2019 ANNUAL CONFERENCE PREVIEW

February 12-14, 2019
Yakima Convention Center
QZIII is a lightweight, portable, video inspection system that can be operated by one person! Accomplish safe-viewing in industrial or environmental areas with no man entry. Perform swift inspections and surveys of pipelines, wet wells, manholes, sewer treatment plants, steam generators, tanks, vessels, and other areas that are difficult to reach. QZIII can also be used to locate lateral services or to identify a blockage at a manhole, access port, or other entry point without entering the line or structure.

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Evergreen Rural Water is celebrating its 25th Anniversary in 2019! We are so excited to reach this milestone and we wouldn’t be here without the support of our members and most importantly our board members. Our nine-member board is volunteer based. It is their job to steer the organization towards a sustainable future by adopting sound, ethical, and legal governance and financial management policies, as well as by making sure the nonprofit has adequate resources to advance its mission. It is because of our board that we were able to purchase our office/training building in 2014. It is because of their leadership and their love for our programs that we have been able to sustain our field staff even during funding lags. Our board members donate their time, travelling throughout the state and country representing Evergreen Rural Water. I want to take the time to say thank you to our current board members. I can’t wait to see where the future takes us.

Thank you to the following individuals:
- Shawn Davisson, City of Okanogan - Board President
- Shawn O’Dell, Washington Water Service - Board Vice President
- Ross Read, Port of Grays Harbor - Board Secretary/Treasurer
- Lance Hoyt, City of Toppenish - NRWA Director
- Paul Hartwig, City of College Place
- Lance Peterson, North Spokane Irrigation District #8
- Don Zuern, City of Long Beach

Two of our regions are vacant. We would love to have a full board for 2019. If your utility resides in the following regions and you are interested in joining the board, please contact the office.
- Northwest Region: Island, San Juan, Skagit, and Whatcom Counties
- East Central: Grant and Kittitas Counties

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Knowing your WWTP – Inner and Outer Workings

To know your plant is one thing but to understand all aspects is a whole different animal. Most seem to have a good understanding of how the plant operates and permit requirements tend to be met on time. That being said, I seem to find that operators, assistants and “worker bees” at some of the plants I visit just know the daily grind – and some don’t grasp how the plant should operate to be met by the permit. In the majority of the cases with an individual operator they are also the water operator, parks, dogcatcher, code enforcement and so on. I believe all employees that work around the plant, be it daily tasks or once a week help, should read and understand the permit associated with that facility. A copy of the permit is required to be located at the treatment plant and should be available to anyone that asks to see a copy of said permit. Some items might not pertain to certain individuals but at least they have the understanding for requirements and timelines for testing and reports that may be due.

Based on past and present experience with some operators the knowledge of how the plant was intended to be operated was based on the last or current operator. A good source for baseline operation can be found in the Operation & Maintenance (O & M) manual. The manual is just a guide for O & M at that particular plant and can be used for multiple aspects. Standard Operating Procedures (SOP’s) can be created for equipment maintenance and binders can be put together for different components of treatment. The O & M is a great tool to learn and understand basic operations of treatment and maintenance for someone just coming in to the wastewater treatment environment.

Biosolids handling and disposal can go hand in hand with the O & M manual and I would also encourage operators to read and understand WAC 173-308. Sections of the WAC may or may not pertain to your facility solely based on the manufacturing and disposal of biosolids created at your facility. It would be beneficial to have a good understanding of proper handling and testing of solids created.

If you would like further assistance in obtaining and/or understanding the wastewater facility you work for, please feel free to email me or give me a call.

CHAD SHORT
Evergreen Rural Water of WA
Wastewater Technician
cshort@erwow.org
509-429-7167

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Most likely, we are all experiencing some type of change from the economic crunch. Some of you small municipalities are and have been going through tough times. As we all know during these times you may have been faced with making cuts. Some of you may already have and are working with a skeleton crew of one or two public works employees to do it all – however, we all know it is impossible to do it all! But, you do what you can to make things work. You find out quickly what is a priority and what’s not. Sometimes, those priority items don’t get done right away and sometimes you may be faced with a difference of opinion from others.

Always remember your treatment plants are the most important (unless you have an emergency of course!). Don’t neglect your infrastructure (collection system, etc.). Keep up on the maintenance, as they tend to be out of sight, out of mind.

