from the end of the tube to ground level must be measured accurately. The top of the tube is fitted with a low-range pressure gauge and a means of supplying air to the tube. A tire pump is usually used to pump air into the tube until the pressure reading remains constant. For each pound of pressure on the gauge, 2.307ft of water has been displaced from the tube. For instance, if the gauge reads 5psi it means that the water level in the well is $2.307 \times 5 =$ 11.535 feet above the bottom of the tube. The distance from the ground surface to the water level can then be computed by subtracting the displacement distance from the known distance to the bottom of the tube.

A water level indicator is another way to gather the information. A probe is lowered into the well and when the probe comes into contact with the water a 9V circuit is completed. When this circuit is completed, a buzzer and a light is activated. The water level is determined by reading directly from the tape at the top of the well casing or borehole. Probes have



recessed tips to minimize errant signals in cascading water.

Another way of finding the water level is by using a data logger. The data logger is lowered into the well and secured at a point above the lowest expected water level. Instead of taking a single reading the logger is deployed for a period of time (usually one week) and records the water level at programmed intervals. These loggers are then removed, and the data downloaded into a laptop. The data collected will show you the static level, the pumping level, and the recovery rate of the well. They can also be placed in the well and read water levels in real time. This is a relative easy and less timeconsuming way of finding your water levels.

The information gained by doing any of these tests can help you and your system track water levels of the aquafer you draw from. It assists you in watching trends in your well during drought conditions, during regular rain fall, and during heavy rain fall. If you and your system are considering checking your well's water levels, give the Circuit Rider in your area a call and they can help you out.



THE CLEAR CHOICE FOR YOUR WATER NEEDS

Water Quality Monitors
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Membrane MicroFiltration
Aeration
Spare Parts & Replacements



Filters & Media
Chlorination Equipment
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Quality Products with Superior Service





NRWA America's Largest Utility Membership

FORD FLEET PROGRAM



The National Rural Water Association and the Ford Motor Company have created a partnership to offer special fleet discounts to State Rural Water Associations and their utility system members. This partnership combines the buying power of 31,000 individual utilities to provide reduced fleet pricing on utility vehicles. The Ford Fleet Team is #1 in commercial fleet customer satisfaction according to surveys. The Rural Water Ford Fleet Program is a valuable member benefit for water and wastewater utilities. State Rural Water Associations determine eligibility for their members, and provide a fleet code that allows access to substantial vehicle discounts to fill the need for reliable work vehicles. Fleet vehicles must be registered in the name of a member water or wastewater system.



Member utilities should contact their State Rural Water Association to access the Rural Water Ford Fleet Program. Vehicles may be purchased at your local dealer or through the national fleet auto group, get all the details you need online at: www.nrwafleet.com. Incentive discount pricing is available on fuel efficient cars, vans, SUVs and trucks. Systems can save up to \$5800 off factory invoice per vehicle. Happy shopping!

2018 Program Details:

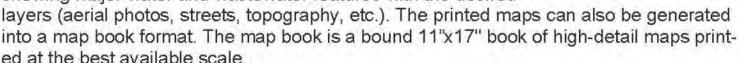
- · Limited to water/wastewater utilities that are current members of a State Rural Water Association
- There is no limit to the number of vehicles that can be purchased under the program
- Incentive pricing is deducted off the factory invoice
- · Fleet vehicles must be in service for a minimum of 12 months or 20,000 miles
- · Vehicles must be registered and operated in the United States
- · Call your State Association today to get your Fleet Identification Number (FIN)

Eligible Vehicles	Incentive
Focus (Excludes BEV)	\$1400
Fusion (Excludes Hybrid & Energi)	\$2000
Taurus (Excludes Police Int)	\$3300
Econoline	\$4500
Edge	\$2500
Escape	\$1800
Expedition	\$4000
Explorer (Excludes Police Int)	\$2700
F-Series Super Duty F250-F550	\$5800
F150 (Excludes Raptor)	\$5500
F150 4X2 Reg Cab	\$4500
Transit	\$3700
Transit Connect	\$2100

GPS/GIS MAPPING SERVICES

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

The printed maps can be large-scale wall maps up to 36"x48" showing major water and wastewater features with the desired



The digital map file on a CD, can be viewed and printed with free software that IRWA will provide. The software allows you to click on a waterline with a leak and highlight which valves need to be closed to isolate the line. There are also tracing features to show the direction of water flow, and other useful features.

Payment for services is determined by a charge per each system feature located. The amount charged for a Map Book will be \$50 plus \$5 per page; and a wall map is billed at \$100 per map. More information is also posted on our website, or you may call our office.

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





ENVIRONMENTAL RESOURCES TRAINING

CENTER



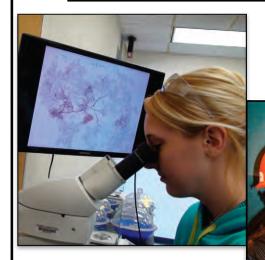
One-Year **Water Quality Control Operations** Program

The ERTC-SIUE Water Quality Control Operations program is a one-year, full time program of study leading to a Certificate of Completion. Classes start in late August and end in the following July. The students' learning is split between the classroom and the operation of ERTC's 30,000 gallon/day training-scale water and wastewater treatment plants. Upon completion of the full year program, students are eligible to take Illinois and Missouri certification exams to become certified as entry-level public water supply operators and wastewater treatment operators.

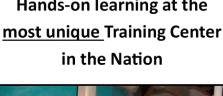
Starting salaries range from \$35,000 per year to more than \$45,000 per year. Students have access to loans, scholarships, and military veterans' grants and programs.

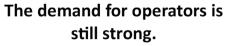


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Environmental Resources Training Center





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