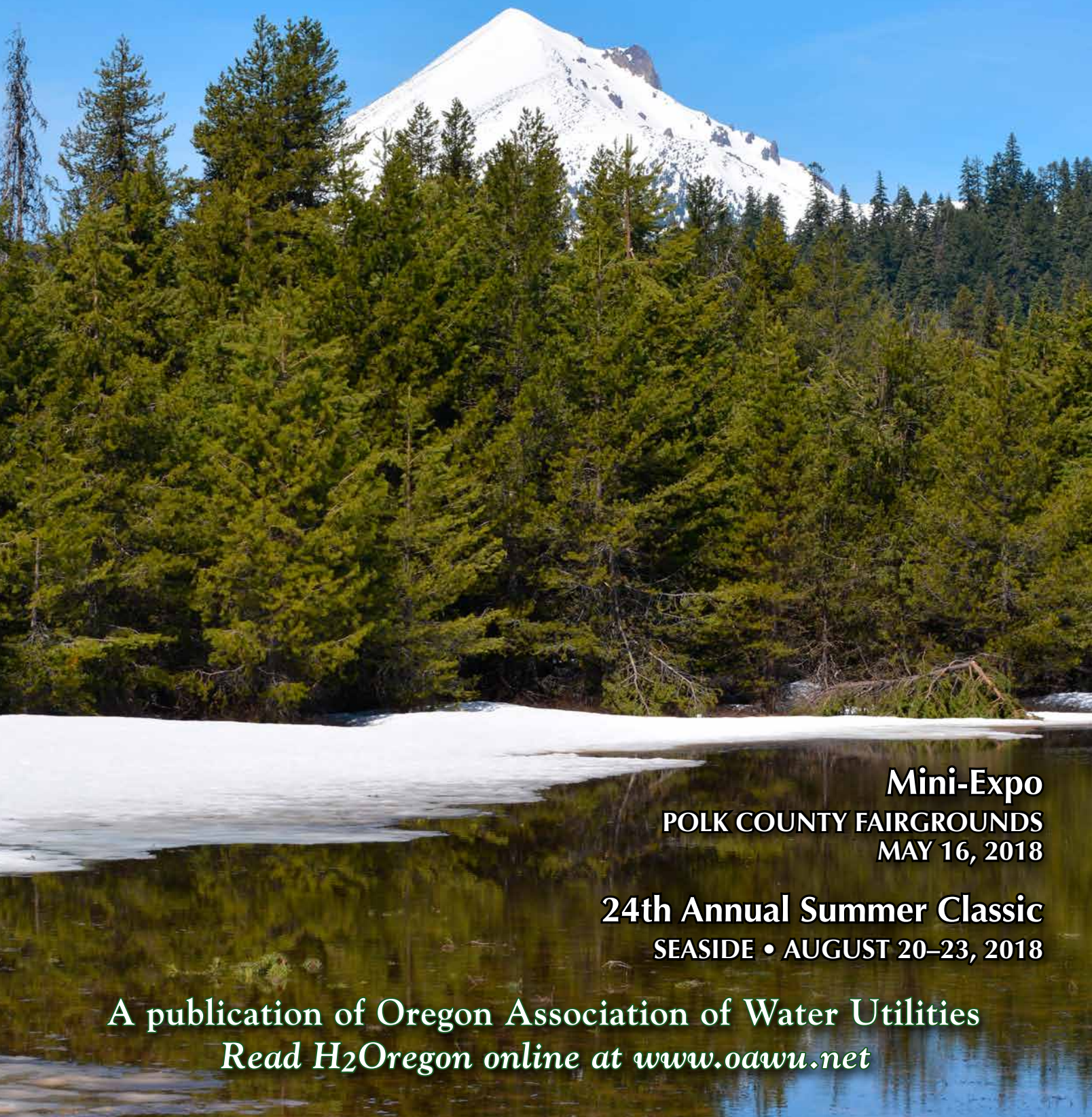


# H<sub>2</sub>Oregon

Spring 2018  
Vol. 40, No. 2



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# H<sub>2</sub>Oregon

Spring 2018  
Vol. 40, No. 2

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Please mail your photo to our office. If we use your photo on the cover you will receive an official OAWU shirt and hat.

We are also seeking articles, clean jokes, Oregon trivia, letters and interesting stories. Please send submissions (no more than two pages in length) to:

### Oregon Association of Water Utilities

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*Mt. McLaughlin from the Great  
Meadow at Lake of the Woods*

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Send your articles with full color photographs, in digital format if possible, to the address listed above.

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*OAWU's mission is to provide service, support and solutions for Oregon water & wastewater utilities to meet the challenges of today & tomorrow.*



# Can You Hear the Crickets?

*Jason Green, Executive Director*



Too many loud noises, choices not to wear hearing protection and possibly age or genetics. I'm not sure. I still hear the sounds of a deer's hooves in the woods, or ducks and geese relatively well. Lower tones aren't a problem, but the mid and upper ranges are a real challenge—ok, so some just don't exist anymore. Song birds, summer tree frogs and especially crickets are seldom heard any longer. In fact, I haven't heard crickets for 15 years or more. I recall a number of years ago asking someone why we don't hear crickets on the coast anymore. I was willing, but unable to hear and frankly, long forgot what I was missing. This brief article is not about ear protection safety, nor necessarily hearing, but maybe the art of hearing or better, listening for a purpose or maybe encouraging someone to increase their ability to learn by asking and listening to others. I have witnessed some folks being very adept at asking for advice or seeking counsel in wonderfully talented ways that cause me to shake my head in wonder at how they so easily identify opportunities and make it happen, mining others' gems of life.

I believe there is quite a vast difference in one being sure and confident as compared to arrogant and cocky. Those who are more confident know all too well that a good measure of confidence can sometimes be misdiagnosed as arrogance. Why might this subject be included regarding hearing? I believe arrogance and self-centeredness has a direct and negative affect on one's ability to hear others. Several indicators that may be revealing—arrogance often prevents a person from: seeking advice, including others, giving credit where due and listening to others—we don't hear someone stating they want to grow or become more prideful and arrogant and self-centered—some of us have a natural good dose of it already! Occasionally we might find someone who is unsure or lacks experience or maybe embarrassed who might not seek advice simply because they don't know how or who or even the right questions to ask. I have been accused of both arrogance and self-confidence and in some cases, guilty of both over the years—both can lead to a hearing impairment.

There is great benefit in listening, watching and learning from others and its often much easier and rewarding than being enrolled in the school of hard knocks. Interestingly, when a person seeks out someone because of their character, reputation, knowledge or experience and asks their input, it conveys an unspoken compliment and trust. Most folks are extremely willing to share their insight, experience, wisdom and opinions. Let the person talk, careful to listen, seek those opportunities and be humble enough to ask questions.

*Continued on next page*



Seeking good counsel and asking for advice requires a level of humility, some may call it vulnerability, doing so does not necessarily mean we are naïve on the subject—we may want to expand knowledge, we respect the person, or wish to validate our existing thoughts, etc. Additionally, whether advice comes through request or otherwise (we all know those who too willingly seem to have all of the unsolicited answers—arrogant know-it-alls), we can choose to listen, consider and maybe take something away from the conversation there too. We most always have options, choices and decisions regarding our mental attitude and what we are willing to appreciate (or not) from others. It may require setting personalities aside or contemplation of poor counsel and yet learning from someone else’s questionable advice. One can learn from a wise person and one can also learn from a fool, though its best not to be the fool, but the reward is not obtained unless one knows how and is willing to ask and listen.