Do the toilets stop flushing? Do you still get problem areas in your collection system? It is a necessity to keep things flowing as smooth as possible. A lot of you don’t have the time, money, manpower and tools and equipment necessary to investigate or repair the problem. What do we normally do? Call your local septic company or a Vactor truck to jet the line. You need to pin point the spot and put that money towards a permanent fix.

Some of you already know, but for those that don’t, Evergreen Rural Water recently purchased a new push camera with 400’ of push rod, as well as a lighted skid that allows the camera to be closer to the center of your collection pipe. Of course we can’t camera your whole system, but if you have problem areas or think you might we can make an appointment and take a look at it from above.

We can get close to the problem. We can also take video and snap shots and transfer them to a USB drive. Don’t waste your time, money or manpower on digging it up until you know what is under there.

If you have any questions contact Loren Steveson, Wastewater Technician (western side) at 360-880-3153 or e-mail lsteveson@erwow.org, Chad Short, Wastewater Technician (east side) at 509-429-7167 or e-mail cshort@erwow.org or you may also contact our main office at 360-462-9287 or e-mail info@erwow.org.

LOREN STEVESON

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Why an Asset Inventory?

I know, I know, enough already with asset this and asset that. It’s like Pumpkin Spice come September. But what I want to share with you is where it starts – with an Asset Inventory. In our Asset Inventory A-Z Class we discover the simple fact that without an inventory we don’t know what we own, what we are responsible for, and the life cycles and replacement schedules for those items. Without an inventory how do we really set rates or level of services? How do you build an accurate budget for maintenance or capital replacement? How do we do proper planning?

We deal with a reality that says this is how we have always done it and ease our way into believing it will be alright – and it will, until you sit before your governing body and ask for funds for an “unforeseen” expense. Yet with an inventory and life expectancies you have the ability to start planning for some of those events. If you’re looking for funding for that project you will need that inventory. You have the ability to begin to set rates that include reserves to help with future expenditures with that inventory. You have the ability to see the true level of service your assets are able to provide and make changes where needed. You begin to become more proactive and less reactive!

We begin to nudge that big wheel of government along a different path and instead of getting run over by that wheel we begin to adjust the direction ever so slightly. We begin to manage the system instead of the system managing us. From A-Z we begin to make the changes needed to understand, adjust, improve, repair or replace our inventory as needed. We give our system a voice and as a steward we live up to our responsibilities of keeper of the trust.

We get all of that return for the investment of some time when we take the simple steps to begin our Asset Inventory.

If you haven’t started, then think about making that change today!

ERNIE KLIMEK
Training and Apprenticeship Supervisor

Winterize

Winter is coming, have you started your winterizing yet? November was a good time to send a message to your customers in their water bill. If you use a postcard, they usually have a message line. You can get conservation credits for educating your customers and reducing water leaks from frozen pipes.

Just a reminder to make sure they have their hoses removed off their outdoor facets. The water in the hose will freeze, than it will travel to the hose bib, then go into the wall and the pipe will freeze and the pipes will burst. When the temperature warms up, the leaks will then appear. If you have a snow bird, they can come home to severe damage.

Cover your vents around the foundation off your house. The cold wind chill blowing under the house can freeze pipes. Just plugging these off helps keep the pipes from freezing.

Check your water meter make sure it is winterized. Some water systems will help and do these while others leave it up to the home owner. Your water meter can freeze, the angle stop will freeze than it can travel down the pipe to the water main, and this can stay frozen for days after it warms up leaving the home owner out of water for days. When these pipes thaw broken pipes can appear.

Check if you have exposed pipes under the house. These need to be wrapped with foam insulation. When it is cold for several days, you may need to let your water drip since moving water doesn’t freeze.

Cover and turn off irrigation systems and outdoor facets in the yard. These are the leaks that are undetected until the meters get read, and in most cases, the water bill is very high. In small systems it can drain the reservoir because the pump can’t keep up causing a system outage.

Water Managers: Make sure you have a good supply of water meters and meter bottoms. If there is a few days of cold weather, the meters will freeze. Most meters have bottoms that are a freeze plate and are designed to break to save the meter. When you’re reading your water meters, it is a good idea to have the meter reader
note the account so they can come back and add installation to the meters. I see cedar wood chips being used often as an easy way to keep them from freezing. Fill the meter box up around the meter up to the meter register. This can be done at the time it is being read if you don’t have several that need to be done slowing down the meter reading.

