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- * Requires No Tools

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Contact Name_

Phone #

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"Protecting and preserving the water and wastewater resources			

on-site technical assistance". On the Cover:

of Rural Illinois through education, representation and

This photo was taken by Jeff McCready,

IRWA Wastewater Technician, of the Route 18 bridge

over the Illinois River in Henry, 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 *ilrwadb@ilrwa.org*.





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Water Storage Tanks

If a water storage tank (whether elevated or ground) is clean when it is placed into service and the water leaving your treatment facility is crystal clear, then the inside of your storage tank should always be clean. Right? Not necessarily so! As a matter of fact, ALL storage tanks will have some sediment in them - it is inevitable. Sediment will slowly accumulate in water tanks, and, if left unchecked may become a threat to public health. Whether or not you are a believer in climate change, the undeniable fact still remains that record high temperatures are becoming more frequent. These record high temperatures ultimately create warmer water inside storage tanks, and this can lead to a loss in chlorine residual thereby promote the growth of microorganisms --- some of which can be harmful and even fatal.

Recently, I was on a jobsite where an elevated water tower was taken out of service for a "washout". I was shocked at what I saw!

The first thing that caught my attention was how the owners of the tower were ill-prepared for the washout. This particular tower's water level was controlled by an altitude valve and neither service valve upstream nor downstream were operational. They were relying solely on the altitude valve to shut the flow of water off to the tower. In a perfect world this may have worked - but we do not live in such a place. The valve was allowing a small flow of water to pass through and the tower crew had to improvise and supply additional pumping to perform their jobs.

As the washout was about to begin, I asked the owner's representative when was the last time that this tank had been cleaned and the answer was not as long as I can remember (I hear that way too much in my travels). Once the washout began, it became obvious this tower had not been cleaned in years. The amount of sludge and discolored water that was coming down the riser pipe was quite surprising, to say the least. The washout took several hours before the spraying of a disinfectant was applied. Following is information taken from the Illinois Environmental Protection Agency's website that should serve as a reminder to all of us.

Water storage tanks need to be periodically inspected and cleaned to help maintain good water quality in the distribution system, and to help extend the life of the tank. Regular tank inspections can also help to identify small problems that may develop into major problems that can create health related issues, lead to costly repairs or premature tank failure. Tanks that are not periodically cleaned can cause contamination events that can harm human health or can contribute to customers' aesthetic complaints. Tank inspection and cleaning can be done by draining the water tank. Another option becoming more popular is using divers or remotely operated vehicles (ROVs). Whichever method is



by Frank Dunmire, IRWA Executive Director



selected, testing of the water according to American Water Works Association (AWWA) C652 is required. AWWA Standards are incorporated into Illinois Environmental Protection Agency (Agency) regulations by reference. This FAQ sheet does not fully describe all of the requirements of the Standard. The intent is to advise the water system of the Agency's acceptance of the Standard.

How often should a water system inspect and clean storage tanks?

The inspection and cleaning interval can vary based on the type of tank and water quality. Generally, a water storage tank should be inspected at least every five years, or more often, depending on local conditions. Cleaning and repairs should be addressed based on the findings of the tank inspection. Additional inspections between maintenance intervals are encouraged.

Is an Agency permit needed to inspect or maintain a storage tank?

A permit is not required to inspect, clean, repair or paint a tank. However, a permit is required if any modifications are made to the tank such as, but not limited to, installing baffles, vents, hatchways, overflows or any type of mixing device.



Water Storage Tanks

Contact the Division of Public Water Supplies, Permit Section at 217-782-1724 before starting any work if you are not sure if a permit is required.

What sampling is required for a tank that has been drained?

Disinfection of the tank using one of the three methods found in AWWA C652 is required. Following this procedure, samples from the tank must be analyzed for chlorine residual and coliform bacteria. If coliform is absent and the chlorine residual is acceptable, the tank can be placed back into service. If not, continue sampling until two consecutive samples for coliform are negative. If necessary, the tank can be disinfected again. A boil order must be issued if the tank is placed into service before the required satisfactory samples are obtained.

Are tank inspections and/or cleanings that use divers or ROVs or cameras allowed?

