

# H<sub>2</sub>Oregon

Winter 2015  
Vol. 37, No. 1

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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 to the editor and interesting stories. Please send submissions (no more than two pages in length) to:

### Oregon Association of Water Utilities

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Bruce Hemenway

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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.

# Life Influences

by Jason Green, Executive Director



I have found it humbling, and occasionally humiliating, to hear how someone has been influenced by something I previously said or did, especially so when being completely unaware it occurred. In practice, it is more likely we consider other's influence on us rather than our influence on others. A couple definitive examples of influence in Noah Webster's 1828 Dictionary are: "In a general sense, influence denotes power whose operation is invisible and known only by its effects, or a power whose cause and operation are unseen," and "Moral power; power of truth operation on the mind, rational faculties or will, in persuading or dissuading, as the influence of motives, of arguments, or of prayer. We say, arguments had no influence on the jury. The magistrate is not popular; he has no influence with the people; or he has great influence with the prince." and "An orator may influence the people to take arms, or to abandon an enterprise. To lead or direct. This revelation is sufficient to influence our faith and practices."

I vividly recall both my childhood discussions with my parents, and later, those with my children concerning friends' influences. Even when younger, I knew the difference but wanted to explain that I would not learn any bad or negative habits if I were to hang out with particular friends. My parents knew the dangers, I thought I understood, but I did not really know the dangers nor the principle that negative or bad influences result in negative fruit in others – a person becomes like those they associate with. I recall my mother's warnings when I was to go visit friends, "Don't you come back home with a dirty mouth or we'll get the soap out." And of course, you well know, I returned home with an expanded vocabulary; things just kind of slipped out at the most inopportune time!

I love the concept shared by Theodore Roosevelt regarding work – in summary: he would surround himself with the very best people he could find and then get out of their way. Finding people with qualities like: being slow to anger, thinking before they speak, rightly considering their reputation and who they closely associate with, understanding actions and consequences, respect for authority, being responsible, concerned with truth and justice, a level of empathy for others, knowing and having a measure of discernment and wisdom and being able to use it – these qualities, and several others, get down into the dirt, the rough and tumble of life and when exhibited, others take note. People of good character have a way of influencing others.

Time does have a way of changing many things, including perspectives. As I write this, our Jack Hills, who has been OAWU's Source Water Specialist/Technician, is finishing his last days before retirement. Jack has a reputation of being a very hard working man. The type that notices something needs done, and does so without being asked. He has exhibited consistent and stellar character traits; a smooth and level man. One of those you just know you can trust and depend upon. Jack regularly challenged me without knowing it. To work harder, to think better, to look for opportunity, to serve others and be thoughtful and kind. We will miss him, and yet, Jack's positive influences have left prints all over. That's something worth thinking about. Where and what is my realm and depth of influence? Who is watching, picking things up, learning, the positive or the negative? Thank you Jack. We will miss you but your influence has affected us all, for the better!

My best to you.  
—Jason 💧

# EFFECTIVE UTILITY MANAGEMENT FOR RURAL AND SMALL SYSTEMS - WORKSHOP

March 2, 2015  
Sunriver Resort  
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Register at  
[http://oawu.net/events\\_event/attendee-registration/?instance\\_id=](http://oawu.net/events_event/attendee-registration/?instance_id=)



This interactive workshop will help rural and small water and wastewater systems address a full range of challenges and improve the management of their operations and infrastructure using tools developed by EPA, USDA, and small system managers. Participants will be trained on:

- How to use the Rural and Small Systems Guidebook to Sustainable Utility Management to assess and make improvements at their operations
- How to improve long-term sustainability and increase resiliency of their systems
- How to develop a workplan to implement improvements at their systems; and
- Share information with their peers on common challenges and solutions

Participants will learn how to make improvements in ten key management areas, focusing first on their most pressing challenges. The workshop promotes participant interaction, encouraging systems to share information on common challenges.

## Ten Key Management Areas

- Product Quality
- Customer Satisfaction
- Employee & Leadership Development
- Operational Optimization
- Financial Viability
- Infrastructure Stability
- Operational Resiliency
- Community Sustainability & Economic Development
- Water Resource Adequacy
- Stakeholder Understanding & Support

## WORKSHOP ACTIVITIES

Overview of Key Management Areas  
Utility 'Self Assessment' Exercise  
Self Assessment Results Discussion  
Improving Outcomes Based on Assessment  
Practices, Tools, and Measures  
Resources for Improvement  
Action Plan Discussion and Exercise

## Who should attend?

- Board of Directors
- City Council Members
- Mayors
- City Managers
- Water Operations Managers
- Waste Water Superintendent
- Finance Directors
- Public Works Directors
- Water/Wastewater workers



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# Microbrews: Good & Bad

*by Jeff Crowther, Wastewater Technician*



Anyone who has been around me very much knows that I enjoy a good microbrew. As for domestic beers, I would go as far as to say, I just don't care for them. A good hefeweizen or a nice dark beer is worth drinking. I like the fact that microbrews have flavor and substance.

As most of us know, the microbrews got their start here in the northwest and we are proud of that fact. I get excited when a new brewery comes along because they might be making something unique and exciting that will make a splash in the microbrew market. To make them even better, typically these breweries are associated with a food service facility such as a restaurant or bar.

With my excitement, also comes concern. These breweries start up and sometimes have very little oversight by the local jurisdiction, especially in smaller communities. How much of an affect is it? Brewery wastewater can have a BOD of as much as 10,000 mg/L, where as normal domestic wastewater is about 200-300 mg/L BOD. The pH can be extremely high or low depending on the sanitation chemicals used in the process. Some jurisdictions have found that the sewer mainlines have been completely plugged due to the discharge of the mash to the sanitary sewer and build up of slime due to the high sugar content of the wastewater discharged.

How does the local jurisdiction control these facilities without discouraging them from locating in your community? The best way is to provide a control mechanism (permit) identifying the minimum measures the brewery should use to protect the municipal wastewater treatment and collection system. These measures should include the following Best Management Practices (BMPs):

- Floor drains should be covered with a screen, preventing anything larger than ¼ inch from going down the drain.

- Recovery of the spent hops, grains, yeast, and solids. These items can be sent to the land fill or recycled for animal feed.
- Minimize the amount of waste product discharged to the sanitary sewer (for larger quantities of product it may require metering the discharge over a longer period or include it with the animal feed recycled products).
- Wash water and sanitation cleaning solutions should be collected and neutralized to an acceptable pH level prior to discharge.
- The control mechanism should also include language that if the BMPs are not followed, additional sampling and oversight will be required at the facility's expense. When these breweries don't control their effluent discharge, it can be devastating to the utility's infrastructure. Collection systems have been destroyed by corrosive cleaners that have not been neutralized prior to discharge. In small systems, the low pH can affect the bacterial activity in the treatment system. The high BOD loading will affect the DO in the system requiring blower adjustments or resulting in poor treatment.

Most responsible micro breweries have no problem following the local jurisdiction's guidelines. It is in their best interest to provide a good product with the least amount of waste. They also want to be responsible members of the community and protect the wastewater treatment system. Sometimes they just need a little guidance.

As I go forward and stop in for that cold dark stout, I will be wondering what exactly is going on behind those doors and going down the drains. Hopefully, they are implementing their BMPs wisely. ♦



# ERP Update

*by Scott Berry, Circuit Rider/Program Manager*

Over the past several months I have received several calls from people trying to update their Emergency Response Plan (ERP). They are finding that it is more difficult to update the plan than it was to create it in the first place. In many cases, it's more difficult because the software they used to create their ERP is no longer supported and the company that conceived it is out of business.