There are at least 9 things that may prevent us from listening well: gossip, judging, negativity, complaining, excuses, exaggerations, lying, dogmatism, and arrogance. When seen in others, these tend to stand out, in the way and hinder our hearing. When we display them in ourselves, we are simply unable to hear well because of self. Where did logical thinking, reasoning, and common sense hide? Wisdom and discernment? Purposeful and possibly challenging discussions? It doesn’t seem to be as common as once in years gone by, just listen or read the news! In addition to exercising and training a sharp and functional mind, these rare and often hidden things also have much to do with and are influenced by the willingness (read humbleness) and ability to listen and clearly hear. Might we sincerely practice, and encourage others to strive to become better listeners and to really hear and learn from others. Might we search, find and mine those gems of work and of life from others regularly. My best to you. ♦




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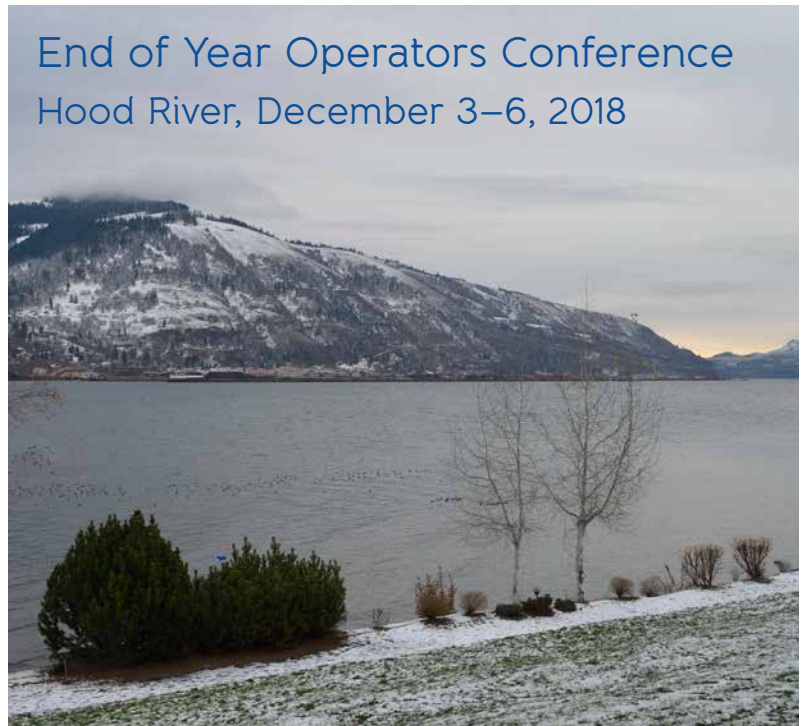
## UPCOMING CONFERENCES

### Fall Operators Conference

Beaverton  
Nov. 5–8, 2018



### End of Year Operators Conference Hood River, December 3–6, 2018





# 40TH ANNUAL HIGHLIGHTS Management & Technical Conference SUNRIVER, OREGON

This year's conference was a great success; we were blessed with a week of beautiful sunny weather. Many of the attendees were able to catch up with old friends and make new ones within the industry. OAWU staff enjoyed serving the members of the association and providing assistance to those in need. Sunriver staff again provided genuine, friendly, excellent service, and great food.

The conference sessions were lead off by Jason Green, OAWU Executive Director, and Ed Pugh, OAWU Board President. They welcomed attendees and discussed the state of the Association. They were followed by Steve Fletcher, President of National Rural Water Association. Steve provided an update on the issues the industry is facing at a national level. This was followed by Mark Landauer who presented an update regarding the legislative issues at the state level.

The OAWU annual business meeting was held after class sessions ended on Tuesday. President Ed Pugh presided over the meeting as attending members heard committee updates and participated in board member elections. The slate of board members who were re-elected to the board were:

**Mike Edwards**, City of Bend  
**Mark Kerns**, Avion Water Co.  
**Ed Butts**, 4B Engineering & Consultants  
**Gay Melvin**, City of Dufur  
**Tim Lyda**, City of Tillamook

At Wednesday's regular board meeting officer elections for 2018 occurred. They are: **Ed Pugh** as President, **Mike Edwards** as Vice President, **Matt Johnson** as Secretary, **Micah Olson** as Treasurer, **Mark Beam** as Past President, and **Mark Kerns** as NRWA Director.

Many attendees were present at the awards banquet, on Wednesday evening, and several visiting attendee families. The steak and salmon were great, and many good conversations could be heard throughout the Great Hall, along with the comic relief of Brent Reed.







The 2017 Manager and Operator award recipients are:

The **Manager of the Year** award went to Richard Sattler from the City of Sherwood.

The **Office Manager of the Year** award went to Mary Lambert from the City of Aurora.

The **Rookie Operator of the Year** award went to Gary Mathis from the City of Amity.



The **Wastewater Operator of the Year** award went to Darrell Gale from the City of Irrigon.

The **Water Operator of the Year** award went to Tom Etzel from the City of Stayton.

The **Associate Member of the Year** award went to Ferguson Enterprise, Inc.



The **Friend of Rural Water** award went to Russ Cooper, the Public Works Director from the City of Monmouth.

Congratulations to all of our award recipients. These awards recognize the dedication and commitment made by those who choose to serve the communities of Oregon every day. Don't forget, if you have an employee whom you would like to nominate for next year's awards, submit the information to the OAWU office for consideration.





# 40TH ANNUAL MANAGEMENT & TECHNICAL CONFERENCE HIGHLIGHTS

The Best Tasting Water award recipients this year were the **City of Stayton** for Best Surface Water and **Deschutes Valley Water District** for Best Groundwater. The submissions are tested by 3 judges from the water community of Oregon and they decide the best groundwater and surface water, then these winners go head to head for best overall water in Oregon. The winner of the Overall Best Water category was **Deschutes Valley Water District**. Their water will be flown to Washington DC and submitted for judging in the Best Water in the Nation contest.

At the Exhibitors' Hospitality Night on Thursday there was good food and drink, many door prizes, raffles, and an auction for a bottle of Knob Hill Whiskey which was donated by **Geoff Robinson** from Frank J. Martin and the high bid won by **Jason Green**, it was re-auctioned and high bid won by **Kriss Schneider** from Schneider Water Services, then re-auctioned and high bid won by **Brad Johnson**. A bottle of Fireball was auctioned off, donated by **Gene Vroman** from the City of Yoncalla, and high bid won by **Nonda Zwald**, then it was re-auctioned and high bid won by **Scott Morrill**. Two bottles of Pendleton Whiskey were also auctioned, the first high bid was won by **Kriss Schneider** from Schneider Water Services and then donated back, and

re-auctioned and high bid won by **Kriss Schneider** again. The second bottle was auctioned off and the high bid won by **Eileen Lockard**. The money went to support the Jeff Swanson Memorial Scholarship fund. All scholarship raffle proceeds totaled \$1810. The winners for this year's Jeff Swanson Memorial Scholarship of \$1500 each were: **Antonio Alvarez**, whose dad works for the City of Monmouth, and **Ellen Wiebe**, whose mom works for the City of Lebanon. The application for the 2019/20 academic year can be found on our website, please apply if you have a child that is currently attending or going to attend college.

The raffle winners were: **Frank Day** from Crooked River Ranch won the 49" LG UHD 4k Ultra Smart TV from the OAWU raffle; the winner of the WaterPac Raffle of a .25-06 Remington 700 Long Range rifle with a Leopold Scope was **Jeff Houchin** from Jacobs; and the winner of .44 Mag Ruger Super for the Jeff Swanson Memorial Fund Raffle was **Mark Cage** from Southfork Water Board.

The winners of the ping pong and cribbage tournaments were announced. First place in ping pong was **Darryl Walker** from the City of Cannon Beach, **Jade Mecham** from Jacobs came in







second and **Jason Devine** from the City of Sublimity came in third. **Dustin Stidham** from the City of Medford came in first for cribbage, receiving the championship board. **Chad Hanson** from the City of Medford came in second and **Jim Shaver** from PACE Engineering came in third. Find the Logo contest winner was **Gary Huckle** from the City of Redmond., the Best Ugly Sweater Contest was won by **Shawna Crowther**, and the Best Pig drawing was won by **Cliff Bellew** from the City of Creswell.

We wish to thank our Associate Members for their donations, time, and support of this

conference and of course to the members who continue to believe in and support the Oregon Association of Water Utilities. Additionally, we would like to especially thank our Gold Sponsors of this year's conference: **EJ** and **Lakeside Industries**; our Silver Sponsor: **HD Fowler Company, Inc.**; and our Bronze Sponsors: **BergerABAM** and **CoBank**.

Be sure to sign up for the Annual Conference next year, the first full week of March 2019, as there will be a slate of new classes to attend, people in our industry to visit with, food to eat, and fun to enjoy. See you there! Best wishes to you, our friends. 💧







# Water, Water Everywhere,

*by Tim Tice, Projects Manager*

The title, a line taken from the poem by Samuel Taylor Coleridge, “The Rime of the Ancient Mariner,” depicts a dire situation on a boat, not in a drydock, but one surrounded by water. When we consider water, both quantity and quality, through modern technology we can fix poor quality, yet we hardly have the answers for low quantity.