Make sure when your operators are doing pump station checks that they are turning on the heaters. They only need to be set above freezing on the lowest setting and set so they will turn off when they get above freezing. The thermostats go out often in these block heaters. Also make sure the windows and vents are closed from the summer heat. You don’t want to start getting high power bills.

I suggest that you have some white potable water hoses in storage and a few hose by hose connectors. These need to be kept clean. If a house freezes, the on call operator can run the hose to the closest house or meter. Make sure that the meter is read, and the people know that you will read the meter when it is removed so they will not be billed for this water. The water will have to be left on a slow stream or it also will freeze.

It’s a good idea to have two weeks of chemicals on hand. Icy roads can cause shipments to be delayed. Make sure your operators are keeping their systems stocked with chlorine and other chemicals you are using for water treatment. It’s a good idea to keep your chemical tanks topped off in case your water system has an emergency or you can’t get to the pump houses, so it will not run out.

The fire hydrants that have been noted that don’t drain may need to be maintained. The bleeders can get plugged. Leave the caps on, and then open the hydrant part way. Sometimes this can flush the bleeders out. You can dig down if able and push a wire in the bleeder hole. These plug up when wash rock isn’t put around them. If either one doesn’t work make sure you have a shut off valve exposed so if needed you can turn the hydrant off.

We are out traveling around looking for water systems that need help. For hydrant repairs or other system questions give me a call if there are any areas that I can help with.

Happy Holidays

SCOTT DIXON
Seasonal Projects

As the winter seasonal demand on consumption drops and winter time weather and outside projects are adjusted as conditions permit, this is a good time to review procedural and health and safety venues for your utility.

If you have Standard Operating Procedure (SOP’s) documents this might be an opportunity to review and consider a Constant Process Improvement (CPI) evaluation. You should involve the entire maintenance and workforce team to evaluate and update if necessary. The maintenance and labor hands-on assessments are critical in working through these SOP’s and should always be orientated for employee safety.

Another indoor winter evaluation would be updating and reviewing your asset management program. The asset management program is an accounting forecast and record which directs management to appropriate funding for the necessary repair and replacement of assets based on efficiency and essential importance priority. Although, this is a management tool – field workers that maintain it, care for it and note the performance and efficiency of the equipment are the ones that drive it. Most assets depreciation schedule is on a run to fail schedule but this sometimes leads to gross inefficiencies and even hazardous conditions. Efficiency and safety should override anticipated asset repair and replacement and especially “run to fail.”

Thirdly, review your MSDS and health and safety mandates for compliance. It is a federal law (CFR) that mandates that each employee be entitled to a safe and healthy work environment. Review your MSDS’s and make sure they are updated. Promote through safety meetings, the availability and accessibility of these federal and state mandated required documents and where they are located.

These three management items should be reviewed annually and any changes made to these should be noted in your control and process records.

FRANK WRIGHT

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 Tom McCurdy, Director of Environmental Sales
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LET’S TALK
Let me start off by saying no, it’s not some monster sized sports drink that satisfies your thirst (although advertisers would like you to think that). Quenching is a process that neutralizes any chlorine in your water source. There are a variety of chemicals available to achieve this process such as: sulfur dioxide, sodium bisulfate and sodium metabisulfite. However, these chemicals tend to scavenge oxygen from water so normally we use ascorbic acid and sodium ascorbate. These chemicals are commonly known as vitamin C, but that is only partially true. What I mean is it only provides part of the benefits vitamin C does. But if for some reason you are suffering from scurvy it’s exactly what you need (on a side note in its granular form it looks similar to Tang – which is why someone ran off with a box of the stuff I had while in Seattle. Go figure). From a treatment standpoint it works very well. It does not scavenge any oxygen from the water and it also helps with fish slime coat.

This is the chemical I recommend using when you need to stop or quench chlorine residual. There are many reasons you may need to do this – such as releasing treated wastewater to a receiving stream. A water main breaks close to a water body that has fish in it (they call them life-bearing streams, but to me it sounds like calling a chicken farm a life bearing ranch). Or, maybe you need to drain a reservoir for maintenance and the volume of chlorinated water could overwhelm a receiving wastewater plant’s primary treatment.

The way this works is this: $C_6H_5O_5CH_2OH + HOCl \rightarrow C_6H_5O_5CH_2OH$ + HCl + H2O. In Layman’s terms it means this roughly: vitamin C and bleach will react to yield vitamin C, acid, and water (plus some heat but that’s not a major concern unless you’re dealing with very high amounts of bleach).