People are having misconceptions about what the ERP is supposed to contain. There are certainly some basics that need to be in there. This document is intended to assist you in the event of an emergency or other event that could jeopardize your operation. Make it fit for you.

If you're attempting to write your own ERP without the use of commercial software, the following is excerpted from OAR Chapter 333-061-0064:

(5) The emergency response plan shall include but is not limited to the following elements:

(a) Communications and authority

(A) Develop an emergency contacts list, and review and update this list at least annually.

(B) Decision-making authorities and responsibilities of water system personnel shall be determined and detailed in the emergency response plan.

(C) Procedure for notification of agencies, the water users, and the local media.

(b) Water system security Public water systems shall develop a security program. The security program shall include, but is not limited to, the following components: security management, physical activity, physical security, chemical storage and use, personnel, computer system, and program evaluation as defined in the State Model Emergency Response Plan.

(c) Water system hazard review

(A) Public water systems shall conduct an inspection of the water system annually to identify the hazards that could affect the water system.

(B) Public water systems shall correct construction deficiencies to eliminate hazards or potential hazards, correct major sanitary survey deficiencies as determined by the Authority, and perform regular maintenance.

(d) Emergency equipment and water supplies.

(A) Public water systems shall make provisions for an auxiliary power supply if not a gravity system, and redundant equipment for critical components. Community water systems shall identify equipment that can be utilized in the event of an intentional attack, which can render



harmless or significantly lessen the impact of the attack on the public health and safety and supply of public drinking water.

(B) Public water systems shall develop a plan for emergency water to include the rationing of drinking water, identifying and utilizing alternative drinking water sources and supplies, and alternative distribution of drinking water.

(e) Emergency response procedures

(A) Public water systems shall develop procedures for responding to emergencies most likely to strike the water system. Community water systems shall develop plans and procedures that can be implemented in the event of a terrorist or other intentional attack on the water system.

(B) The emergency response plan shall describe procedures to isolate all parts of the water system.

Community water systems shall develop actions and procedures which can render harmless or significantly lessen the impact of terrorist attacks or other intentional actions on public health and safety and supply of public drinking water.

(C) The emergency response plan shall describe the emergency disinfection procedure, process for issuing a boil water advisory, and process for handling a waterborne disease outbreak.

If you have made no major modifications or additions to your infrastructure, you should not need to start from scratch with your ERP. You might simply update those portions such as the Emergency Contacts list, Command Structure, etc. on a format that is more easily kept current, such as MS Word or Excel.

For assistance in updating or reviewing your ERP, feel free to give us a call. ♦



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# WaterPro: Rural Water

*by Jack Hills, Source Water Specialist*

I hope you made it to the WaterPro conference in October. It was so nice to have one close to our backyard, when we so often have to travel to the South or Mid-West for these conferences. In the previous magazine article I told you about developing technology for wastewater treatment by Algae Systems in Mobile, AL during our NRWA In-Service-Conference last June. If you weren't able to attend the WaterPro conference in Seattle this year, I thought I'd share highlights and encourage you to plan on trying to make the next NRWA Annual Conference coming up in September 2015 held in Oklahoma City. It's not so far away, give it some thought. There is a lot to see, learn, and meet with peers from across the country.

It is quite inspiring and uplifting when you find yourself in a gigantic room full of folks who have similar positions as yourself in the water and wastewater industry from all across the USA. You realize that you are a part of the largest water and wastewater membership organization in the country. Then you are amazed when the event begins with an opening prayer. How wonderful is that when you weren't expecting it? Being used to our public pressure of always being "politically correct." You will be encouraged as you are recognized as a group of the "un-sung" heroes of the nation, steadily, continuously doing your jobs for a product and service that is so much taken for granted. "Water comes out of the tap and poo runs downhill!" The NRWA conferences not only honor

the "grass-roots" American workers, but also the men and women of our armed services. I like that!

Well, on to the Seattle conference. During the three days there were some thirty time slots of presentations from which to choose. You can get to about four a day so you have to select the ones in which you are the most interested. Being from the Pacific Northwest, there were several topics appropriate for our region that I attended, earthquake preparedness, flood resilience, and battling cold weather freezing the water in our standpipe reservoirs. As these were presented it gives us a chance to think about our own systems and the situations that are relevant to us. Are we prepared for these events and how will our systems be affected by them? Will we be able to continue service to our customers?

Then there were the more common topics presented, the things we deal with every day; doing rate studies and budgeting, leak detection, water well maintenance, meter technology, filter meter management and others dealing with management, finances and engineering. It is interesting to learn what is going on in each of these areas, to find out about the latest changes in technology, and listen to what other systems around the country are experiencing.

With my roots in Colorado, I usually also take in a presentation on the oil and gas industry's impact on rural water systems, as there is always controversy with the latest improvements for production and whether

Oregon Association of Water Utilities

# Conference

there is resulting contamination of our drinking water sources.

Not only are the class presentations informative, but the vendor exhibitors go to great lengths to display and demonstrate their products. Nearly a hundred booths are set up that you can view their wares, and discuss with the sales reps, and see firsthand some of the latest ideas and products that people and the industry have developed. You never know when you may come to a situation on your own system and think that there was a product or idea that will solve this problem.


For a little diversion and a way to raise money for the NRWA PAC there are always raffle tickets you can buy; maybe to win a vehicle or four wheeler, or one of many items furnished by the state associations. If nothing else, and you don't want to "invest" in the PAC, it is interesting just to see what items the various states put in the raffle. Many are symbolic or native to the state or region; rifles from Kentucky, desert scene paintings from the southwest, outdoor

paintings from Montana, macadamia candy from Hawaii, a Pendleton wool blanket from your own OAWU!

Well so much for the conference. Next there is the place and setting in which the conference is located; in this case, Seattle, the Space Needle, Pike's Market and the Water Front. For me, it was a chance to have lunch with my son whose office is a couple of blocks from Pike's Market.


Thanks for enduring my brief conference "tour." I leave you with a photo from the Water Front and saying "See you in Oklahoma City in September 2015 for the next WaterPro Annual Conference." Check it out. [www.NRWA.org](http://www.NRWA.org) If you're not going to national, you can at least join us in Sunriver in March or Seaside in August for a small version of the national conference, great presentations, exhibitors, and the OAWU staff to serve you. 💧



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# What is the Grade for

*by Mike Collier, Training Specialist/Operations*

Most of us change our car's oil, transmission fluid, spark plugs, wiper blades, and radiator fluid at regular intervals. We understand that this type of maintenance is necessary for our vehicles. We usually check to see how many miles we have driven and, as we get closer to needing one of these procedures, we begin to set aside some money in order to pay for them.

If this is the case for the majority of vehicles on the road, then why is it that water and wastewater systems throughout the US, and throughout Oregon, have maintenance that goes undone? This maintenance includes everything from meter replacement and pump maintenance to updates to our O and M manuals.

Generally, the water systems does not have time or funding to perform these tasks. Partially, this may be due to decisions from managers, board members, or the city councils. These tasks can remain difficult to get done even when the decision makers have bought into a general maintenance plan for our system and infrastructure. This problem stems from lack of funding. We have a product and service that is greatly undervalued. When the cost of production, or collection and treatment is barely getting us by, there is little to no excess money to direct towards maintenance.

Every year The American Society of Civil Engineers (ASCE) creates a Report Card which shows the condition and performance of the

nation's infrastructure. According to ASCE's 2013 report card for America's infrastructure the US has a D+, with approximately 4 trillion dollars investment needed by 2020. As for Oregon, we have a C-, with the cost to maintain and upgrade our water and wastewater systems over the next 20 years being almost \$7 billion dollars.