The Oregon supply of water, as it pertains to quantity, has allowed for our normal way of life to become content for the most part, only anxious during times of drought. It is during these times when new ideas on how we should be managing our resource come up.

In 2015 China installed facilities to desalinate 1.03 million tons of water per day<sup>1</sup> (247 MGD) to quench the thirst of its country. For many years their water resources were being mismanaged. In Oregon, precipitation averages between 8-inches and 200-inches per year across six regions<sup>2</sup>, which can make one consider both sides of the spectrum as to how much water we really possess and how much is adequate for consumption needs.

The supply of data is ever-growing; with better understanding as to where the water is being consumed, regulations are in place to control and safeguard our sources.

As water suppliers, our goal is to supply enough water during all times of day throughout the seasons, usually under the assumed guise that it is a no-cost, low-cost product. The financial support is one area to continue these services, but two other areas (management and operations) are equally important.

Operations of water facilities has never been better, with the exception that it is not being pursued by upcoming generations. The third leg is management of the source through a varied approach. Specific to management of the source, the idea of conservation really hasn’t taken hold by many water users. “You don’t know what you’ve got until it’s gone” rings true during times of drought, but often is easily forgotten. In an ironic truth regarding conservation, public





# Nor Any Drop to Drink

water systems are in the business to sell water, but when the water runs dry, what do we sell?

Management and conservation, planning for such has been in effect since 1994 with rules outlining standards for the preparation of such plans. Key components for already existing water management and conservation plans (WMCPs) are the benchmarks written in either initial or updated plans. It is these benchmarks that outline specific activities to conserve water.

Some examples of conservation requirements are:

- Full metered system (production/ consumption)
- Water audits (annual)
- Meter testing
- Leak detection
- Rate structures
- Public education

The above list is not a recommendation but are required steps to provide evidence on the conservation efforts in managing the resource as required within a Water Management and Conservation Plan (WMCP). Writing an initial or updating a WMCP (no longer than ten-years between updates) requires assessing your current operations to determine conservation. For the most part, an updated plan resembles the initial outline with changes to updated production and consumption figures, progress towards implementation of the benchmarks and half a dozen other essential points.

When a benchmark is included in the plan, follow up (5-year timeline) progress reports require the water supplier to summarize the steps taken and report to Oregon Water Resources Department. Also included in progress reports is the total water diverted under each water right. What does your annual water audit tell you about the health of your system?

For the most part, water supplies in our State are adequate, and with certainty we can find data supporting both sides of the argument. What has transpired in the efforts to better manage water sources is an ever-changing approach to said management. Every method requires flexibility to accommodate a particular time frame. A mindset to be aware of impending circumstances, adjust accordingly to weather, mechanical failures, or unprecedented growth requires adaptation. Like the mariner who endured so much, a change in attitude eventually brought him back sailing towards home, where he shares his story to make his audience wiser.

Making our audience (consumers) more aware of the changing conditions of both water sources and consumption levels, enables and prepares us to adapt to those imminent times. When river flows decline, aquifer levels cannot sustain yields, major breaks cause us to reduce normal pumping production, our attitude will likely be the key component in telling our story of success.

*The best that life has to offer!* 💧

- 1 [www.technologyreview.com/s/601861/chinas-massive-effort-to-purify-seawater-is-drying-up/](http://www.technologyreview.com/s/601861/chinas-massive-effort-to-purify-seawater-is-drying-up/)
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# Common Sense Design

*by Heath Cokeley, Programs Manager/Circuit Rider*

I heard a story recently that made me laugh. It was about an old farmer in North Dakota that got a new truck. You see, this farmer had been driving the same 1985 Chevy pickup that he had purchased new back in '85. Because he owned the mineral rights to his land and the developments that had been made extracting natural gas, this farmer had become quite wealthy. He decided to trade his old Chevy in for a new model pickup. Unfortunately, with all the new gauges and knobs that they build into the new trucks the farmer quickly realized that he had difficulty running this new rig. First, he tried to get the dealership to just switch the dash out of this new truck for his old truck, but when they told him that would be very expensive he just opted to get his old truck back.

I have found similar things in my world. You see, with my new car I can set the temperature for whatever the driver wants or what the passenger wants, separately. It has a hundred different buttons that can do all sorts of stuff, most of which I couldn't tell what it is without rifling through the owner's manual for some time. In my old Corvair, when it was warm, I would roll down the window. A little warmer and I could open the wing window and if it got really hot I had a vent I could open down by my left knee that brought air straight in from the wheel well. As a society we have lost much of the simplicity in design and traded it in for the new, shiny, and technologically advanced model. Does that make the new stuff better?

Please don't get me wrong, I am not saying all advances in technology are bad, by any means. Obviously, cars today are much safer than they were 50 years ago, but what is the problem with blending the things that work well with our new ability to build. Taking lessons from our history on how things are done, learning from what worked well and what didn't can only help when we build things for the future. Many of our older water and wastewater facilities took this simplistic approach when they were designed. For instance, I have reviewed many water systems that capture their source water at an elevation much higher than the users of the system, treat it if necessary, put it in a storage tank that is still at an elevation much higher than the users and let gravity do the rest. Obviously, the ability to do this will change from system to system, but when a facility upgrade is to be added to your system, it can be challenging to look at its design and see if there is a way to simplify it. I realize these facilities are going to be designed by the system engineers, but it doesn't hurt to have an extra set of eyes looking over things and asking questions from another point of view. Though these systems will be designed by an engineer, ultimately, they will be operated and maintained by the



operators and so should be designed in a way that best allows for long term operations and maintenance.

One thing I see as being frequently over looked during the design of a facility is the ability to work on it. All these mechanical devices that are being installed will eventually need to be worked on, or replaced, so being able to work around or remove a pump or a valve is a very important aspect in the long run. This may be as simple as making the doorway a little wider or the hatch a little bigger, but this small change during the design phase of a project can pay great dividends in the long run.

In today's world we have made great advances in our ability to accomplish things that a decade ago were thought to be unachievable. We frequently can move our goods, in this case water and wastewater, in a more



effective and efficient way, as well as, have the technology to make drinking water out of nearly any source of water we find. At the end of the day, though, we are still governed by the same laws of gravity our forefathers were. Water and Wastewater still flows downhill. Looking at the lessons from the past that previous system designers have had to learn, I can only see as a benefit to both the water and wastewater industries.

I hope all your schedules and work loads are coming together for this new year of 2018 and with that, I will see you down the road. ♦



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# Networking

by Scott Berry, Operations Manager

As I write this article, I'm here in Sunriver at our annual conference watching, with interest, as many of the attendees mingle and talk. The conversations usually start off on hunting and fishing and then catching up on what's been happening since their last conversation. That invariably leads into a discussion on problems and challenges in their respective water and wastewater systems. These are the conversations that I really like. They're the ones where information gets shared, commonalities are discussed, perspectives are confirmed or challenged, and solutions to problems are found.

I've often said over the years that the most valuable information is shared during the breaks. With that in mind, it's important to realize that while networking is crucial to your career, it's also something that's going on all the time. Good networking involves having authentic conversations with interesting people—even if you're an introvert. Connecting with people—whether on a personal or professional level—is very useful for your career. Some of the key benefits of networking are:

**Fostering Relationships.** There are many comparable utilities represented at these events, as well as, many people from state agencies and other service providers. Knowing who these people are and what they have to offer is an invaluable resource.

We try to provide many opportunities built into these conferences for water and wastewater operators to converse, but they only work when they are taken advantage of.

The Find-the-logo contest allows you to gain some face-time with all the vendors and service providers present, nearly 70 here at Sunriver. Take the time to find out what these people have to offer. The cribbage and ping pong tournaments at Sunriver, as well as the golf tournament in Seaside, put you in contact with several of the other operators. Talk to them, find out who they are and what they do.

Networking is about sharing the information and knowledge you have gained over the years. It's about forming trust and finding opportunities to help and in so doing, strengthen the relationship. People in general, and operators are hardwired to reciprocate. If you help someone, you never know when they might return the favor. It could be next week or many years down the road, and I don't mean this in a Don Corleone kind of way. I mean that most of the operators that I've met embody the best of the "neighbors helping neighbors" mentality.

**A Fresh Perspective.** I've often said that some of the most important information sharing occurs during the breaks between classes. Listen to the comments during classes and if it sounds like a problem you're having or a problem you've already solved, speak up. Quite often, the ones who have the most to contribute are the ones who are hesitant to speak up in class. If that last sentence describes you, talk to the instructor during break so the details can be shared with everyone else.