Another operator asked me, “is there a time when you are releasing chlorinated water and you don’t need to dechlorinate?” Well, normally the only time you would not need to quench a residual is when you are releasing to an earthen ditch or similar (in a rural area) and are far enough from a water source that any chlorine would be consumed before it reached a life bearing stream. If you’re not sure check with the Department of Health or ask a circuit rider! – shameless plug, but I do that sometimes!

Hydrogen peroxide is another type of quenching process that shows promise. Hydrogen peroxide itself is a weak disinfectant and when it is used to neutralize chlorine it basically disassociates or breaks down into oxygen, salt, and water. The drawbacks to this method right now are costs since it takes about half a pound of hydrogen peroxide to neutralize a pound of free chlorine. There is also an issue with higher chlorine residuals. A byproduct of the chemical reaction is heat which is usually evidenced by small bubbles in the water. However, at higher levels, the exothermic reaction could be violent, so caution on dosing must be used.

Bottom line is, if you need to stop or quench the chlorine residual you should have a method at hand that is reliable, safe to employ and environmentally friendly. There are pros and cons associated with any quenching method. If you need further information or advice on methodology call me or any circuit rider. We’ll be happy to help!

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Workplace accidents typically result from a mix of employee behaviors, unsafe conditions and holes in the organization’s safety culture. These exposures should never be overlooked because workplace accidents are more common than you may think.

According to the Bureau of Labor Statistics Information (BLSI) 2016 survey, for every 100 full-time workers, there were nearly 8 (7.7) recorded workplace injuries or illnesses reported in the water, sewage and other systems industry. These statistics are alarming, but if a self-inspection program is put into place, you could potentially spot existing or impending hazards before any harm is done. Not only that, but you could also help reduce the likelihood of damage to property as hazards associated with property damage are also assessed in the process of your program. According to OSHA, other benefits that employers may find include:

- Improved compliance with laws and regulations.
- Reduced costs, including significant reductions in workers’ compensation premiums.
- Engaged workers.
- Enhanced social responsibility goals
- Increased productivity and enhanced overall business operations.

Formal self-inspection programs increase the likelihood that the outcomes will be successful. Many organizations conduct self-inspections on an as-needed basis and rely on employees to report hazards as they notice them. It is not uncommon for employees who work in a particular area to “miss” hazards due to familiarity, complacency or individual bias. A formal self-inspection process allows different employees to view areas of the operation and help identify hazards that may be missed by those who work in the area regularly.

Like any other corporate initiative, a formal self-inspection program will only be successful if it is supported by the leadership of the organization and the employees who buy into the process. A team meeting to discuss the new project and solicit feedback from employees can help an organization obtain buy-in from the staff. The inclusion of a mixture of leadership and employee representatives on the inspection teams also provides an opportunity for leaders to interact with the staff and build rapport with them.

Here are some other tips for creating an effective self-inspection program:

- Create a written policy that establishes your facility’s commitment to safety, and inform all employees of this policy. Once created, lead by example and follow procedures that employees are expected to adhere to.
• Use a checklist that is designed for your operations. This creates consistency in the process and memorializes the inspection.
• Create accountability for addressing any hazards that arise. While it may not be feasible to fix everything right away, developing a plan and communicating it to your staff will build trust in the process.
• Ask questions of your staff while conducting self-inspections. The goal of the process is to identify hazards. Workers will sometimes point out hazards that are not apparent to the inspection teams.
• Develop a pre-determined schedule for self-inspections. It is important to have a schedule so that the process is not forgotten during your day-to-day operations.
• Assign roles and responsibilities to your team. Who will lead? Who will track growth and progress? Once you establish roles, maintain the program by holding employees accountable.³
• Train the members of your self-inspection team on the techniques of hazard identification and mitigation. Once a program is developed, evaluation is key to ensuring that the program is running as intended and on its way to achieving your overall goal. Not only that, but an evaluation gives you the opportunity to find room for improvement. This needed improvement may relate to the program itself, or even personnel. Evaluation should occur regularly, and if not more frequently, at least annually. If opportunity for improvement arises, adjust accordingly.⁴

A self-inspection program can vary depending on your facility, but a well-designed one can help in many ways. Establish, or strengthen your program to help reduce workplace accidents and property losses, as well as overall costs of risk and property management. It’s always better to be safe than sorry.