When we narrow this report to just the water and wastewater systems in America, they both receive a D. The United States has about 170,000 drinking water systems and of these 54,000 are community water systems that serve more than 264 million people which is almost 84% of the US population. Much of our drinking water infrastructure is nearing the end of its useful life. The quality of drinking water in the United States remains high, even though pipes and mainlines are frequently in need of replacement.

It is estimated that the US has more than one million miles of water mains in place. The condition of most of these pipes is unknown, as they are buried underground. These pipes are usually not examined until there is a problem or a line break. These breaks are becoming more common, as there are an estimated 240,000 water main breaks per year in the United States. When a pipe fails there are added costs due to the emergency response needed for such an event and the damage that a large line break can have to the surrounding infrastructure.

Oregon Association of Water Utilities

# Your System?

Pipes that were installed during the mid-20th century are likely to begin failing in large numbers. This can be reduced by replacing the most degraded pipes before they have a chance to fail. Doing a survey of the pipe in your system can help determine what sections of mainline need to be replaced first, giving us the most bang for our buck.

There is less and less money available (loans, grants, and other monies) to do such projects for our water systems. We have seen increases in costs placed upon water systems for meeting regulatory requirements as the result of the implementation of the Safe Drinking Water Act (SDWA) Amendments of 1996. The SDWA created stricter drinking water limits on numerous contaminants, including arsenic, radioactive contaminants, microbial, and disinfection byproducts. Even with these increased costs imposed on our water and wastewater systems for testing and/or system upgrades,

the federal and state funding has often remained the same.

Pipes represent the largest need, about 85% of necessary investment, for wastewater and stormwater systems. Along with piping the EPA and the U.S. Justice Department have made eliminating Combined Sewer Overflows a top priority. We will also have an increase in the cost of treatment facilities due to the growing concern of new contaminants, increase in regulation, and expanded capacity needs due to growth.

Also, for the ASCE report card we find that the United States has approximately 15,000 treatment facilities; the condition of many of these systems is poor, with aging pipes and inadequate capacity leading to the discharge of an estimated 900 billion gallons of untreated sewage each year.

To cover the necessary maintenance along with the additional increase in costs, it is important to raise awareness for the true cost of water.

Current water and wastewater rates do not reflect the true cost of supplying clean, reliable drinking water or treated effluent. Replacing old pipe will require significant local investment; this will include increasing water and wastewater rates and an increase in private, state and federal programs to supply the necessary funding. Also, we may need to be creative: increasing our conservation efforts in order to prolong the life of the current infrastructure and creating more non-potable water systems for things like irrigation and toilet flushing. Consider your phone, cable, or electric bill, most of these cost much more each month than our water or sewer bill. We have an inequitable system where we pay more for entertainment than something that is necessary for even basic life and wellbeing. It is probably time for most of us to get a rate study, adjusting our rates if needed, and prepare for the mainline, tank, or pump replacements that should be completed prior to emergency failure. 💧

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# Leak Detection

by Heath Cokeley, Circuit Rider

Why is it that pipes only break on Friday night or at 2 am in the morning? Yes, of course we know this is not entirely true, but it sure feels like it sometimes. Is there any way we can prevent this from happening? No, not in every case, but there are ways to decrease the events. One of my jobs, that I greatly enjoy, is walking into a water system and looking over their wall of fame. Most utilities have them; the corporation stop that is half eaten away because it leaked for so long, the brass angle stop with a galvanized insertion fitting that is hose clamped to the poly, or one of my personal favorites, a section of mainline that has so many band-aids on it that you could call it a stainless steel mainline. Having worked for a system that had many stainless steel mainlines, I can tell you from experience, which is an extremely expensive way to distribute water.

So, how do we find the leaks and fix them before they turn into a 2 am repair? Leak detection. I am not saying that every utility needs to hire an outside company with expensive listening and correlating devices to find their leaks, but it is an option. What I would suggest is to initially do your own leak detection. There are many ways to skin a cat when it comes to leak detection. One of my personal favorites is, what I call, a midnight leak audit. At some point in the middle of the night, when you are fairly certain no one in a given area is going to be using water, go out to some sections of line you can

isolate with valves. Put a pressure gauge on the line (fire hydrant, back-flow device, etc.) and shut-off the valves on either side of that section, then watch to see if the pressure drops, but ensuring that the pressures do not drop below the state required minimum pressure. If you do not shut off the customer services you may run the risk of detecting a leak that is on the customer's side of the meter. If you do elect to turn off the customer's service, remember this is creating a "closed system" in their home and could damage the water heater or worse. Customer notification is a must prior to this scenario. This is a quick way to narrow down what sections of your distribution system may have leaks.

Now that you have some of your leaks isolated down to maybe a few hundred or a few thousand feet of pipe, you can begin to isolate the leaks even further. The first things I always check, after narrowing a leak down to a smaller area, are the service lines. I check the services first, by simply opening all the meter boxes and feeling the head of the meter. It works better if you have a stethoscope or some other form of listening device, but sometimes you can find leaks in service lines by feeling for the vibration in the meter itself. After that you are down to walking the mainlines, looking for wet spots and listening at any location where you have access to the pipes such as valves, vaults, hydrants and so on. Oregon Association of

Oregon Association of Water Utilities



Water Utilities is here as a resource, we have three leak detectors we can loan out or a Circuit Rider can come out and help you find leaks. This is one of the many beneficial services offered because of your membership.

There are a number of other avenues that can be taken to help find leaks. For large diameter pipes, there is now a device that can be dropped into the flow of the water, it scans for leaks and also give you a GPS location of them. I am hopeful this technology will get smaller in the future and can be used on small diameter pipelines as well. There

are also listening devices that can be placed on valves and programmed to self-start at certain times of the day or night to listen for leaks. There are companies out there that will charge you a fee and come out to your system and try to find your leaks for you. The bottom line is that you have a number of tools at your disposal, both fee based and at no cost. All these options mentioned will allow you to become more familiar with your system.

I hope I was able to give you a few pointers that you may not have thought about. Your experiences

may be of benefit to others, if you have any stories of either success or struggles that you would like to share, give me a call or shoot me an e-mail. Like everyone else in this industry, I am constantly learning and like to hear new things, especially from the people that have had to learn them the hard way. Those are always the best lessons. Thanks for reading and I'll see you down the road. 💧



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# Sedated by Complexity

by Tim Tice, Projects Manager

Various new methods and approaches of time and task management are being developed, and the question arises, just how new or necessary are the methods and approaches, really? The new gadgets and software of today are the very best society possesses, so one may say that it would be wise to change with the times.

Snootiness about progress is feeling that today's ideas are better than the old ones. This concept can falsify our values or sway people from the principles that have helped to build society to what it is today. News methods, approaches and devices may keep us in an inebriated state, only to realize that time has passed us by.

Everything is better with time is not necessarily true. Time doesn't always improve the way things are done such as a white fence does not stay white, but darkens with age. As time changes, there are some things that remain changeless. With time saving devices that assist us in organizing our schedules, tasks and calendars do we not find ourselves more often paying too much time to these devices?

An appetite for work is an appetite of purpose and attempting to be more efficient at it has created an imbalanced pendulum that makes us feel anxious when we cannot perceive the proper movement. With modernization of society, why is anxiety not eliminated? Anxiety is an unpleasant feeling over any given situation or event and on occasion

everyone is exposed to this feeling. We have many tools to keep us on an even keel, a balance we strive for, yet the worries persist.

Adam Smith, a Scottish philosopher of the 18th century, had a passion for liberty, reason and free speech. He wrote, "The man who works so moderately as to be able to work constantly, not only preserves his health the longest, but in the course of the year, executes the greatest quantity of works."