There are a lot of different individual backgrounds in this industry that make up the chorus of voices. Different backgrounds provide different perspectives to solve a problem from many angles.



**Opening New Doors.** Another thing networking does for you is to make your profile a bit larger and get your name out there. You never know where a new opportunity or an advance in your career will come from. Being present in people's minds by being memorable and helpful when you do talk to them makes them more likely to think of you. If you combine this with the law of reciprocity, you can create some very powerful opportunities. That being said; my admonishment would be to not purposefully seek out others that are higher on the ladder specifically trying to impress them and develop opportunities. That type of interaction is almost always transparently self-serving and will most likely get you remembered for the wrong reasons.

In these interactions, as with any professional interactions, be confident. Confidence when lacking in grace and humility is a recipe for arrogance. Always approach with an attitude of service to others, not looking for ways others can serve you. 💧

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# Do You Have a Line Flush

by Hans Schroeder, Circuit Rider

Why should a line flushing program be implemented? There are typically 3 applicable reasons that should be considered:

1. Improve disinfectant residuals
2. Resolve customer complaints- color, turbidity
3. Clean lines for better hydraulics and save energy

Imagine driving down the road at less than 1-1/2 miles per hour. That's about the rate that water moves through the water lines. This speed, of movement of water, can cause sediment like rust and mineral particles to build up over time inside the lines. Also, a buildup of bacteria known as "biofilm" can coat the inner surface of the water lines. The combination of sediment and bacteria can restrict water flow in the lines and ultimately cause line corrosion.

Line flushing is performed by causing enough water to flow through the mains at a higher velocity and duration than normal flows to flush deposits and sediments that have accumulated in the line. By closing predetermined valves, an operator can isolate the main being flushed. This will force the water to the hydrant within that line. To properly flush a mainline, the velocity should be a minimum of 2.5 feet per second. For example, a 4" pipe requires about 100 GPM, a 6" pipe would be 220 GPM and an 8" would be 400 GPM. To calculate volume in GPM required, multiply the desired velocity in feet per second (fps), by the pipe diameter squared in square feet, then multiply by 0.785, 7.48 gallons per cubic foot, and 60 seconds per minute. This formula is *quarter pi D squared*. Let's do the math on an 8" pipe to check this.

An 8-inch pipe, in feet, would be 0.66 feet (8 divided by 12). We want a flow of 2.5 feet per second to flush the water line.

So,  $2.5 \text{ fps} \times 0.66 \times 0.66$  (pipe diameter squared)  $\times 0.785$  (1/4 pi)  $\times 7.48$  (gallons in cubic foot)  $\times 60$  (seconds per minute) = 384 GPM.

Now if that same pipe needed scoured, just change the 2.5 fps with 5 fps.

There are 4 different ways to flush water lines:

1. Conventional
2. Continuous blow-off
3. Unidirectional (UDF)
4. Automatic flushing unit

Conventional flushing is kind of the "quick fix" of the flushing program. This type of flushing is simply going to an isolated area, where there have been complaints of water clarity, odor or possibly low chlorine residual, and opening one or more hydrants to resolve the problem.

Continuous blow-off is more of a preventative technique used in dead end areas, where it is essential to keep a lower velocity of flow. Basically, there



# ing Program?

would be a valve partially opened to relieve the pressure so that there is less flow and pressure entering a possible plant or area sensitive to higher pressure of water. Kind of like a bypass of sorts. Dead end lines can be an area where there is a buildup of sedimentation, stagnant water, a loss of chlorine residual and water discoloration. Taste and odor could also be customer complaints stemming from these dead-end line areas.

UDF is the approach most systems use on an annual basis. UDF is the flushing procedure in which a section of water main is isolated so that water can be moved at a high velocity to clean the main and then be discharged out of a fire hydrant. The velocity of the water will flush out any sedimentation that has occurred. Now if “scouring” is needed, the velocity would need to be in the range of 5 feet per second. Scouring is used to remove deposits from the inner walls of the water main or to remove any sort of tool that may be resting on the bottom of the main. This will ultimately help increase flows within the mains.

Automatic flushing units are also a very effective tool. They can be programmed to flush on a set day for a set amount of time. The units can be set up for temporary

use in certain areas. No need for power, many run on just a 9 volt battery. For permanent installation there are options so that the unit will not freeze in winter conditions. The unit can also be installed with a water meter so that unaccounted water loss is not an issue.

Now there is one thing to take into consideration, make sure to be aware of the condition and type of pipe that is being flushed. Flushing should progress from the larger diameter pipes to the smaller pipes. Flushing also should be done after most people have left for work, if possible, to take advantage of higher flows and to minimize customer complaints. Valves and hydrants should be exercised prior to starting the flushing. This will help the operator to determine if there are any faulty valves or hydrants and ports within the system. Usually an operator will combine both the valve exercising program with the flushing program.

With a flushing program in place, this will save time and energy within the distribution system when implemented. A savings in pump costs, repairing leaks and water quality. If you need assistance putting together a flushing or valve exercising program, an OAWU Circuit Rider would be happy to assist in mapping and implementation. 💧

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# Traits of an Effective Leader

*by Mike Collier, Deputy Director/Sourcewater Specialist*

There are many ageless traits that can be attributed to great managers and leaders alike. This article will quickly review many of these traits – the list is not all inclusive, but should cover most of the attributes that will be found in businesses and companies where the staff are seen as thriving.

Have one main goal, or mission statement to follow. To have one main focal point will allow everyone to be on the same page. Also, the leader can keep pointing back at the main goal, this will help everyone see that there is a general direction in which they are headed. The leader will be viewed as having focus and direction and everyone is working toward achieving this main goal. This will also help with decision making – how does the decision line up with the main goal, where does the priority land when looked at considering the main goal. Or if difficult times or decisions come up – make the decision in view of the mission statement, even in the tough times we can see how we are achieving our mission. A leader should have a passion for this mission, it will help the other workers to buy-in and want to pursue the main goal and will help to relay our mission to those we serve, we will call them our customers. Be creative when explaining the mission statement, using different ways to describe the mission will be useful so that people will understand what the main goal is. Such as: “wet is our business.” Be repetitive, reminding themselves, as the leader, the customers, and employees of the mission to help bring focus back to what everyone is doing.

A second attribute would be to lead by example. Don’t be hypocritical, it is important to not put expectations on the employees that the boss would not be willing to put upon themselves. I understand that as the boss they may expect people to do what they ask, but it will be a lot easier for subordinates to do this when they see that the boss does not put themselves above it. An example would be to work extra hours, especially if there would be a time when the boss may want to have the staff work on a project on a Saturday and, when that time comes, to be there on that Saturday with them.

Be disciplined. It is important to be ethical and show discipline as the leader. It shows that they are reliable and expect a high standard for themselves and the staff. This can be shown not just at work, but also in their personal life. Sleeping, eating, exercising well, working on and maintaining close relationships. Even if retirement is around the corner, it is important to finish strong, working hard until the end.

With many leaders it is easy to have pride and ego start to take over, none of us are truly self-made, it is good to be humble. Not thinking that they are greater than/ or better than others will help to keep their subordinates happy. Being willing to serve in all different aspects of the operation, pick up the trash occasionally, we never know who is watching and we never know where we may find some wisdom. Leading isn’t about commanding and controlling it is about helping others to become better themselves, invest in the employees and having positive influence.



Along with investing in the staff is to sacrifice for them and to sacrifice for the goal. This may be sacrificing pride, time, or money. This is necessary when we are growing relationships and investing in people. Being kind and compassionate, being sympathetic will go a long way when the boss is trying to get the most from their staff. People only work so hard for money, but they may be willing to lay down their lives for a true friend. Show concern for their personal needs, truly care for them. Along with this is to be generous. Be giving of your time, give perks – time off, money, meals, something else? This will help them feel cared for. Another way to do this is to celebrate success – consider rewards.

Another thing many managers and leaders consider is to take time for themselves to reflect on work, ways things can improve, what is going well, what could go better, on themselves, relationships, goals, the company, the company's mission statement, and more. The boss needs to take time

to work on themselves, seek wisdom, and take time to think and reflect – trying to unplug from all distractions, but when distraction comes it is important to take time for the employee and be kind – sacrificing this personal time.