Yes, underwater inspections that use divers or remotely operated vehicles/ cameras are allowed. Cleaning as part of an underwater inspection is also acceptable.

Does the Agency need to be contacted when doing a tank inspection?

Water system officials are encouraged to contact the appropriate Illinois EPA regional office prior to a tank inspection or cleaning. Agency staff can answer questions and advise on the appropriate testing requirements.

Can an underwater inspection and/or cleaning be done while the tank is in service?

The Agency strongly recommends that the tank be isolated from the distribution system prior to personnel or a ROV entering the structure, unless operational conditions prevent this. An example would be a water plant with a single clearwell that cannot be taken out of service.

What sampling is required for an underwater inspection and/or cleaning where the tank is isolated from the system?

After the inspection and/or cleaning, samples from the tank must be analyzed for chlorine residual and coliform bacteria. If coliform is absent and the chlorine residual is acceptable, the tank can be placed back into service. If not, continue sampling until two consecutive samples for coliform are negative. If necessary, the tank can be disinfected. A boil order must be issued if the tank is placed into service before the required satisfactory samples are obtained. Sampling the tank prior to the work is also recommended to establish baseline water quality.

What sampling is required for an underwater inspection and/or cleaning where the tank

must remain in service?

For tanks that must remain in service, sample before the work, each day during the work, and after the work has been finished. Daily samples are required for chlorine residual. coliform bacteria and turbidity. Contact the appropriate Illinois EPA regional office if the chlorine residual drops below the required minimum level. if coliform bacteria are present or if

continued from page 4

turbidity increases. If sample results warrant, a boil order will be required until water quality is acceptable again.

What are any other requirements for conducting an underwater inspection and/or cleaning?

Refer to AWWA C652 for equipment and personnel requirements, safety requirements and disinfection requirements for equipment and personnel.

Can a coating be applied to a water tank during an underwater inspection?

Yes, as long as the product meets ANSI Standard 61 and is approved for application to wet or damp surfaces. Follow all manufacturer recommendations.



Fire Hydrants

Few operators have not had a fire hydrant that that has caused problems during the cold months of winter. One that leaks or doesn't drain properly, and not having an auxiliary valve before it, are many times familiar issues. I'm just betting most everyone has incurred these problems at one time or another. These kind of things can cause big concerns in your system. I was recently at a system that had a hydrant which was leaking past the shoe on up into the barrel, and had a plugged weep hole. Facility personnel didn't realize this before winter, so it was never taken care of. Then comes along flushing in the spring... and low and behold the barrel had frozen, splitting open. It had cracked the hydrant from the breakaway to the bonnet.



by Evan Jones, IRWA Circuit Rider

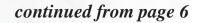


When the utility first called, they wanted me to come assist them in locating and securing the shut off main line valves, so that they could repair a leak. When I arrived, I started asking questions about the leak and to be shown the problem. As we pulled up to the leaking hydrant, I got excited to see that it was a Mueller model, as I knew that I could disassemble and fix it without shutting down a quarter of town... as there was not a valve in front of the hydrant.

The system staff were very hesitant to let me take this hydrant apart without shutting down the main line gate valves to block the flow to it. These guys, in their own defense, were relatively new to the industry. They had never had to work on, or tear apart a hydrant. My comment

continued on page 7

Fire Hydrants





to them about it all was if we ran into an issue, we could always shut down the mains. But, in IRWA's constant effort to help and train operators, this is how they would learn to fix the next one.

The hydrant we were working on was a 1951 Mueller 4 ¹/₄. We were successful in removing the weather and operating caps, and the bonnet. We did however, have a hard time removing the oil reservoir. We believe, it had never had any oil added in it since the date of install. Also, we did successfully remove the entire hydrant barrel.