Those core rudiments, that have stood the test of time, are changeless. God, Family and friends, a balance of work and play are the components that will allow us to deal with the wrong perception of the pendulum and keep the rise of anxiety controlled. New gadgets are tools to assist us in the daily endeavors and are great for time management. When these tools become our Achilles heel and the foundation of anxiety because of the change in our behavior, then it is time to reevaluate the necessity of any such tool.

The unpretentiousness of time, the remembrance of times past and the values that have stayed the test of time allow us to wake each day with a firm purpose and reassurance that our efforts in all areas of our lives will not be empty and hollow. Becoming sedated by the complexity of gadgets is an avenue we all travel, we simply need to assure ourselves we are headed in the right direction. *The best that life has to offer!* ♦

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# Faith, Family, Work

*by Hans Schroeder, Circuit Rider*

As I grew up I was taught to prioritize my days. Looking back, it seems simple enough now, doesn't it? Then throw into the mix spouse, children and all the activities that occur within the day. It becomes a juggling act, seems as though there just isn't enough time in a day to accomplish it all. As I prioritize my calendar of events I ask myself: How does this affect my family, my work or my faith? I feel that there are often compromises.

Over the past six months I have had to stay more attentive to my family, as my wife has had some unusual medical conditions happen to her, as well as, finding out our granddaughter was born with a cataract and had to have a replacement lens put in her eye. I have tried to continually stay positive for my wife and family through these times. In the mean time also trying hard to fulfill work responsibilities, life can become very hectic. Oh, let's not forget to add in traveling to rodeos on the weekend at least twice a month. It's a balancing act mentally, not to mention physically. The travel time in my vehicle can become just as strenuous as a good day on the backhoe or in the trenches.

What is the best way to deal with the things that come our way on a daily basis? I have found I need to prioritize my life, I start with the month then break it down to weeks, days and finally, if necessary, by the hours. I start with meetings that I have for the month and then I switch to family. What are we doing on the weekends? Do I need to help with doctor appointments? Can I be gone two weeks straight or do I need to be home to help with an extracurricular activity? From there, what needs to be completed for the week? Who needs me and where is it in the state? What tools do I need to take with me? What system request takes priority over another? Finally, after all those are scheduled in, I can concentrate on the day. For you it could be the same type of thing. What meetings are coming up this month council, safety, CEU training? From there you can concentrate on what equipment needs to be taken care of this winter, which is of the utmost importance. Can we do the work ourselves or do we need to schedule that in with someone else? I know when I used to drive to work I would think about what I needed to do that day. What has to be done first? Then mentally prioritize my day. Not saying the plan will always work out. Then you may have that pressing citizen that needs a meter fixed or your supervisor decides they have something more important for you to do.

In this day and age, most of us have the luxury of a smartphone; and trust me I talk with Siri a lot throughout the day telling her to remind me to call someone, schedule in a doctor appt, or needing to take my granddaughter Ryleigh to story time at the library. So, when you are filling in your calendar

please don't forget to schedule the important things in life. Everyone needs a little time to get in that special devotion EVERY DAY; your family (we never know which day will be our last day with that special person in our life and age and health don't have to, necessarily, play a role in that in a blink of an eye they could be gone). Finally, don't forget to be a producer at work not a consumer, after all we are there to do a job, we are trusted by the citizens of the community!

In closing I hope you all got your summer projects completed, now it is time to look to being just as productive in the shop, because winter is in the air and before you know it the snowplows will be out! ♦



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# OAWU through the eyes of a City Administrator by René Moore

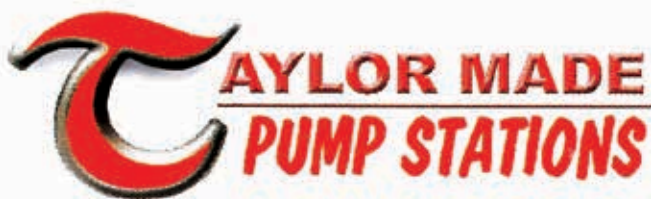
Do you really know what OAWU can do for you and your organization? My name is René Moore and I've been the City Administrator for over 13 years with the City of Moro. Someone from OAWU has always stopped in the office in my 13 years bringing by a pen or coffee mug and sitting down for a visit. If the Director of Public Works was around he would stick his head in and shake hands and go about his day. It's only been in the last three plus years that we have come to appreciate the circuit riders from OAWU for more than just a visit.

Did you know that if you are having sampling problems you can call a circuit rider and he will be there to help guide you through the process and even help flush the system? Did you know that if there is a problem with your chlorinator or wastewater system that you can call a circuit rider and he will be there to help you diagnose the problem? Did you know that if you have a fire hydrant hit and out of commission that you can call a circuit rider and he will be there to help you order the right parts and even teach you how to fix it? Did you know that if you just wanted to bounce some ideas, which a circuit rider will come and listen to what you have to say? Did you know that if you wanted to do a water sampling waiver that you can call a circuit rider and they will help guide you through the process?

The City of Moro has experienced these plus many more and in the beginning we had no idea this was the type of service they can bring

to our City. Being a very small city and small budget and when it is the City Administrator and the Director of Public Works running the whole entire City, this type of service is very valuable to us. We now know that whatever type of situation we come across, OAWU is just a phone call or email away. You can email the main office asking for a circuit rider to come your way and within hours or a day, you will have an answer and a circuit rider would be calling you to set up an appointment.

The circuit riders' wealth of knowledge in their specific fields is extraordinary. If for some reason they don't know the answer, they will find the answer for you. Our demographics prove to get the right parts and knowing the proper suppliers is almost impossible. We have had circuit riders call suppliers and get the parts coming before they even leave and they are also making the next appointment for when the part arrives to help you. I can't say enough about the services OAWU provides. If you aren't already a member then you are missing out on great service and more importantly, great people! The City of Moro has become good friends with some of the circuit riders and now it is nice they just stop in to say "HI" and see if we need anything. Thank you OAWU management, office staff, and all the circuit riders for the wonderful job you do and service you bring to our cities. We really appreciate each and every one of you! 💧