The last few traits to consider would be to not micromanage, give the staff ownership of what they are doing, this shows trust and pushes and stretches the staff. Typically, staff work harder and better on something they feel ownership of. Having a succession plan is also important plus succession will strengthen through employee development. It is ok to still have high expectations of the staff and have a call for commitment, refusing to micromanage doesn't mean not caring about the outcome. The leader should build on the relationships and help to grow and motivate the staff through this relationship. Everything will eventually come down to the people and relationships, either between the employees or between the employees and the customers. 💧

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# Give Credit Where Credit is Due

*by Jeff Crowther, Wastewater Technician*

In our work life, it is easy to focus on the technical aspects of our jobs, such as whether we are meeting permit requirements. While these needs of the job are required, there is another part of the job that is important if we want to have a successful and fulfilling career. This is the interpersonal part of the job, how we interact with our coworkers.

While there is too much to go into one article about how we should interact with those around us, one area that is easy to improve is giving credit to those who deserve it. Keeping this in mind will help us no matter where we are in our career, whether we are just starting in a new position or leading a team of twenty.

For those just starting careers, giving credit to our coworkers when they help us with a task, or train us on a new skill will show them that we appreciate their time and respect their experience. This will typically make everyone around us more interested in helping us succeed in the future and will make them look good in front of their superiors, it benefits everyone. Giving credit to our supervisors, when it is warranted, will also show that we want to be part of a successful team.

As a supervisor, giving credit to our employees is extremely important. It signals that they are doing a good job and will increase morale in the office. It can make people enjoy their jobs more as they feel they are being recognized for their good work, as they should be. It also shows that we are taking pride in what they accomplish, and that it isn't being done for nothing.

Overall, I believe we will find that making sure we are giving credit to those who deserve it improves our relationships at work. This will make our time at work more fulfilling, and also our coworker's, supervisor's, or employee's time more enjoyable. 💧





# Russ Cooper is 2018's Friend of Rural Water

*Sunriver, Oregon*—The annual Friend of Rural Water award's purpose is to acknowledge and honor an individual who regularly goes above the call of duty. They represent the Oregon Association of Water Utilities (OAWU) through their work ethic, integrity, leadership and the servant attitude that they regularly demonstrate at their place of work. It is a privilege and honor to recognize the recipient of this award.

OAWU has been impressed with Russ Cooper's professionalism, performance, attitude and care of the City of Monmouth. He takes pride in his work, is extremely conscientious, does not take shortcuts, is willing to learn, and shares the things he has learned with others. In addition to these, Russ is a hard worker and a delight to work with. He has been supportive of OAWU for many years, including serving on the OAWU Board of Directors, serving as the National Rural Water Association Oregon Director, and has gone out of his way to support and help educate members of the Association. He was also instrumental in bringing the Association to purchase the new office facility located in Independence, assisting with the Jeff Swanson Memorial Scholarship Fund, and the current level of professional operator and manager training provided by the Association. Simply stated, Mr. Cooper exemplifies what OAWU and water is all about. It is truly a pleasure to provide this award to such a quality person. ♦



*Friend of Rural Water recipient Russ Cooper accepts his award at the 40th Annual Management & Technical Conference in Sunriver, Oregon.*

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This class will assist the water and wastewater system operator in outlining the specific points in developing the draft of the O&M manual. Step by step, each attendee will create their draft as it relates to their utility system during class. The e-file may then be completed back at the system office.

Class cost is \$160, or if you are unable to attend a class you may purchase a thumb drive with e-files for \$160. To sign up for the class, or to have a thumb drive mailed to you, contact your Association for further information. 💧



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**PRESS RELEASE**—Do you want your voice heard regarding forestry and water quality? Oregon State University's Institute for Natural Resources (INR) is embarking on a new study to evaluate the impacts of forest management on community source water supplies. Funded by the Oregon Forest Resources Institute (OFRI), a state agency, the study will systematically review relevant science related to changes in water quality and quantity resulting from forest management activities in source watersheds. The Steering Committee for the project includes Mike Collier from OAWU.

A key study component will be a survey of community water utilities who utilize surface waters as part or all of their supply. We anticipate that the survey will be sent to water utilities in mid-April, with responses desired by mid-May. Responses can be provided through a web-based survey form, or the survey can be printed and returned by mail. Gaining the perspectives of water utility managers is in everyone's best interest, so OAWU encourages you to participate. Further information can be obtained from Jon Souder at OSU (541-404-7356 or [jon.souder@oregonstate.edu](mailto:jon.souder@oregonstate.edu)). ♦

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April 5	W. Treatment & Dist. Level 3,4 & Filtration Endorsement	Salem	0.6 Water/Onsite	3370 Fee
April 10	Math for Operators	Independence	0.4 Water/Wastewater/Onsite	3562 Fee
April 10	Preparing for a W System Survey & WW System Inspection	Independence	0.3 Water/Wastewater/Onsite	3561 Fee
May 15	Confined Space & Job Site Safety	Independence	0.6 Water/Wastewater/Onsite	3563 Fee
May 16	3 <sup>rd</sup> Annual Mini EXPO	Rickreall	0.4 Water/Wastewater	3634 FREE
June 12-13	Water Treatment Water Distribution Certification Review	Salem	1.4 Water/0.5 Wastewater/Onsite	3394 Fee
June 14	W. Treatment & Dist. Level 3,4 & Filtration Endorsement	Salem	0.6 Water/Onsite	3370 Fee
June 20	Math for Operators	Reedsport	0.4 Water/Wastewater	3562 Fee
June 20	Pumps and Pumping	Reedsport	0.3 Water/Wastewater/Onsite	3560 Fee
July 11	Math for Operators	Tillamook	0.4 Water/Wastewater	3562 Fee
July 11	Pumps and Pumping	Tillamook	0.3 Water/Wastewater/Onsite	3560 Fee
July 24-25	Water Treatment Water Distribution Certification Review	Bend	1.4 Water/0.5 Wastewater/Onsite	3394 Fee
August 20	Backflow Assembly Tester Recertification	Seaside	0.6 Water	TBA Fee
August 20-23	24th Annual Summer Classic Conference	Seaside	2.3 Water/Wastewater	TBA Fee
August 28-29	Wastewater Treatment/Collections Certification Review	Salem	1.4 Wastewater/0.7 Water/0.1 Onsite	3559 Fee
September 6	Developing your Operations and Maintenance Manual	Springfield	0.4 Water/Wastewater	3395 Fee
September 6	Leak Detection	Springfield	0.2 Water/Wastewater	TBA Fee
November 5	Effective Utility Management	Beaverton	0.6 Water/Wastewater	TBA FREE
November 5-8	2018 Fall Operators Conference	Beaverton	2.6 Water/Wastewater	TBA Fee
November 15	Confined Space	Springfield	0.3 Water/Wastewater/Onsite	3151 Fee
November 15	Hazardous Communication Standard (Global Harmonization)	Springfield	0.3 Water/Wastewater	3459 Fee
November 15	Water & Wastewater Field Operations & Safety	Salem	0.4 Water/Wastewater	3568 Fee
November 15	Leak Detection	Salem	0.2 Water/Wastewater	TBA Fee
December 3	Effective Utility Management	Hood River	0.6 Water/Wastewater	TBA FREE
December 3-6	20th Annual End of Year Operators Conference	Hood River	2.6 Water/Wastewater	TBA Fee

## Levels 1-4 Water Operator Exams

Trained and certified operators are necessary to ensure that the systems are managed in a manner that fully protects public health and the environment. The OARs for certification stipulate that the qualifying experience for applicants for certification as a water treatment plant operator must attain at least half the required operating experience at a public water purification plant that uses complex filtration technology and is not more than one classification lower than the level of certification they are seeking. In other words, if you have only worked for a Class 2 treatment plant, we allow you to apply for a Level 3 certification but not a Level 4 certification. If you move on to a Class 3 plant, then you must have ½ the qualifying experience (at the Level 3 plant) before allowing to apply for a Level 4 certification. Reciprocity from state-to-state ensures that the operator have the operating experience for which they are certified.

For additional information, please visit <http://public.health.oregon.gov/HealthyEnvironments/DrinkingWater/OperatorCertification/Levels1-4/Pages/exams.aspx>

## More Resources

Drinking Water Data Online <https://yourwater.oregon.gov>  
 Center for Health Protection <http://public.health.oregon.gov/PHD/Directory/Pages/Program.aspx?pid=4>  
 Drinking Water Services <http://public.health.oregon.gov/PHD/Directory/Pages/Program.aspx?pid=58>

Training class dates, class topic and/or locations may be subject to change as needed.