Sources:

Bill Raab is the Director of Risk Control for Glatfelter Public Practice. His role is to work with policyholders to increase their resilience to risk. Bill holds a Master’s degree from Florida State University in Risk Management and Insurance, a Bachelor of Science from Penn State in Industrial Health and Safety, and is currently pursuing a Doctorate in Organizational Leadership from Abilene Christian University. Bill prefers to spend time with his family when he is not pursuing his professional passions. ☁

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CONFERENCE EVENTS AND INFORMATION

PRE-CONFERENCE
On Monday, February 11, 2019 in Yakima, we will have two pre-conference classes to choose from. One class will be Nutrient Removals taught by Don Van Veldhuizen with USABlueBook. This will be a 5-hour training session. The other class will be a hands on half-day class on Asset Management 101 taught by AAKAVS Consulting. This class will have participants going out in the field for part of the day, so you will need to dress for a Yakima winter.

TUESDAY-THURSDAY: FULL CONFERENCE CLASSES, CEUs AND MEALS
From Tuesday to Thursday, a variety of concurrent classes are available with the ability to earn up to 1.7 CEUs. Registration will open at 7:00am each day. There is something for everyone! Take a look at the next page for the full list of training sessions available. Classes are subject to change.

Full conference registration includes the following meals: Tuesday lunch; Wednesday breakfast and awards banquet dinner; Thursday breakfast. One-day registrations include the respective days meals.

BANQUET!
That’s right! The banquet is back for our 25th Anniversary! The banquet will take place Wednesday after class. We will serve a formal dinner, which is included in your full conference registration. Please come and join us to congratulatate this year’s winners. You or someone you know may be the Water Operator of the Year or Wastewater Operator of the Year. Don’t forget to send us your nomination, which is included in this publication. You can submit your vote by going to our website, www.erwow.org and click on the annual conference page.

EXHIBIT HALL
The exhibit hall opens on Tuesday at lunch. Immediately after class on Tuesday, we will hold the Evening with Exhibitors. The open house is a fun evening with snacks, a no host bar and beer samples! Our exhibitors have the latest in technology and services, so don’t miss out. The exhibit hall will be open all morning on Wednesday with exhibitors breaking down after the Awards Luncheon.

LODGING
There are conference room blocks at the following hotels; Holiday Inn, Red Roof Inn and Red Lion. Please call the hotels directly for room rates and availability.

CALL FOR NOMINATIONS
Calling all members to vote for a water, wastewater or source water operator who has done an extraordinary job, and deserves the title of Operator of the Year! Also, you can nominate the ERWoW Field Staff Member of the Year! Submit your nominations by January 10, 2019 at www.erwow.org.
### Monday, February 11, 2019
- Nutrient Removal: 10:00am-4:00pm
- Asset Management 101-Cradle to Grave: 10:00am-3:00pm

### Tuesday, February 12, 2019
- Attendee Registration and Packet Pick Up ~ 7:00am
- Opening Session

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<tr>
<th>Time</th>
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<th>Tract 3</th>
<th>Tract 4</th>
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<tbody>
<tr>
<td>8:00am</td>
<td>Opening Session: Water Flowing Through History</td>
<td>Magnesium Hydroxide for Nitrification and Improved Setting</td>
<td>Addressing Water/Wastewater Monitoring Challenges</td>
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<td>9:10am</td>
<td>The Shi* No One is Talking About</td>
<td>New Large Electronic Meters for Utility Applications</td>
<td>Why is Water Wet?</td>
<td>New Large Electronic Meters for Utility Applications</td>
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<td>10:20am</td>
<td>Changes in the Drinking Water Contaminant Landscape - Algae, AWIA, PFASs, and Perchlorate</td>
<td>Why We Clean and Televiser Sewer and Storm Systems</td>
<td>Alternative Disinfection</td>
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<tr>
<td>11:20am</td>
<td>Lunch and Exhibit Hall Opening</td>
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### Wednesday, February 13, 2019
- Attendee Registration and Packet Pick Up ~ 7:00am
- Breakfast ~ 6:30am-8:00am