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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 \$155, or if you are unable to attend a class you may purchase a thumb drive with e-files for \$155. 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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Date	Class Title	Location	CEU Information	ESAC#	Fee/Free
Jan 27	Control Valves	Salem	0.5 Water	2884	FREE
Feb 11	Math for Operators	Salem	0.4 Water/Wastewater	2885	Fee
Feb 11	Pumps & Pumping	Salem	0.4 Water/Wastewater	2862	Fee
Feb 19	Developing Your O&M Manual	Salem	0.6 Water/Wastewater	2780	Fee
Mar 2	Effective Utility Management	Sunriver	0.6 Water/Wastewater	TBA	FREE
Mar 2-6	37 <sup>th</sup> Annual Management & Technical Conference	Sunriver	2.3 Water/Wastewater	TBA	Fee
Mar 17-18	Wastewater (WWT/WWC) Certification Review	Salem	1.4 Wastewater	2882	Fee
Mar 25	Water Rights & Other Legal Issues	Tillamook	0.4 Water	2717	FREE
Mar 25	Wastewater Law 101	Tillamook	0.2 Wastewater	2893	FREE
Apr 1	Confined Space & Jobsite Safety	Beaverton	0.6 Water/Wastewater	2886	Fee
Apr 7-8	Water (WT/WD) Certification Review	Salem	1.4 Water/0.7 Wastewater	2787	Fee
Apr 14	Wastewater Treatment & Labs	Newberg	0.4 Wastewater	2883	Fee
Apr 15	SDWA Update	Newport	0.4 Water	2887	FREE
Apr 22	Math for Operators	Eugene	0.4 Water/Wastewater	2885	FREE
Apr 23	Water & Wastewater Field Operations & Safety	Pendleton	0.6 Water/Wastewater	TBA	Fee
Apr 28	Disinfection Options for Water & Wastewater	Newport	0.4 Water/Wastewater	2888	Fee
May 6	Water Rights & Other Legal Issues	Beaverton	0.4 Water	2717	FREE
May 6	Wastewater Law 101	Beaverton	0.2 Wastewater	2893	FREE
May 12	Control Valves	Bend	0.5 Water	2884	FREE
May 14	Water & Wastewater Field Operations & Safety	Salem	0.6 Water/Wastewater	2564	Fee
May 27	Math for Operators	Tillamook	0.4 Water/Wastewater	2885	Fee
May 27	Pumps & Pumping	Tillamook	0.4 Water/Wastewater	2862	Fee
Jun 2-3	Water (WT/WD) Certification Review	Salem	1.4 Water/0.7 Wastewater	2787	Fee
Jun 17	Mini Expo	Independence	0.4 Water/Wastewater	TBA	FREE
Jun 24	Water Treatment & Labs	Grants Pass	0.4 Water	TBA	Fee
Jun 24	Water Treatment & Labs	Riddle	0.4 Water	TBA	Fee
Jun 24	Water Treatment & Labs	Tillamook	0.4 Water	TBA	Fee
Jul 8	Preparing for Your Water System Survey	Salem	0.4 Water	2881	Fee

## Levels 1-4 Water Operator Exams

Trained and certified operators are necessary to ensure that 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 applying for a Level 4 certification. Reciprocity from state to state ensures that the operator has 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>

## State Wastewater Exam Dates

All categories: <http://www.deq.state.or.us/wq/opcert/stpoperexamsqry.asp>  
 (2015 dates have not been announced)  
 Year-round, open schedule for exams  
 For additional wastewater exam information, visit  
<http://www.deq.state.or.us/wq/opcert/opcert.htm>

## Oregon ESAC/CEU accreditation

Phone/Fax: 503-698-8494  
[info@oesac.org](mailto:info@oesac.org) [www.oesac.com](http://www.oesac.com)

*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).*



# Positive Coaching

*Throwing My Loop*  
by Michael Johnson

How do we help those we love? How do we help people improve at a particular task? Did you ever coach a little league team? How about soccer? Teach someone how to ride or rope? How did you do it? Did you implement your coaching strategies after meticulous research on best practices? Probably not. You probably did it like all coaches since the days of Moses. All coaches coached the way they were coached — they say everything really loud and they always say it twice! (As in, “Let’s go! Let’s go! Hustle! Hustle!”) Surely the coaches I had in life must have set some kind of record — none of them ever smiled a single time in four years! And almost all dads have one surefire method...yell at your kid more than you do the others. Of course, if any player (or horse) makes a mistake — you yell at them! That’s just the way it’s done, right?

Could there be a better way? Maybe so...an organization called Positive Coaching Alliance surely does offer some food for thought. PCA was founded by Jim Thompson, a man who worked at the Stanford Business School. Before that, Thompson taught emotionally disturbed students where he became skilled with managing and motivating those children. When his son turned 6 and started in sports, Thompson discovered parents and coaches violating all the methods he knew to be effective — putting intense pressure on children, giving technical advice when the child was anxious or frustrated, and coaches yelling at children when they made a mistake. Thompson would eventually collect his ideas in a book called “Positive Coaching, Building Self-Esteem Through Sports.” With the support of the Stanford Athletic Department, he launched PCA in 1998.

The core of PCA is to train “double-goal” coaches. Coaches are encouraged to win — indeed to be relentlessly positive, and to teach life-lessons as well. Parents are encouraged not to coach, but rather to focus on guiding their child’s character development — to help their child become a good person.

Sports psychologists know athletes who focus on things they can control — as opposed to external factors — are less anxious, more confident, happier, and better performers. And according to Thompson, to be a “good” coach — that is to help players come closer to their potential — the key is not praise for good performance nor criticism for poor performance. What works best for young people is to help them understand they control three key variables — their level of effort, whether they learn from experiences, and

how they respond to mistakes. (Rodeo cowboys are usually really good at all three of those. I wish everyone was.) That last one — how to handle mistakes — interests me.

For years I’ve noticed successful athletes — particularly golfers and bull-riders — share a powerful trait. One of the primary differences between the amateur and pro is the ability of the pro to instantly wash the bad shot from memory. Bull-riders fail more than fifty percent of the time, yet they seem unaffected by what most of us would consider a high failure rate. I’m hard pressed to think of any behavior we could adapt in our own personal lives that could help us more than that trait of resiliency.

Jim Thompson would agree. His coaches are trained to help us do just that. Your daughter takes a called third strike. She looks at you. What do you do? Son misses a steer. He looks at you. What do you do? If you were trained as one of Thompson’s coaches, you would have a response.

You make a gesture — a flushing motion like with a toilet! It’s gone. Forget it.

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PCA's philosophy is that every child has an emotional tank, and we must be careful to not let it run dry. The organization even encourages a "magic ratio." Five positive statements for every one that's negative. Some of my buddies might consider that soft. I don't think so at all. I've had some powerful coaches in my life who felt the same way. I attended a herding dog clinic in Amarillo long ago. The teacher was Orin Barnes, a master with the horse and with the herding dog as well. As he lectured, these words came forth...

"We must get to the top of the pecking order with the horse and the dog," he said. "There are two things, however, we cannot do." He paused for the longest time. Then he said, "We cannot hit and we cannot yell."

I held up my hand. "Mr. Barnes, as a native Texan, you have robbed me of the only two weapons I have used all my life. If I can't hit or yell, what on earth can I do?"

"That, Miguel, is why we are having this clinic," he said. Then he added...

"And that, young man, is a question I expect you to work on for the rest of your life." 💧




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# Managing Your Grease Producers!

One of the main issues causing severe problems and very expensive maintenance problems in the wastewater industry today is Fats, Oils and Grease; commonly known as FOG. We often hear that SSO's (Sewer System Overflows) are caused from FOG buildup in collection lines and lift stations. Wastewater plants can have serious foaming issues from filamentous bacteria in their clarifiers and digesters. This foaming is often caused by heavy loads of FOG entering the wastewater plant.

*The absolute best place to control fog in your system is at the source!!!*

Who are your grease producers? They will vary from restaurants, industrial users and the population in general. How do you manage all of these users in your system? Some will be easy and others will be difficult.

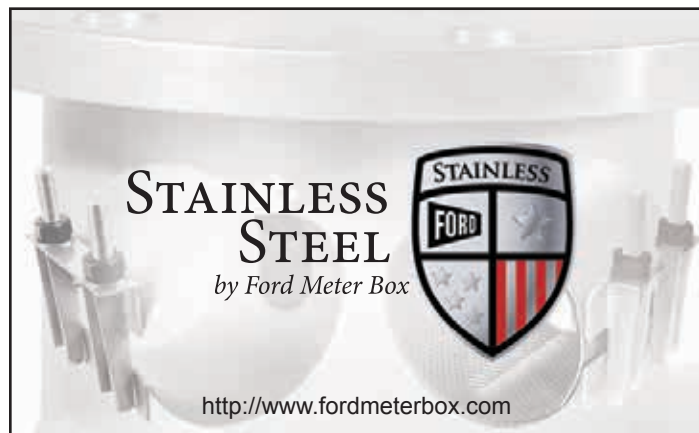
One of your best ways of managing FOG in your system that is being created by restaurants and other food producing facilities such as hospitals, schools, nursing homes, etc. is to develop a comprehensive FOG ordinance. The real challenge, after it is developed and approved, is enforcing the ordinance. A FOG ordinance that is not enforced is useless. Two of the many excuses that I see small towns use for not enforcing their own FOG ordinance is usually political or manpower. The political issue should be easy to address. When the ordinance is approved, the town council has to be emphatic that it

applies to all Grease producers, including but not limited to friends and relatives of the current or any future Mayor and City Council Members that may currently or in the future own or operate a restaurant or similar business. This ordinance also applies to all City Officials including the Mayor and Town Council that may own a restaurant in your community.