For more information on any class by OAWU, please contact the office at 503-837-1212, [office@oawu.net](mailto:office@oawu.net) or visit [www.oawu.net](http://www.oawu.net).

# MARK YOUR CALENDAR!



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**Darrin Andersson**  
 (503) 507-1754  
[darrin.andersson@ferguson.com](mailto:darrin.andersson@ferguson.com)

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# Do you have a leak?

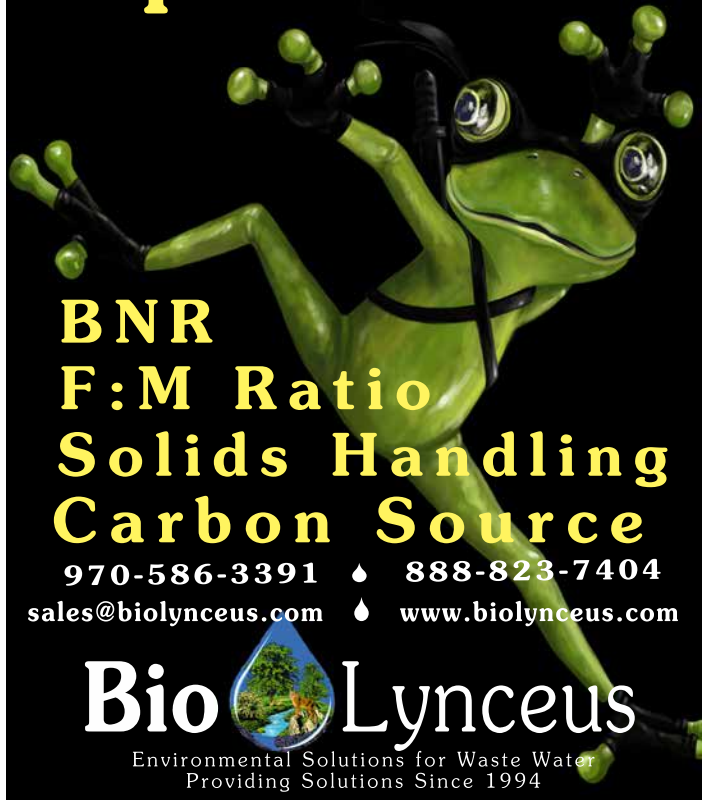


Can't find  
where your  
water loss is  
coming from?

**Call OAWU to help.**  
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# QUIZ CORNER

1. If the PSI at the bottom of a reservoir is 32 and the diameter is 25 ft., how deep is the water?
  - A. 73.9 ft
  - B. 89.2 ft
  - C. 106.4 ft
  - D. more information needed
2. What is the maximum number of electrons that can be in the first energy shell of an atom?
  - A. one electron
  - B. two electrons
  - C. five electrons
  - D. more information needed
3. If a 6 inch pipe is to be flushed at 3 feet per second how many gallons per minute (gpm) will you need to flow in order to achieve that flushing velocity?
  - A. 125 gpm
  - B. 264 gpm
  - C. 397 gpm
  - D. 500 gpm
4. What is the velocity in feet per second (fps) in an 8 inch pipe that is flowing 783 gallons per minute?
  - A. 1 fps
  - B. 2.5 fps
  - C. 3 fps
  - D. 5 fps
5. When setting up a Colilert E-coli test, what temperature do you incubate the samples at?
  - A. 17 C
  - B. 35 C
  - C. 20 C
  - D. 25 C
6. What is the boiling point of a quart of water when the outdoor temperature is -27 degrees at sea level?
  - A. 111
  - B. 165
  - C. 239
  - D. 212
7. Would you use an ebullioscope to:
  - A. make cupcakes.
  - B. measure alcohol content in a wine sample.
  - C. determine salination saturation after filtration
  - D. take a closer look at the reasons for the number of bullies in any given social environment.
8. How many sections does the new safety data sheet contain?
  - A. 10
  - B. 12
  - C. 16
  - D. 8
9. Pipe labeling is now considered mandated under the new Hazardous Communication Standard?
  - A. True
  - B. False
10. Under the new Hazardous Communication Standard, pictograms must have what "colored" border?
  - A. Red
  - B. Black
  - C. Yellow
  - D. White

ANSWERS: 1-A, 2-B, 3-B, 4-D, 5-B, 6-D, 7-B, 8-C, 9-B, 10-A

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2018 OREGON ASSOCIATION OF WATER UTILITIES

# MEMBERSHIP APPLICATION

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City/State: \_\_\_\_\_

County: \_\_\_\_\_ ZIP: \_\_\_\_\_

System Email: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Operator: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Number of Hook-ups: \_\_\_\_\_

Were you referred? By whom \_\_\_\_\_

## Type of System:

☐ Water ☐ Wastewater ☐ Both

## Membership Category Amount of Dues

- |  |                                |
|--|--------------------------------|
| <input type="checkbox"/> Regular Member    | \$ _____<br>See schedule below |
| <input type="checkbox"/> Associate Member  | \$500.00                       |
| <input type="checkbox"/> Individual Member | \$100.00                       |

## Regular Member Dues Schedule

1 to 100	\$75 + 34 cents per hookup
101 to 500	\$85 + 34 cents per hookup
501 to 1,000	\$90 + 34 cents per hookup
1,000 and up	\$100 + 34 cents per hookup
Maximum dues is	\$1,000.00

**Mail payment to: OAWU**  
**935 N. Main Street**  
**Independence, OR 97351**

*If paying by credit card, please call  
the OAWU office at 503-837-1212 for  
processing and receipt.*

## Membership Types

### Regular Member

A Regular Member shall be any water or wastewater utility, public or private, engaged in the production, distribution or reclamation of water. A Regular Member shall have one vote.

**Annual Dues: See Regular Member Dues Schedule**

### Associate Member

An Associate Member shall be any organization individual or corporation, supplying services or equipment to water and wastewater utilities. An Associate Member shall have one vote. For Associate Member Benefits, please contact OAWU.

**Annual Dues \$500.00 per year**

### Individual Member

An Individual Member shall be an individual involved in the water/wastewater industry or a user of such utilities. The membership is informational in nature and shall be non-voting.

**Annual Dues \$100.00 per year**

## Benefits of Membership

- On-site technical assistance
- Various free training programs
- Discounts on training courses
- Discounts on Annual Conference registration
- Access to on-site training program
- Subscription to quarterly *H2Oregon* magazine
- Direct mailings in your area about upcoming training courses
- Summaries of legislative issues
- Legislative representation at state and federal level
- Associate Member Services and Products Guide
- Access to technical assistance library
- Access to technical and testing equipment for loan
- Voting rights in Association affairs (Regular & Associate Members)
- Positive contacts with other organizations
- Camaraderie with water and wastewater professionals
- Operator Of Record services
- Job referrals, announcements and searches
- Well testing
- Plan review
- System performance evaluation and options
- Additional programs and services
- Disaster response assistance and planning



MB18

Please return to OAWU:  
935 N. Main St., Independence, OR 97351  
or Fax: 503-837-1213 or email: office@oawu.net.

# **MEMBERS**

62nd Court Mutual Water Company  
 Adair Village, City of  
 Adams, City of  
 Adrian, City of  
 Agate Water System  
 Albany Rifle & Pistol Club  
 Alpine Crest Improvement Dist.  
 Amigo Villa Water Service, Inc.  
 Amity, City of  
 Ananda Center at Laurelwood, Inc.  
 Arch Cape Water & Sanitary District  
 Arlington, City of  
 Arrah Wana Water Company  
 Arrowhead Mobile Home Park  
 Aspen Lakes Utility Company, L.L.C.  
 Athena, City of  
 Aumsville, City of  
 Aurora, City of  
 Avion Water Company  
 Baker City, City of  
 Bandon Dunes Resort  
 Bandon, City of  
 Banks, City of  
 Barlow Water Improvement District  
 Barlow, City of  
 Bay City, City of  
 Bay Hills Water Association  
 Beaver Water District  
 Beaverton, City of  
 Bend Research Inc.  
 Bend, City of  
 Benton County Service District  
 Berndt Creek Water Corp.  
 Beverly Beach Water District  
 Biggs Service District  
 Black Butte Ranch  
 Black Mountain Water District  
 BLM Eugene  
 Blue River Water District  
 Blue Spruce Estates  
 Bly Water & Sanitary Dist.  
 Boardman, City of  
 Bonanza, Town of  
 Boring Water District #24  
 Bradley Lake Estates  
 Brandy Bar Landing, Inc.  
 Breitenbush Hot Springs  
 Bridge Water District  
 Brightwood Water Works  
 Brooks Community Service District  
 Brownsville, City of  
 Buell-Red Prairie Water District  
 Bunns Village Properties, LLC  
 Burns, City of  
 Burnside Water Association  
 Butte Falls, Town of  
 Camp Rilea  
 Canby Utility  
 Cannon Beach, City of  
 Canyon City, Town of  
 Canyonville, City of  
 Carlton, City of  
 Cascade Locks, City of  
 Cave Junction, City of  
 Cedarhurst Improvement Club, Inc.