Now started the expensive part of ordering a new barrel, to replace the cracked one. It turns out that a neighboring community just happened to have a 1952 Mueller 4 ¹/₄ hydrant setting in their scrap pile that they were nice enough to give us so we could finish our project. We successfully took the 1952 one apart;

This just goes to show you that with the proper training, some jobs don't have to be that hard or expensive. So, if you find yourself in a situation whether it be a hydrant or anything else... just give your IRWA Circuit Rider a call. Chances are, either he or another operator they know, have dealt with similar issues at one time or another. And, as such, they can help you through it.

and cleaned up all the parts from both the hydrants, and were able to make a usable one. The only thing that had to be purchased for the project, was a gasket kit. The system employees were very surprised by how easy the job was, and how they didn't have to call in a boil order to disrupt everyone's



Water Ways Volume XVII - Winter 2020

In the Right Place at The Right Time

by Chuck Woodworth, IRWA Circuit Rider

Being a Circuit Rider going to several different water systems every month, I have seen things being done in new ways. I often ask if I can share that with other operators, with the same reply from each operator. If it will help someone, you sure can. Most of the things I have seen is some kind of a homemade tool that was made to complete a task either faster, easier or safer. I should have taken pictures of all of them that I have seen over the years. I was at a water system the other day and the operator said "you have to see this!" as he directed me into the chemical feed room. He was telling me that the mixer motor had gone out on his KMnO4 mixing tank, it was going to be a few days before he could get a replacement motor. He wanted to be able to keep feeding the chemical, so he came up with using a variable speed drill as his mixer motor. In the picture you can see a zip tie being used to control the speed, a couple of blocks to hold it in place and a new motor was on order. I don't suggest this as a long term fix but it worked fine during the short time it took to get a replacement motor on site.



I always enjoy being in the right spot at the right time when someone is installing new water mains. I found a system adding about a half mile of pipe to better serve a subdivision with this looping project. The picture of the hot tap I wanted to point out that if you notice how the trench was dug



out? They left a good portion of the soil on the back side of the main undisturbed in order to install the thrust blocks. By only removing enough soil needed to install the new valve, only three concrete blocks and a couple of wedges was needed to make a good and tight thrust block support.

continued on page 9



In the Right Place at The Right Time

continued from page 8

Installing new 6 inch watermain goes pretty fast when the trench is dug using a trencher. I stopped at this system one early morning while on my way to a different system. When I left, I thought I would stop back by the next morning to see how they did. When I arrived back to the location the next morning, all the equipment was gone and all that I could find was a couple of new valve boxes and fire hydrants all installed. The pipe had been installed, connections made, trench backfilled and trash picked up. A job well done! Only if every job came together like that one must have. Maybe it was because of a really good crew working together, or possibly both. I was surprised that they had completed the job in one day that I didn't think about getting another picture the completed job.



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Stay warm out there this winter and if I don't see you before, I'll see you in Effingham at the our conference the 3rd week of February 2020.



The Illinois Community Water Supply Design O&M Regulations Source Protection and You Source Water Protection Specialist *(Special thanks to Dave McMillan, IRWA Trainer for use of information for this article)

Subpart B: Source Development

Back-up Well Requirement *(This part is not under Source Protection but is an issue I have been trying to get supplies to address under SWP for years.)

Section 604.230 Groundwater Quantity

Single Well Systems: No community water supply, the construction or modification of which commences after July 26, 2019, may rely only on a single well for its water source. A community water supply, the construction of which commenced before and that is not modified after July 26, 2019, may rely on a single well for its water source, but must be placed on the critical review list under 35 Ill. Adm. Code 602.107. For the purposes of this subsection, "modified" means when the fixed capital costs of the new components constructed within a 2-year period exceed 50% of the fixed capital cost of a comparable entirely new facility.

Subpart C: Source Water Protection

Develop a plan largely based on AWWA G300

Provided flexibility

Phased-in by supply size

Section 604.330 Submission

A community water supply that first commenced construction after July 26, 2019, must develop and submit a source water protection plan simultaneously with the construction permit application.

A community water supply in existence as of July 26, 2019, must develop and submit to the Agency for approval a source water protection plan within the following time frame after July 26, 2019:

▶ within 3 years, for a community water supply serving a population greater than 50,000 persons;

 within 4 years, for a community water supply serving a population of greater than 3,000 but less than or equal to 49,999 persons; or

▶ within 5 years, for a community water supply serving a population of less than or equal to 2,999 persons

An existing community water supply that anticipates using a new source of water for its supply must develop and submit a revised source water protection plan simultaneously with the construction



by Mark E. Mitchell,

permit application.