The lack of manpower is another issue and is often budget driven. Many small communities cannot afford to hire a full time "Grease Cop." There are several options to help with this issue. One possibility is your community can join forces with or use an inspector from a neighboring town or city. Another possibility is that you may be able to work with your local, county or state health department and make site visits with their inspectors.

When enforcing your ordinance make sure you enforce it equally for everyone. Your ordinance should be written to give you permission to enter and inspect **WITHOUT NOTICE** any facility, anytime, 24 hours a day, 7 days a week and 365 days per year. If you give the business forewarning, do you think they might change their normal operations, just for your visit? Possibly!

Nothing goes in a grease trap or interceptor! When writing your ordinance, you need to make sure that it does not allow any grease producer to add anything to their interceptor. This means no



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degreasers, no enzymes, no chemicals and no microbial products. I do recommend that you allow live microbiology to be added to the lines **AFTER** the grease interceptor, but never ahead of the interceptor. You do not want anything added to your grease interceptors that might liquefy grease and send it into your collection system.

Educating the employees of your grease producers is imperative. This training should be required at least monthly and signed off on by your grease producer. There are many reasons for requiring monthly training. Most importantly is employee turnover; especially, in the fast food industry. I often jokingly tell operators, if you have an employee at a fast food restaurant there more than 90 days, s/he is probably the manager. Even if there is not a high turnover, we often find that kitchen workers start cutting corners and quit scraping pots, pans and dishes and stop using proper disposal methods for grease. Often this happens on the last shift of the day when kitchen workers are anxious to get off work.

Educating the public at large will be one of your hardest tasks and if done correctly, it can be one of the most rewarding and fun projects you will ever do in the wastewater industry. The absolute best people to educate on grease are 6th, 7th and 8th grade students. This education needs to be completed at your wastewater facility and not in the class room. They have great influence over the adults in their home

and they want to learn new things. Teachers are always looking for places to do field trips and your wastewater and water system are a great place to do this. You should be offering these opportunities to every grade school and middle school in your district.

Educating the adults in your community may be a little harder. I recommend that you use any media possible to get the word out. Many companies, including ours, have informational templates of flyers that you can send to all your residents. We will make our flier available in both English and Spanish to you at no charge. You can send out flyers with your billing notices. This must be done at least three times in order to get their attention and should be repeated annually. Apartment complexes and mobile home parks usually create a lot of grease. Post flyers in the laundry rooms at apartment complexes and trailer or RV parks and on bill boards at local coffee shops.

If you are in need of more information or additional training for your staff and grease producers, please contact us. We provide training opportunities for municipalities across the country. Continuing education credits are available for most classes.

If you need more information or have any questions contact me, Rick Allen, via phone at (303) 888-2008 or via email at [rick@environmentaltrainer.com](mailto:rick@environmentaltrainer.com). ♦

The advertisement features a central illustration of a Revolutionary War soldier in a blue uniform and tricorn hat, playing a drum. He is positioned between two large red fire hydrants. The hydrants are connected by a network of black hoses. Above the hydrants, the text "Revolutionary Flow Control. That's the American Way." is written in a stylized, cursive font, with an American flag motif in the background. The entire scene is set against a textured, parchment-like background with several white stars.

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## OAWU System Member Scholarship Application

OAWU will be awarding two (2) scholarships for the Annual Management and Technical Conference in Sunriver 2015. These scholarships include registration, conference meals and social functions. Lodging and transportation will be the individual's responsibility. Award decision based upon membership and system need.

Please submit the application form below by January 26, 2015 to  
OAWU, 935 N. Main St. Independence, OR 97351, Attn: Scholarship 2015

Name of Applicant: \_\_\_\_\_

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

Address: \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone: (        ) \_\_\_\_\_ Email: \_\_\_\_\_

Reason applying for scholarship:

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## OAWU College Student Scholarship Application

OAWU will be awarding two (2) scholarships for the Annual Management and Technical Conference in Sunriver 2015. These scholarships include registration, conference meals and social functions. Lodging and transportation will be the individual's responsibility. All applicants must be an active college student in water or wastewater. Submit a 500-word typed essay on why you would like to attend our conference and why you chose the water/wastewater industry.

Please submit the application form below by January 26, 2015 along with your essay and mail to: OAWU, 935 N. Main St. Independence, OR 97351, Attn: Scholarship 2015

Name of Applicant: \_\_\_\_\_

Address: \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Home Phone: (        ) \_\_\_\_\_ Email: \_\_\_\_\_

School Applicant is Attending: \_\_\_\_\_

Field of Study: \_\_\_\_\_

"Our mission is to provide service, support, and solutions for Oregon water and wastewater utilities  
to meet the challenges of today and tomorrow."

# OAWU's 2015 Annual Conference Awards



## Water operator of the year:

Based on exceptional accomplishments of an individual during 2014. Criteria for nominee:

1. Employer / System of nominee must be an OAWU member.
2. Employer / System must be in state compliance.
3. Minimum of two years employed with system.
4. Demonstrates leadership in dealing with daily utility operations and/or concerns.
5. Nominee must be State Certified.

---

## Wastewater operator of the year:

Based on exceptional accomplishments of an individual during 2014. Criteria for nominee:

1. Employer / System of nominee must be an OAWU member.
2. Employer / System must be in state compliance.
3. Minimum of two years employed with system.
4. Demonstrates leadership in dealing with daily utility operations and/or concerns.
5. Nominee must be State Certified.

---

## Rookie operator of the year:

Based on exceptional accomplishments of an individual during 2014. Criteria for nominee:

1. Employer / System of nominee must be an OAWU member.
2. Employer / System must be in state compliance.
3. Minimum of one year employed with system.
4. Demonstrates leadership in dealing with daily utility operations and/or concerns.
5. Nominee must be State Certified.

---

## Office Manager/Manager of the year:

Based on exceptional accomplishments of an individual during 2014. Criteria for nominee:

1. Employer / System of nominee must be an OAWU member.
2. Employer / System must be in state compliance.
3. Minimum of two years employed with system.
4. Demonstrates leadership in meeting office / system demands.

---

Nominee's full name:

Employer / system:

Nomination category:    ☐ Water    ☐ Wastewater    ☐ Rookie    ☐ Office Manager/Manager

Description of nominee's achievements and/or accomplishments:

Please feel free to include copies of awards, certificates, support letters, etc.