Century Meadows Sanitary System, Inc  
 Century Meadows Water System, Inc.  
 Charles Tracts Water Company  
 Chart Water Supply, Inc.  
 Chehalem Mt. Sun Ridge Association  
 Chenoweth Water PUD  
 Chiloquin, City of  
 CHR Dist. Improvement Co.  
 Christmas Valley Domestic Water  
 Cimmarron City Water Co., Inc.  
 Circle C Improvement Dist.  
 Clarks Branch Water Association  
 Clatskanie, City of  
 Clayton Creek Water Association  
 Clean Water Services  
 Cline Falls MHP  
 Cloverdale Sanitary District  
 Cloverdale Water District  
 Coburg, City of  
 Colorado Lake Co-Op  
 Colton Water District  
 Columbia City, City of  
 Columbia Hills Homeowners Association  
 Columbia River PUD  
 Condon, City of  
 Coquille, City of  
 Corbett Water District  
 Cornelius, City of  
 Cottage Grove, City of  
 Country Club Water District  
 Country View Mobile Estates  
 Covanta Marion, Inc.  
 Cove Orchard Water Association  
 Cove, City of  
 Crater Lake National Park  
 Crescent Water Supply & Improvement District  
 Creswell, City of  
 Crooked River Ranch Water Co-Op  
 Crystal Springs Water District  
 Culver, City of  
 Dallas, City of  
 Dayton, City of  
 Dayville, City of  
 Deception Creek Mobile Park  
 Deer Creek Estates Water Association  
 Deernhorn Community Water Association  
 Depoe Bay, City of  
 Deschutes Valley Water District  
 Detroit, City of  
 Dexter Oaks Mobile Home Park  
 Dexter Sanitary District  
 Diamond Peaks at Leisure Woods I & II  
 Diamond Peaks Tract 1355  
 Diamond Summit Association  
 Dietz Airpark Water System  
 Donald, City of  
 Drain, City of  
 Drifter's MHP  
 Dufur, City of  
 Dundee, City of  
 Eagle Point, City of

East Yamhill Rural Water Company  
 Eastmont Water Company  
 Eastshore Water Improvement District  
 Echo, City of  
 Elgin, City of  
 Elkton, City of  
 Enterprise, City of  
 Estacada, City of  
 Eugene Mobile Village  
 Fairview Water District  
 Fairview, City of  
 Falcon Cove Beach Water District  
 Falcon Heights Water & Sewer District  
 Fall Creek Water District  
 Falls City, City of  
 Fern Ridge School Dist. 28J-10  
 Fern Valley Estates Improvement Dist  
 Fernridge Mobile Estates  
 Fir View Water Company  
 Fischer's Place Mobile Home Park  
 Fishhawk Lake Recreation Club, Inc.  
 Florence, City of  
 Forest Park Mobile Village  
 Fossil, City of  
 Garden Valley Water Association  
 Garibaldi, City of  
 Gaston, City of  
 Gates, City of  
 Gearhart, City of  
 Georgia Pacific-Wauna  
 Gervais, City of  
 Gilchrist Water Co., LLC  
 Gladstone, City of  
 Glendale, City of  
 Gleneden Sanitary District  
 Glenmorrie Co-op Association  
 Glide Water Association  
 Goble Water Association  
 Gold Beach, City of  
 Gold Hill, City of  
 Government Camp Water Company  
 Grand Prairie Water Supply Company  
 Grand Ronde Community Water Association  
 Grand Ronde Sanitary District  
 Granite, City of  
 Grants Pass, City of  
 Green Oaks Mobile Ranch  
 Greenhoot Properties  
 Haines, City of  
 Halfway, City of  
 Hall's Trailer Court  
 Halsey, City of  
 Harbor Water PUD  
 Harrisburg, City of  
 Hebo Joint Water/Sanitary Authority  
 Heceta Water PUD  
 Helix, City of  
 Heppner, City of  
 Hidden Valley Improvement District  
 High Lostine Owners Association  
 Highland Subdivision Water District  
 Hiland Water Corporation  
 Hillsboro, City of

Hines, City of  
 Hood River, City of  
 Hopewell Water Company  
 Hubbard, City of  
 Hunnell Hills Community Water System  
 Huntington, City of  
 Hwy 58 Trailer Park  
 Ice Fountain Water District  
 Idanha, City of  
 Idleway Improvement District, Inc.  
 Imbler, City of  
 Independence, City of  
 Indian Meadow Water Company  
 Interlachen Water PUD  
 Lone, City of  
 Irrigon, City of  
 Island City, City of  
 Jackson County Parks  
 Jacksonville, City of  
 Jasper Knolls Water District  
 Jewell School District  
 John Day Water District  
 John Day, City of  
 Johnson Creek Water Services Company  
 Junction City, City of  
 Juniper Hilltop Mobile Park  
 Keizer, City of  
 Kelly's Brighton Marina, LLC  
 Kelso Water Association  
 Keno Water Company, Inc.  
 K-GB-LB Water District  
 Kilchis Water District  
 Kingswood Heights Water Association  
 Klamath Falls, City of  
 Klippel Water System  
 Knappa Water Association  
 Knoll Terrace Park  
 L.A. Water Cooperative  
 La Pine, City of  
 Labish Village Water Commission  
 Lady Creek Water System  
 Lafayette, City of  
 Laidlaw Water District  
 Lake Grove Water District  
 Lake of the Woods Resort, LLC.  
 Lake Oswego, City of  
 Lakeside Water District  
 Lakeside, City of  
 Lakeview, Town of  
 Lakewood Homeowner's, Inc.  
 Lamb Weston  
 Lamontai Improvement District  
 Lamplighter Water Association  
 Lane County Parks  
 Langlois Water District  
 Lark Meadows HOA  
 Laurelwood Water User's Co-op Association  
 Lawrence Subdivision Water Association, Inc  
 Lebanon, City of  
 Lexington, Town of  
 Lincoln City, City of  
 Little Beaver School, Inc.





# MEMBERS



Long Creek, City of  
 Lostine, City of  
 Lowell, City of  
 Luckiamute Domestic Water Co-op  
 Lyons-Mehama Water District  
 Madras, City of  
 Madrone Hill Mobile Home Park  
 Malin, City of  
 Manzanita, City of  
 Mapleton Water District  
 Maupin, City of  
 McKay Acres Improvement District  
 McKenzie Palisades Water  
 McLain Village Water  
 McNulty Water PUD  
 Merrill, City of  
 Metolius Meadows Prop. Owners Assn.  
 Metolius, City of  
 Midland Water Association  
 Mill City, City of  
 Milo Adventist Academy  
 Minikahda Water District, Inc.  
 Mitchell, City of  
 Modoc Point Sanitary District  
 Molalla, City of  
 Monmouth, City of  
 Monroe, City of  
 Monument, City of  
 Moro, City of  
 Morrow Commission, Port of  
 Mosier, City of  
 Mossy Brae Water District  
 Mt. Angel Abbey  
 Mt. Angel, City of  
 Mt. Ashland  
 Mt. Bachelor, Inc.  
 Mt. Shadows HOA  
 Mt. Vernon, City of  
 Mulino Water Dist. #23  
 Myrtle Creek, City of  
 Myrtle Point, City of  
 Nantucket Shores Water Company  
 NeahKahNie Water District  
 Nehalem, City of  
 Nesika Beach-Ophir Water District  
 Neskowin Regional Sanitary Authority  
 Neskowin Regional Water District  
 Netarts Water District  
 Netarts-Oceanside Sanitary Dist.  
 Newberg, City of  
 Newport, City of  
 North Corvallis Mobile Home Park  
 North Hill Water Corporation  
 North Plains, City of  
 North Powder, City of  
 Northwest Newberg Water Association  
 Nyssa, City of  
 Oak Lodge Water District  
 Oakland, City of  
 Oakridge, City of  
 Oaks Mobile Home Park  
 Oceanside Water District