AWWA G300-14 Source Water

Protection (https://www.awwa.org/Store/ Product-Details/productId/39814230)

The above link will take you to the AWWA Publication G300-Sourcewater Protection. Please contact me at mitchell@ilrwa.org to provide you with any full or parts of your SWP (depending on your progress through the process if we have assisted you with any portions of this) OR for your Emergency Response Plan or to request a draft copy of an Emergency Response Plan to get you started with a portion of what you will need.



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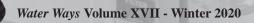
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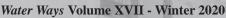
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38th Annual Technical Conference Keller Convention Center - Effingham, IL

February 18-20, 2020

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Water Ways Volume XVII - Winter 2020

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CONFERENCE LOCATION

The conference will be held at the Thelma Keller Convention Center located at 1202 N. Keller Dr. The convention center is attached to the host hotel.

REGISTRATION

Registration & badges are required for all conference attendees. Please register each attendee using the registration form included.

Pre-Registration:

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

IRWA, PO Box 49, Taylorville, IL 62568

To pay on-line with your credit card go to www.ilrwa.org and click on the conference link on the home page.

Pre-registration must be postmarked by February 7th. 2020.

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.**

An event membership of one-cent per person is included in your registration fee(s) allowing participants in NRWA fundraising activities. This is required by Federal Election Commission laws. If you wish to opt-out please go to the registration booth at the conference for your refund of this one-cent fee.

CANCELLATION & REFUNDS

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

REGISTRATION HOURS

Pre-Registration Pickup ONLY 4:00 p.m. - 6:00 p.m. Monday, February 17 **Regular Registration Hours** Tuesday, February 18 8:00 a.m. - 4:00 p.m. Wednesday, February 19 8:00 a.m. - 3:00 p.m.

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 18 Wednesday, February 19 10:00 a.m. - 4:00 p.m. 8:00 a.m. - 3:00 p.m.

OTHER ACTIVITIES

Exhibitors Hospitality Night

4:30 p.m. - 7:30 p.m. Tuesday, February 18 All food and beverages for the evening provided by our exhibitors.

Pub Crawl

Tuesday, February 18 7:30 p.m. - 12:00 a.m. Thank you to the City of Effingham for their continued support of the pub crawl! The buses will begin picking up at the Holiday Inn at the conclusion of Hospitality Night.

Casino Night

Wednesday, February 19 6:00 p.m. - 8:30 p.m.

CERTIFICATION OVERVIEWS & EXAMS

Certification overview courses and state certification exams for drinking water and wastewater will be held at our conference this year. The reviews will be given courtesy of E.R.T.C. on Wednesday, February 19, 2020. The review is included with your conference registration.

The exams will be given on Thursday, February 20, 2020 beginning at 8:30 a.m. It will be available for attendees and non-attendees alike. You must have a valid Letter of Admission issued by the IEPA. You must bring the Letter of Admission and a photo ID. There are no conference fees associated with the exam. However, you must return a registration form with the exam you will be taking circled so that we have enough materials.