Name of person making nomination:

System/company name:

System/company phone #:

Please return nomination form by Friday, February 7, 2015  
Send to: OAWU, Nominations Committee  
935 N. Main Street, Independence, OR 97351-2505  
Questions, please call (503) 837-1212





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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	\$ _____ See schedule below
<input type="checkbox"/> Associate Member	\$400.00
<input type="checkbox"/> Individual Member	\$75.00

## Regular Member Dues Schedule

1 to 100	\$75 + 30 cents per hookup
101 to 500	\$80 + 30 cents per hookup
501 to 1,000	\$90 + 30 cents per hookup
1,000 and up	\$100 + 30 cents per hookup
Maximum dues is	\$930.00

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

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☐ VISA ☐ MasterCard ☐ AMEX

Card #: \_\_\_\_\_

Expiration Date: \_\_\_\_\_

Card Security Code: \_\_\_\_\_

Name on Card: \_\_\_\_\_

Signature \_\_\_\_\_

**MB15**

## 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 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 \$400.00 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 \$75.00 per year*

## Benefits of Membership

- On-site technical assistance
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- 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
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 BLM Eugene  
 Blue River Water District  
 Blue Spruce Mobile Estates  
 Bly Water & Sanitary Dist.  
 Biggs Service District  
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 Bonanza, Town of  
 Boring Water District #24  
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 Breitenbush Hot Springs  
 Bridge Water District  
 Brooks Community Service District  
 Brownsville, City of  
 Buell-Red Prairie Water District  
 Bunn Village Properties, LLC  
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 Chehalem Mt. Sun Ridge Association  
 Chenoweth Water PUD  
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 Christmas Valley Domestic Water  
 Cimmarron City Water Co., Inc.  
 Circle C Improvement District  
 Clarks Branch Water Associatioin  
 Clatskanie, City of  
 Clayton Creek Water Association  
 Cline Butte Utility Company  
 Cline Falls Mobile Home Park  
 Cloverdale Sanitary District  
 Cloverdale Water District  
 Coburg, City of  
 Colton Water District  
 Columbia City, City of  
 Columbia Hills Homeowners Association  
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 Cove, City of  
 Crater Lake National Park  
 Crescent Water Supply & Improvement District  
 Creswell, City of  
 Crooked River Ranch Water Company  
 Crystal Springs Water District  
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 Dayton, City of  
 Dayville, City of  
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 Deer Creek Estates Water Assn.  
 Deerhorn Community Water Association  
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 Deschutes Valley Water District  
 Detroit, City of  
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 Diamond Summit Association  
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 Falcon Cove Beach Water District  
 Falcon Heights Water & Sewer District  
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# **MEMBERS**

Maupin, City of  
 McKay Acres Improvement District  
 McKenzie Palisades Water  
 McMinnville Water & Light  
 McNulty Water PUD  
 Medford Water Commission  
 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  
 Moran Water System Association  
 Moro, City of  
 Mosier, City of  
 Mossy Brae Water District  
 Mt. Angel Abbey  
 Mt. Angel, City of  
 Mt. Ashland  
 Mt. Bachelor, Inc.  
 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-Walluski Water Association  
 OPRD Main Office- Salem  
 Orchard Heights Water Association  
 Orchard Point Mobile Homes  
 Oregon Shores Beach Club, Inc.  
 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.  
 Parrett Mountain View Estates  
 Perrydale Domestic Water Association  
 Pete's Mt. Water Company, Inc.  
 Philomath, City of  
 Phoenix, City of  
 Pilot Rock, City of  
 Pine Grove Water Dist.  
 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, Inc.  
 Ponderosa Pines Water Company  
 Port of Morrow Commission  
 Port Orford, City of  
 Power City Water Co-op  
 Powers, City of  
 Prairie City, City of  
 Prineville, City of  
 Pristine Water Source, LLC  
 Quincy Water Association  
 Rainier, City of  
 Redmond, City of  
 Redwood Water Service, Inc.  
 Reeder Ranch, Inc.  
 Reedsport, City of  
 Rhododendron 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 Trailer Park  
 Riviera Mobile 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 Co.  
 Round Lake Water Utilities  
 Rufus, City of  
 Running Y Utility Company  
 Sandy, City of  
 Salem, City of  
 Salem Keizer School Dist.  
 Salmon River Mobile Village  
 Sam's Valley Elem. School Dist. #6

Scappoose, City of  
 Scenic Fruit Company  
 Scio, City of  
 Scotts Mills, City of  
 Scravel Hill Water Co-op  
 Seal Rock Water District  
 Seneca, City of  
 Shangri-La Water District  
 Sheridan, City of  
 Sherwood, City of  
 Siletz, City of  
 Silver Falls School District 4J  
 Silverton, City of  
 Sisters, City of  
 Skylane Farm  
 Skyview Acres Water Co-op  
 Sodaville, City of  
 South Fork Ranch Homeowners, Inc.  
 South Fork Water Board  
 South Hills Water System, Inc.  
 Southwest Lincoln County Water District  
 Southwood Park Water District  
 Spirit Mountain Gaming, Inc.  
 Spray, City of  
 Springbrook Water Association  
 Squaw Creek Canyon Development  
 St. Paul, City of  
 Staffordshire Water System, Inc.  
 Stanfield, City of  
 Star Satellite Improvement District  
 Steeves Mobile City  
 Storlie Water Company Inc.  
 Sublimity, City of  
 Suburban East Salem Water District  
 Sumpter, City of  
 Sunridge Estates  
 Sunrise Water Authority  
 Sunriver Water LLC  
 Sunset Acres Water Improvement Co.  
 Sunset Lake RV Park  
 Sunset Water Systems, Inc.  
 Sunshine Village Water Association  
 Sutherlin, City of  
 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  
 Tillamook County Creamery Association  
 Tillamook, City of  
 Timber Water Association  
 Toledo, City of  
 Tollgate Water Co.  
 Tone Water  
 Trappist Abbey  
 Tri City Water & Sanitary Authority  
 Troutdale, City of  
 Tualatin Valley Water District  
 Turner, City of

Twin Rocks Sanitary District  
 Tygh Valley Water District  
 Ukiah, City of  
 Umatilla, City of  
 Umpqua Basin Water Assn.  
 Union, City of  
 Unity, City of  
 US Army/ COE, Cottage Grove Lake Office  
 Vale, City of  
 Valley View Water Co-op  
 Valley View Water District  
 Veneta, City of  
 Vernonia, City of  
 Vida-Lea Community Cooperative  
 VMWID  
 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  
 Watseco-Barview Water District  
 Wedderburn Sanitary District  
 Weiss Estates HOA, Inc.  
 Welches Water Company  
 Weldon Mobile Home Park  
 West Hills Water Company  
 West Linn, City of  
 West Slope Water Dist.  
 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 Washington Family Ranch  
 Young's River Lewis & Clark W.D.  
 Zig Zag Water Cooperative, Inc.

## WELCOME, NEW MEMBERS!

John Adams  
Michael Angell  
Oscar Arellano  
Kirk Barham  
Roy Bicknell  
Larry Carleton  
Roy Carter  
William Chacon  
Vince Chavez

Tony Degn  
Edgar Dix  
Audrey Edwards  
Tyler Everall  
Warren Felton  
Pat Gammell  
Chris Goetz  
Jason Gosling  
Daryl Hensley

James Hughes  
L. Alan Johansson  
Randall Jones  
John Mason  
Rachel McAllister  
John McKeivitt  
Steve Merritt  
Richard Perry  
Chuck Rapelje

William Schmittle  
Kent Schnell  
Steve Starnier  
Matt Thompson  
Carolyn Todd  
Susan Turner

Biggs Service District  
Jasper Knolls Water District  
Salem-Keizer School District  
Silverton, City of  
Sunshine Village Water Association  
Sunrise Water Authority  
Vida-Lea Community Cooperative  
Winchester Bay Sanitary