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<tr>
<td>7:00am</td>
<td>Breakfast Presentation: Know When to Hold Them</td>
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<td>8:00am</td>
<td>The Do's and Don't's of Tracer Wire</td>
<td>Chlorine System Design and Troubleshooting</td>
<td>WW Operator Certification Update</td>
<td>Understanding Chlorination</td>
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<td>9:10am</td>
<td>Addressing Non-Revenue Water with Solid State Meter and AMR/AMI</td>
<td>Water Use Efficiency: What the Numbers are Telling You</td>
<td>Presentation by Department of Ecology</td>
<td>Cybersecurity for the Rest of Us</td>
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<td>10:10am</td>
<td>Snack Break in the Exhibit Hall</td>
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<td>11:15am</td>
<td>Lunch on Your Own</td>
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<td>12:15pm-1:30pm</td>
<td>No Host Bar Reception</td>
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<td>1:30pm</td>
<td>Cross Connection Control Surveys</td>
<td>Office of Drinking Water’s Viewpointing on Asset Management Programs</td>
<td>Data Logging (Sensors and Telemetry)</td>
<td>Apprenticeship Program</td>
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<td>3:50pm</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5:00-5:30pm</td>
<td>No Host Bar Reception</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5:30-8:00pm</td>
<td>Awards Banquet and Raffle</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Thursday, February 14, 2019
- Breakfast ~ 6:30am-8:00am
- Breakfast Program: Last Operator Standing

<table>
<thead>
<tr>
<th>Time</th>
<th>Tract 1</th>
<th>Tract 2</th>
<th>Tract 3</th>
<th>Tract 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00am</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8:00am</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:10am</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10:20am</td>
<td></td>
<td></td>
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</tbody>
</table>

*EVERGREEN RURAL WATER OF WASHINGTON*  
**CONFERENCE AT A GLANCE | TUESDAY - THURSDAY**  
Classes and times are subject to change. Please check website for updates.
REGISTRATION FORM (Please duplicate this form for each person attending).

Four Easy Ways to Register:
• Register online at: erwow.org/Conferences/2019AnnualConference/Attendees.aspx
• Mail completed form(s) with payment to: ERWoW, PO Box 2300, Shelton, WA 98584.
• Fax completed form(s) to: (360) 462.9289.
• Scan form and e-mail to: info@erwow.org.

*If you are a system operator and bring a board member, mayor, or city councilmen with you to the full conference you will receive a 15% discount on your registration fee.

Name: ___________________________ Water Cert #: ____________________ WW Cert #: _____________
Company: _____________________________
Address: ___________________________ City: _________________ State: _______ Zip: _____________ Phone: ( ) _____________
Fax: ( ) ______________ E-mail: ____________________________
Spouse/Guest Name: ____________________________

☐ Dietary restrictions? ____________________________ ☐ Disabilities? Please indicate on a separate sheet of paper

### ANNUAL CONFERENCE REGISTRATION FEES:

<table>
<thead>
<tr>
<th>Registration</th>
<th>ERWoW Member – Full Conference</th>
<th>Non Member – Full Conference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Conference</td>
<td>on or before 1/29</td>
<td>$225</td>
</tr>
<tr>
<td></td>
<td>on or after 1/30</td>
<td>$275</td>
</tr>
<tr>
<td>Single Day Conference Registration</td>
<td>Tuesday, February 13</td>
<td>on received $160</td>
</tr>
<tr>
<td></td>
<td>Wednesday, February 14</td>
<td>on received $160</td>
</tr>
<tr>
<td></td>
<td>Thursday, February 15</td>
<td>on received $160</td>
</tr>
<tr>
<td></td>
<td>or before 1/29</td>
<td>$160</td>
</tr>
<tr>
<td></td>
<td>or after 1/30</td>
<td>$175</td>
</tr>
</tbody>
</table>

### Pre-Conference:

- ☐ ‘With Full Conference Registration $75 Please ☐ Nutrient Removal 0.5 CEUs WW Only
- ☐ ERWoW Member: Pre Conference $135 ✚ Pick One
- ☐ Non Member: Pre Conference $160 ☐ Asset Management 101 0.4 CEUs Water/WW CEUs

### Spouse Registration:

- ☐ Spouse One Day - Please choose one: ☐ $50 Tuesday ☐ $75 Wednesday (Banquet dinner included)
- ☐ Spouse Full Conference - $125 (Banquet dinner included)
- ☐ Banquet only - $60

### Events:

- ☐ I will attend the Banquet on Wednesday (included with Full Conference Registration)

Total Amount Due: $___________
Payment Information: ☐ Check enclosed ☐ Purchase Order #___________
Charge to my: ☐ M/C ☐ Visa Acct#: ___________ - ________ - ________ - ________ Exp. Date: ____________ CSC #: __________