Ochoco West Water & Sanitary Authority  
 Odell Sanitary District  
 Odell Water Company  
 Olney-Walnuski Water Association  
 OPRD Main Office – Salem  
 Orchard Heights Water Association  
 Oregon Caves Nat. Monument & Preserve  
 Oregon Shores Beach Club, Inc.  
 Oregon Water Utility  
 Oregon Water Wonderland II Sanitary District  
 Orient Drive Mobile Estates, LLC  
 Otter Rock Water District  
 Pacific High School  
 Paisley, City of  
 Paradise/Rogue Meadow WS  
 Parkdale Water Company, Inc.  
 Perrydale Domestic Water Association  
 Pete's Mt. Water Company, Inc.  
 Philomath, City of  
 Phoenix, City of  
 Pilot Rock, City of  
 Pine Grove Water District  
 Pinecrest Water Company  
 Pioneer Park Water Co-op  
 Pioneer Village Water Company, Inc.  
 Pleasant Valley Water Company  
 Pleasant View Water Company  
 Polehn Heights Water Association  
 Ponderosa Pines Water Company  
 Port Orford, City of  
 Power City Water Co-op  
 Powers, City of  
 Prairie City, City of  
 Prineville, City of  
 Pristine Water Source  
 Quincy Water Association  
 Rainier, City of  
 Redmond, City of  
 Redwood Water Service, Inc.  
 Reeder Ranch, Inc.  
 Reedsport, City of  
 Rhododenron Water Association  
 Richland, City of  
 Rickreall Community Water Association  
 Riddle, City of  
 Rimrock West Improvement District  
 River Meadows Improvement District  
 River Point Farms, LLC  
 Riverbend-Riverbank Water District  
 Riverfront RV Park  
 Rivergrove Water District  
 Riverside Water District  
 Riverview RV Park  
 Roats Water System, Inc.  
 Roberts Creek Water District  
 Rock Creek Water District  
 Rockaway Beach, City of  
 Rocky Pointe Marina  
 Rogue Community College  
 Rogue Lea Estates MHP LLC  
 Rogue River, City of

Rogue River – Siskiyou National Forest  
 Roseburg Forest Products Company  
 Round Lake Water Utilities  
 Rufus, City of  
 Running Y Utility Company  
 Salem-Keizer School District  
 Salem, City of  
 Salmon River Mobile Village  
 Sandy, City of  
 Scappoose, City of  
 Scio, City of  
 Scotts Mills, City of  
 Scravel Hill Water Co-op  
 Seal Rock Water District  
 Seneca, City of  
 Shadow Hills Park Water Cooperative  
 Shangri-La Water District  
 Sheridan, City of  
 Sherwood, City of  
 Siletz Community Water System  
 Siletz, City of  
 Silver Falls School District 4J  
 Silverton, City of  
 Sisters, City of  
 Skylane Farm  
 Skyview Acres Water Company  
 Sleepy Hallow Phase 1 Water  
 Sodaville, City of  
 South Fork Ranch Homeowners, Inc.  
 South Fork Water Board  
 South Hills Water System, Inc.  
 Southwood Park Water District  
 Spirit Mountain Gaming, Inc.  
 Sportsman's Park Water Association  
 Spray, City of  
 Springwater Estates HOA  
 St. Paul, City of  
 Staffordshire Water System, Inc.  
 Stanfield, City of  
 Star Satellite Improvement District  
 Stayton, City of  
 Steeves Mobile City  
 Storlie Water Company Inc.  
 Sublimity, City of  
 Suburban East Salem Water District  
 Sumpter, City of  
 Sun Mountain Water System  
 Sunridge Estates  
 Sunrise Water Authority  
 Sunriver Environmental LLC/Sunriver Water LLC  
 Sunset Acres Water Company  
 Sunset Lake RV Park  
 Sunset Water Systems, Inc.  
 Sunshine Village Water Association  
 Sutherlin, City of  
 SW Lincoln County Water District  
 Sweet Home, City of  
 Talent, City of  
 Terrace Mobile Plaza  
 Terrebonne Domestic Water District  
 The Dalles, City of  
 Three Rivers School District  
 Tierra Del Mar Water Company  
 Tigard, City of

Tillamook Bay, Port of  
 Tillmook County Creamery Association  
 Tillamook, City of  
 Timber Water Association  
 Toledo, City of  
 Tollgate Water Company  
 Tone Water  
 Trappist Abbey  
 Tri City Water District  
 Troutdale, City of  
 Tualatin Valley Water District  
 Turner, City of  
 Twin Island Community Water  
 Twin Rocks Sanitary District  
 Tygh Valley Water District  
 Ukiah, City of  
 Umatilla, City of  
 Umpqua Basin Water Assn.  
 Union, City of  
 Vale, City of  
 Valley View Water Co-op  
 Valley View Water District  
 Veneta, City of  
 Vernonia, City of  
 VIDA-LEA Community Co-op  
 Waldport, City of  
 Wallowa Lake Co. Service District  
 Wallowa, City of  
 Warm Springs Conf. Tribes Reservation of OR  
 Warren Water Association  
 Warrenton, City of  
 Wasco, City of  
 Water Wonderland Improvement District  
 Wedderburn Sanitary District  
 Welches Water Company  
 Weldon Mobile Home Park  
 West Hills Water Company  
 West Linn, City of  
 West Slope Water District  
 West Yamhill Water Company  
 Western Heights Water Association  
 Westfir, City of  
 Weston, City of  
 Westport Water Association  
 Wheeler, City of  
 Whispering Pines #4  
 Wickiup Water District  
 Willamette Water Company  
 Willamina, City of  
 Wilson River Water District  
 Wilsonville, City of  
 Winchester Bay Sanitary  
 Wi-Ne-Ma Christian Camp, Inc.  
 Winston-Dillard Water District  
 Wood Village, City of  
 Woodburn, City of  
 Yachats, City of  
 Yamhill, City of  
 Yoncalla, City of  
 Young Life's WA Family Ranch  
 Young's River Lewis & Clark WD  
 Zig Zag Water Cooperative, Inc.

## WELCOME, NEW MEMBERS!

Sun Mountain  
Water System LLC

Bee, Steven  
Butcher, Erik  
Campbell, Craig  
Carlson, Rob  
Lord, Kim  
McCann, Alexander

Wyer, Shane  
Jacob, David  
Eells, Lannie  
Eichler, Robert  
Lewis, Mark  
Lundbland, Christian

Smith, Brandin  
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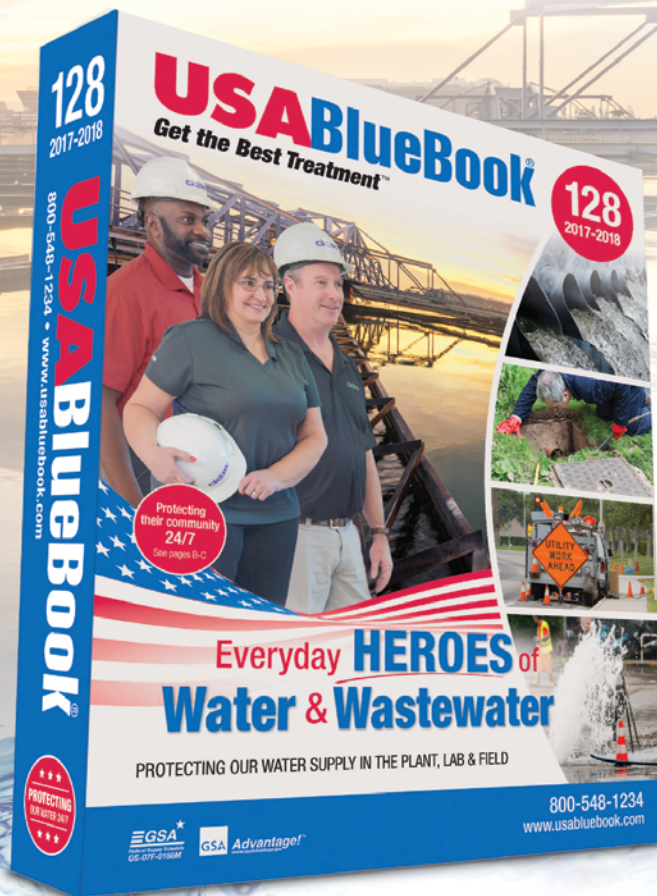


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