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TIM

Water Ways Volume XVII - Winter 2020

	Tuesday, February 18	8th - Registration Open: 8:00 a.	m.— 4:00 p.m.	
9:00 a.m.	Opening Session/Awards Ceremony/RD Update			
10:00 a.m.		Break/Exhibit Hall Opens		
	WATER	WASTEWATER	BREAKOUT	
11:00 a.m.	IEPA Regulatory Update			
12:00 p.m.		Lunch Buffet—Ticket Required		
1:00 p.m.	Manganese—Aesthetics, Health & Treatment		How to Dispose of Your Unused & Surplus Inventory and Make Money	
1:45 p.m.	Mapping Applications for Water & Sewer		Cyber Insurance & The Non-Physical Fire	
2:30 p.m.		Break/Exhibitor Drawings		
3:00 p.m.	Practices in Reduction of TOC & DBP		Flushable Wipes	
3:45 p.m.	The Corning Infrastructure Tidal Wave		IRWA Programs Overview— Energy Efficiency & Rate Studies	
4:30 p.m.	Water Taste Test		Annual Meeting	
	Wednesday, February 1	9th - Registration Open: 8:00	a.m.— 3:00 p.m.	
8:00 a.m.		Exhibit Hall Opens		
9:00 a.m.	Well Advancements	Activated Sludge Basics		
9:45 a.m.	Tank Inspections	Sludge Management for Lagoons	Water Math Review (9:00-11:00)	
10:30 a.m.	Break/Exhibitor Drawings			
11:00 a.m.	Understanding Chlorination	A Turn Key Solution to Wastewater Issues		
12:00 p.m.		Lunch Buffet—Ticket Required		
1:00 p.m.	Flagger Training	Duckweed Control for Wastewater Lagoons	Disinfection Devices (4-00 - 2-00)	
1:45 p.m.	Contingency Plans for Pumps	Small Commercial Wastewater Treatment Systems	Disinfection Review (1:00-2:00)	
2:30 p.m.		Break/Exhibitor Drawings		
3:00 p.m.	RD Loan and Grant Application Development	Operator Observations for Process Control of Activated Sludge Systems (Exam Review Topic)	Softening Review (3:00-4:00)	
3:45 p.m.	Using Telemetry for Better Preventative Maintenance	Basics of Biological Nutrient Removal (Exam Review Topic)		
		Thursday, February 20th		
7:30 a.m.		Breakfast Buffet—Ticket Required		
8:30 a.m.	IDPH Update			
9:15 a.m.	Building Water Resilience in Your Community	WASTEWATER	WATER CERTIFICATION	
10:00 a.m.	Break	CERTIFICATION		
10:15 a.m.	Planning for an ISO Evaluation	EXAM (until 11:30)	EXAM (until 1:30)	
11:00 a.m.	GIS-A View from an Operator	(unur riso)	(unui 1.30)	
11:45 a.m.	Closing Ceremony/Grand Prize Drawing			

SESSIONS AT A GLANG

WATER SESSIONS

Rural Development Update—Mike Wallace; RD- Updates to the Rural Development programs will be discussed.

IEPA Regulatory Update—Mary Reed; IEPA - This is always a popular session. See what's new in rules and regulations from IEPA.

Manganese—Aesthetics, Health and Treatment— Katharine Bohrman and Jim Groose; Watersurplus - Reasons for treatment include aesthetics and health effects. Recent development in catalytic filter media allow simpler water treatment design to take Mn out of water.

Mapping Applications for Water & Sewer — Ben Hill; Diamond Maps - A demonstration of how small municipalities and rural water systems use GIS and Mapping in the daily routine to do things such as locating hard to find assets, tracking maintenance & communication.

Practices in Reduction of TOC and DBP—RJ Lindmark; <u>Cedarchem</u> - New tools and real practices used in water treatment plants in the Mid-West for the reduction of plant TOC and disinfection by-products.

The Coming Infrastructure Tidal Wave—Kris Schulz & Gerry Harstine; Servline – Using asset planning to prepare for the tidal wave of replacing your infrastructure.

What to Look for in a Tank Inspection—Darin Clarke; Maguire Iron - Do you know what to look for when inspecting a tank? Come to this session for some insight to this.

Understanding Chlorination— Don VanVeldhuizen; USA BlueBook - What makes chlorine such a good disinfectant and why is it used so extensively? Learn how it works and how to make it work better based on your needs.

Flagger Training —Bill Bloch; Illinois Public Risk Fund - This session will be a crash course in some of the important points you need to know for properly directing traffic around your worksite.

Contingency Planning for Pumps—Ken Musick & Brad Gould; C and C Pumps & Supply - Contingency planning to minimize or prevent downtime for water & wastewater pump stations.

RD Loan and Grant Application Development—Scott Barringer-Rural Development - USDA Rural Development has an electronic application process to make it easier for the applicant to take advantage of their funding opportunities. This program streamlines & simplifies the application process for USDA RD Programs. The RD Apply Lab will be available and provide one-on-one technical assistance for parties interested in gaining access to the RD Apply Application System.

Using Telemetry for Better Preventative Maintenance—David B. Mundie, PhD; High Tide Technologies - A discussion and demonstration on how historical telemetry data can save utilities money and down time with preventative maintenance.

Illinois Department of Public Health Update—Darrah Dunlap; IDPH - Come to this session to hear about what is happening over at the Department of Public Health. Multiple topics will be discussed.