Questions? Call 360-462-9287. Registration and attendance at and/or participation in ERWoW’s meetings and other activities constitutes an agreement by the registrant to ERWoW’s use and distribution (both now and in the future) of the registrant or attendee’s image in photographs, video and electronic reproduction of such events and activities. Cancellation Policy: Cancellations received on or before 1/29/2019 receive an 80% refund. There will be no refunds after 1/29/2019. Substitutions are welcome. No shows will be billed.
**Upcoming Events**

<table>
<thead>
<tr>
<th>JANUARY</th>
<th>MARCH</th>
</tr>
</thead>
<tbody>
<tr>
<td>29-31</td>
<td>12 Control Valves-Removing the Mystery</td>
</tr>
<tr>
<td>Water Distribution Manager Issaquah</td>
<td>Spokane</td>
</tr>
<tr>
<td>FEBRUARY</td>
<td>13-14 Cross Connection Control Specialist</td>
</tr>
<tr>
<td>11</td>
<td>19-21 Wastewater Exam Review Tacoma</td>
</tr>
<tr>
<td>Pre Conference Nutrient Removal Yakima</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>20 3 M’s of Maintenance Wenatchee</td>
</tr>
<tr>
<td>Pre Conference Asset Management 101 Yakima</td>
<td></td>
</tr>
<tr>
<td>12-14</td>
<td>26-28 Water Treatment Plant Operator Exam Review Federal Way</td>
</tr>
<tr>
<td>Annual Conference Yakima</td>
<td></td>
</tr>
<tr>
<td>26-28</td>
<td></td>
</tr>
<tr>
<td>Water Distribution Manager Spokane</td>
<td></td>
</tr>
</tbody>
</table>

**ERWoW Scholarships!**

Evergreen Rural Water of Washington (ERWoW) will be giving away two $500 Scholarship Awards to students in pursuit of higher education for the 2019-2020 academic year! Dependent children and stepchildren of ERWoW Members are eligible to be considered. Scholarship awards are not limited only to first year college students.

Applications to be considered MUST be submitted or postmarked by February 1, 2019.

Scholarship details and requirements:
1. Scholarship assistance will be paid in two installments. $250 for the fall semester/quarter in the year 2019 and $250 for the spring semester/quarter in the year 2020.
2. All awards will be issued directly to the applicant and not to the college, university or institution of higher learning.
3. Recipients of scholarships will be required to provide ERWoW with proof of full-time enrollment each semester for which the scholarship is awarded at an accredited institution of higher learning. Payment will be made immediately upon proof of enrollment. Scholarship recipients must submit proof of enrollment for the fall 2019 semester/quarter no later than October 3, 2019 and proof of enrollment for the spring 2020 semester/quarter no later than March 1, 2020.
4. Eligibility for scholarships is limited to dependent children or stepchildren of ERWoW members. Dependent children or stepchildren of ERWoW Board and staff are not eligible.
5. In order to be eligible for a Scholarship, applicants must complete the application form in its entirety by completing all blanks and signing the certification statement. To get an application contact Tracey at the ERWoW office 360-462-9287 or download online, www.erwow.org/membership/scholarships.aspx

The scholarship application must be submitted or postmarked NO LATER THAN February 1, 2019. Scholarship Awards will be announced at the Spring Quarter Board of Directors Meeting in 2019.

**ALL EVENTS CAN BE FOUND ON** [www.erwow.org/training/calendar.aspx](http://www.erwow.org/training/calendar.aspx)
Coaches Corner
BY MIKE PENDERGRAFT, EASTERN REGION CIRCUIT RIDER

Water rates are determined by...
A. A single set of rules
B. AWWA
C. Individual water systems criteria
D. The consumer business department

Black stains on plumbing fixtures might be attributed to...
A. Calcium
B. Copper
C. Magnesium
D. Manganese

Where are samples for Pb and Cu taken?
A. Customers faucets
B. End of distribution system
C. Entry point to distribution system
D. Following each treatment process

How can a starting load on pump motors be reduced?
A. By increasing cavitation
B. By increasing suction lift
C. By throttling or closing the pump discharge
D. By throttling or closing the pump suction valve

How are three phase motors usually protected?
A. Amp meters
B. Circuit breakers
C. Fuses
D. Overload relays

Hydrant seat leakage should be checked...
A. Only when the hydrant is disassembled
B. Visually
C. With a listening device
D. With a pressure gauge

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