## INDIVIDUAL MEMBERS

Albiston, Garrett	Carter, Roy	Felton, Warren	Houston, Colin	Martin, Tim	Robertson, Donald	Tabrum, Walter
Adams, John	Cass, Bradley	Flande, Mark	Huff, Zach	Mason, John	Sander, Faye	Thayer, Bradley
Anderson, Brian	Chacon, William	Forseth, Steve	Hughes, James	McAllister, Rachel	Sannar, Todd	Thompson, Jake
Anderson, James	Chavez, Vince	Foster, Rob	Human, Steve	McCauley, Larry	Savey, Brian	Thompson, Kamen
Anderson, Ken	Clark, Jamie	Frahm, Dave	Hume, John	McClenathan, Mike	Schmidt, Lonny	Thompson, Matt
Anderson, Kevin	Clark, Kenneth W.	Free, Derek	Iverson, Allen	McFadden, Tim	Schmittle, William L.	Thomson, Henry
Angell, Michael	Clement, Tony	Fujisawa, Kellen	Jacob, David	McKeivitt, John	Schnell, Kent T.	Tilander, Tim
Anthony, Joe	Close, Greg	Gammell, Pat	Jauron, Scott	McTeague, Kyle	Schroeder, Michael	Todd, Carolyn
Arellano, Oscar	Costantino, Gregory	Geiman, Dave	Jay, Jerry	Meigs, Gilbert	Scowden, Mark	Tupper, Sean
Ashenbner, Jacob	Dahlberg, Mike	Gill, Robert J.	Johansson, Alan	Merritt, Steve	Seelye, Shawn	Turner, Susan
Baker, Scott	Dammeyer, Scott	Ginter, Brian	Johnson, Bret	Merry, Mark	Sellers, Ricky	Vatland, Mel
Barham, Kirk	Daniel, Morgan	Goetz, Chris	Johnson, Bron	Miller, Paul	Selshanko, Alexei	Verley, Christopher
Barnett, Brion	Davenport, Ray	Golden, Kirk	Jones, Randall	Mitchell, Joe	Sheppard, Neal F.	Violette, Jeff
Barton, Brent	Davis, Guy P.	Gonzalez, Jorge	Kash, Stella	Moniz, Garrett	Sherlock, Christopher	Waldron, Timothy
Bauer, Kyle	Davis, Willie Jr.	Goodpasture, Joe	Katrena, Scott	Montgomery, Martin L.	Simenson, Donald J.	Wallace, Neal
Beauchemin, James	Degn, Tony	Gosling, Jason	Keenan, Pete	Mooney, Ronald	Simmons, Edward	Wanner, Ron
Bell, Ron	Desroche, Ron	Grabner, Robert	Kirk, Jeremiah	Morris, Brady S.	Smith, Craig	Warwick, Gordon Jay
Biamont, Tony	Dillard, Bob	Grek, Robert	Klinger, Martin	Naught, Lester	Smith, Larry	Weaver, Rick
Bicknell, Roy	Dix, Edgar	Griffin, Beverly "Bev"	Kneaper, Jason	Noah, Jim	Smith, Randall	Wenzl, James T.
Blake, Mike	Dobie, Kevin	Halverson, Bruce	Kuhnke, Joel	O'Reilly, Mike	Snegirev, Pav I	Wheatley, James
Blezinski, Robert	Dolbow, Elizabeth	Hanes, Cameron R.	Kunders, Aaron	Owens, Rebekah	Sollee, James	Whitlock, George
Bradshaw, Dave	Dunn, Frank	Hannen, Scot	Lake, Ronald	Parent, Kenny	Stark, Chris	Wilson, Daniel
Brown, Jeff	Durfee, Kenneth C.	Harrod, Ron	Larman, Dan	Patch, David	Starnier, Steve	Wilson, David A., Jr.
Buckley, John	Eckley, Paul	Hecox, Thomas	Laymon, Mark	Pendell, Keith	Steele, Mark	Wolfe, Chad
Burton, Howard	Edwards, Audrey	Henderson, Shane	Liebelt, Levi J.	Perry, Richard	Steidler, Matthew B.	Wolford, Paul
Buskirk, Jeff	Ehredt, Tyler	Hensley, Daryl	Lund, Darrell	Piccolotti, Jim	Stevens, Bret	Woodall, Ken
Caire, Tim	Elder, Dave	Hesse, Todd	Lund, David	Pinson, James	Stevens, Pamela	Woodward, Steve
Carleton, Larry	Estrada, David	Higgins, Chuck	Maine, Mike	Porter, James	Stinnett, William	Woody, Max
Carlson, Kimberly	Evans, Peter M.	Hodge, Patrick R.	Malley, Susan	Powers, Ron D.	Stone, Brian	Yap, Anita
Carlton, Larry	Everall, Tyler	Hook, Ryan	Mangini, Jered	Rapelje, Chuck	Stonesifer, Vincent T.	
Carson, Paula	Farris, Randy	Hoover, Max	Marshall, John	Rettke, Tim	Strassner, Bob	

## ASSOCIATE MEMBERS

4B Engineering & Consulting	CoBank	HD Supply Waterworks	Oregon Business Development	Special Districts Assn of Oregon
Abbey Systems, Inc.	Consolidated Supply Co.	Hydra-Stop	Dept.	Taylor Made Pump Stations
Advanced Control Systems	Corix Water Products	Instrumentation Northwest, Inc.	Oregon Meter Repair	The Automation Group
Advantage Precast Inc.	Correct Equipment, Inc.	Itron, Inc.	Oregon Public Utility Commission	The Ford Meter Box Co., Inc.
American Flow Control	CUES	Jordan Ramis PC	Owen Equipment Company	The Sherwin-Williams Company
American Leak Detection	Ditch Witch Northwest	Kamstrup Water Metering	OXARC Inc.	Titus Industrial Group, Inc
Anderson Perry & Associates	DN Tanks	Kennedy/Jenks Consultants	PACE Engineers, Inc.	TMG Services
Backflow Management, Inc. (BMI)	Edge Analytical Laboratories	Lakeside Industries/EZ Street	Pittsburg Tank & Tower Co.	Tripac
Bancorp Insurance	EJ	League of Oregon Cities	Pollardwater.com	Umpqua Research Co.
BergerABAM	Engineering America	LiquiVision Technology, Inc.	Public Works Supply	USABluebook
BioLyneus, LLC	Enviro-Clean Environment, Inc.	M & H / Kennedy Valve	PumpTech Inc	Utility Service Company, Inc.
Branom Instruments Co.	Ferguson Enterprises	Master Meter, Inc.	RH2 Engineering Inc.	Waterlab Corp
Cascade Columbia Distribution Co.	Frank J. Martin Company	Mueller Company	Romac Industries, Inc.	Wonderware PacWest
Ch2M Hill - Dallas	Furrow Pump, Inc.	Nelson Environmental Inc.	Schneider Water Services	Xylem Dewatering Solutions
Ch2M Hill - Lebanon	GC Systems, Inc.	Neptune Technology Group	Schoen's Motors	Xylem, Flygt Products
CIMCO Sales and Marketing	General Pacific, Inc.	Olson Engineering	Schroeder Law Offices, PC	
	HACH Company		Sensus USA	
	HD Fowler Company, Inc.			

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



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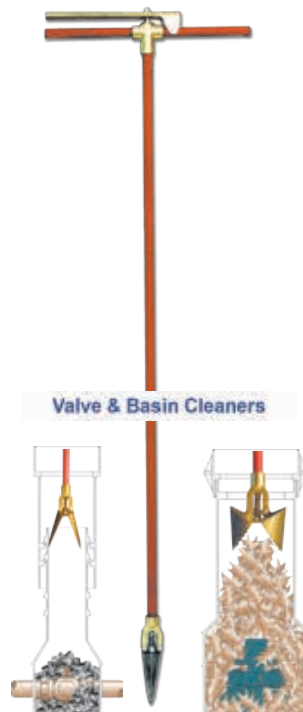


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