Building Water Resilience in Your Community—Karen Edwards-Lindsey; US Environmental Protection Agency - Drinking water and wastewater systems across the country are at risk to many kinds of water emergencies, causing disruptions in their service. The USEPA has developed tools and resources that can help build resilience within your water system. During this session, USEPA's Water Security Division will discuss the American Water Infrastructure Act (AWIA) which requires each community water system serving a population of greater than 3,300 persons to assess the risks to, and resilience of, its system. Preparing for an ISO Audit—Randall Downs; Verisk - ISO is a rating of fire protection across the US. Many water companies do not realize they directly impact the insurance rates in the community. Learn how you can prepare for this audit.

GIS - A View from an Operator – Ted Padilla; City of Rock Falls & Jon Hodel; Cloudpoint Geographics, Inc. - In the early 2000's, the City of Rock Falls decided to move forward with technology into electronic mapping. Hear about the process that they have been through to accomplish this goal.

WASTEWATER SESSIONS

Activated Sludge Basics—Don VanVeldhuizen; USA BlueBook -What is activated sludge and why is it used so extensively? Learn about the process and why it is such an effective way to treat large quantities of raw wastes.

Sludge Management for Lagoons —Robert Risley & Brian Risley; Water Treat Technology - This session will inform operators of how to properly perform their own sludge survey and make them aware of new technology available.

A Turn Key Solution to Wastewater Issues—Stephen Mitchell; Walter Louis Fluid Technologies - A sustainable solution for treatment of wastewater which is directly linked to improved economics, productivity and environmental effluent.

Duckweed Control for Wastewater Lagoons—Patrick Hill; <u>Triplepoint Environmental</u> - Duckweed is an invasive, fast growing plant that is common in wastewater lagoons. This presentation will describe the pros and cons of lagoon duckweed and highlight methods of controlling or preventing it.

Small Commercial Wastewater Treatment Systems—Daniel Johnson; One Water, Inc. - Case study of using biofilms to treat onsite commercial wastewater at a truck stop in rural Indiana.

Operator Observations for Process Control of Activated Sludge Systems—Jim Winslade; ERTC - This wastewater exam review includes both simple process control tests and visual observations in the system which would allow the operator to make adjustments.

Basics of Biological Nutrient Removal—Jim Winslade; ERTC -Another wastewater exam review topic on how systems work, operational considerations, and advantages/disadvantages.

BREAKOUT SESSIONS

How to Dispose of Your Unused and Surplus Inventory and Make Money—William Faltz; Wisconsin Surplus Online Auction • We will show you how easy it is to get your items ready for an auction to turn your items into spendable cash so you can purchase new items.

Cyber Insurance & The Non-Physical Fire —J. Kevin Sneed; US Pro Insurance Services - An inside look at today's utilities and taxing districts including water and wastewater and they types of nonphysical fire risks they face in the digital age.

Flushable Wipes—Justin Hovinen; Ebara Pumps Americas Corporation - Methods to eliminate clogging of solid handling pumps, various types of solids handling pumps as well as best practices for effective operation will be discussed.

IRWA Programs—Energy Efficiency and Rate Studies—Brandon Windell & Clark Cameron; IRWA - Find out how these IRWA programs can benefit and possibly save your system money!

Water Certification Exam Overviews—Matt Maas; ERTC - Matt is back this year to give you more on water exam overviews. This year, the topics will be broken up in so specific subjects on math, disinfection and softening.



The National Rural Water Association and the Chrysler Group have created a partnership to offer a Volume Incentive Program (VIP) 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. You will have access to special fleet benefits as a preferred Chrysler Group customer.

The Rural Water 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 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 pricingis available on Jeep SUVs and Ram trucks. Systems can save up to \$7,500 off factory invoice per vehicle. Happy shopping!

2020 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 12,000 miles
- Vehicles must be registered and operated in the United States
- Call your State Association today to get your Fleet Account Number (FAN)



Model Year	Brand	Description	Incentive
2020	Chrysler	Pacifica/Voyager	\$3,000
2020	Dodge	Durango AWD	\$5,000
2020	Dodge	Durango RWD	\$5,000
2020	Jeep	Grand Cherokee 4X2	\$5,000
2020	Jeep	Compass 4X4	\$2,900
2020	Jeep	Grand Cherokee 4X4	\$5,000
2019	Ram	Classic 1500 Quad/Crew 2WD	\$8,500
2019	Ram	Classic 1500 Quad/Crew 4WD	\$8,500
2019	Ram	Classic 1500 Regular Cab 2WD	\$5,500
2019	Ram	Classic 1500 Regular Cab 4WD	\$5,500
2020	Ram	2500 Regular Cab 4WD	\$5,500
2020	Ram	3500 Crew/Mega Cab 4WD	\$6,250
2020	Ram	2500 Crew/Mega Cab 4WD	\$6,250
2020	Ram	Classic 1500 Regular Cab 4WD	\$5,500
2020	Ram	Promaster 1500 Cargo Van	\$6,500
2020	Ram	Classic 1500 Quad/Crew Cab 2WD	\$8,500
2020	Ram	Classic 1500 Regular Cab 2WD	\$5,500
2020	Ram	Classic 1500 Quad/Crew Cab 4WD	\$8,500
2020	Ram	2500 Crew/Mega Cab 2WD	\$6,250
2020	Ram	Promaster 2500 Cargo Van	\$7,000
2020	Ram	Promaster 3500 Cargo Van	\$4,500
2020	Ram	Promaster City	\$4,500
2020	Ram	3500 Cargo Van High Roof (159 IN WB)	\$7,500
2020	Ram	3500 Cargo Van High Roof (159 IN WB EXT)	\$7,500
2020	Ram	1500 Quad/Crew 2WD	\$6,750
2020	Ram	1500 Quad/Crew 4WD	\$6,750
2020	Jeep	Grand Cherokee 4X4 Exodiesel	\$2,500
2020	Jeep	Grand Cherokee 4X2 Exodiesel	\$2,500
2020	Ram	3500 Crew/Mega Cab 4WD Ecodiesel	\$2,250
2020	Ram	2500 Crew/Mega Cab 2WD Ecodiesel	\$2,250
2020	Ram	2500 Crew/Mega Cab 4WD Ecodiesel	\$2,250
2020	Ram	2500 Regular Cab 4WD Ecodiesel	\$1,750

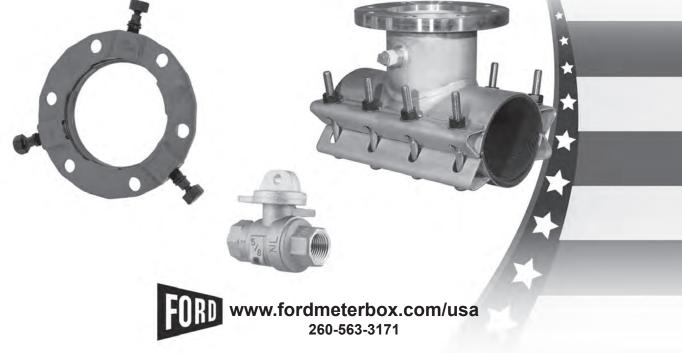
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GPS/GIS MAPPING SERVICES



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

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!



NATIONAL RURAL WATER ASSOCIATION

NRWA America's Largest Utility Membership

2020 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 50 United States
- Call your State Association today to get your Fleet Identification Number (FIN)
- Companies, service providers or other sales organizations are not eligible for this program

Eligible Vehicles	Incentive
Fusion (Excludes Hybrid & Energi)	\$2,000
Edge	\$2,500
Escape SFWD	\$1,500
Escape (Excludes Hybrid/PHEV)	\$1,800
Expedition	\$4,000
Explorer	\$1,000
Explorer XLT 4WD or RWD	\$1,500
F-Series Super Duty F250-F550	\$5,800
F150 4X2 Reg Cab	\$4,500
F150 (Excludes Raptor)	\$5,500
Transit Connect	\$2,400
Transit 2WD	\$4,200
Transit AWD	\$3,500
Ranger 4X2 Crew Cab	\$1,000
Ranger 4X2 SuperCab	\$300
Ranger 4X4 Crew Cab	\$1,700
Ranger 4X4 SuperCab	\$1,400



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