



H₂Oregon

Spring 2022
Vol 44, No. 2

A publication of Oregon Association of Water Utilities
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Spring 2022
Vol. 44, 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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Cover photo by Heath Cokeley
Munson Creek Falls south of Tillamook

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Notice: Oregon Association of Water Utilities invites you to prepare a short article about your water system or other topics which would be of interest to our readers. We also welcome articles from our associate members. The Publisher reserves the right to reject or edit any articles received for publication. Statements of fact and opinion are the responsibility of the authors alone and do not imply an opinion on the part of OAWU.

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.*

Oregon Association of Water Utilities

An Indispensable Tool

by Jason Green, Executive Director



I cannot see myself without my ever present and useful cell phone... or can I? To tell the truth, I waffle on this. Maybe you do too. It's a love hate thing. One day I enjoy it and wonder how quickly the years led from a very large room holding a basic computer, albeit, impressive for the day, to a small hand-held awesomeness of marvel! Speed, options, applications, safety, entertainment, comfort, or the reassurance it brings, the facts of life and reality, and always a text or call away from family or friends. Another day I despise its' ever presence, umbilical cord of sorts, taking hostage my thoughts and pushing actions turned to habits of checking if it still lives, vibrates, if I should charge it or giving it attention when I know I should be fully vested into a current conversation or task. I am often unable to withstand the temptation of a quick peek. You?

In the last issue, we briefly considered influences of/from others and those people we impact. That led to a lively discussion at the OAWU Annual Conference where the subject was finance, leadership, and succession planning. A rabbit trail showed, we followed it to influences and then raised the curtain to look at cell phones! A fascinating subject that affects most of our everyday lives at work and home. Regarding the workplace, we considered the usefulness. How quickly we might obtain answers, fact check, look at options, availabilities, parts or a map. We discussed policies at work, needed or not, understanding workplaces and people differ. We also gave time to several of the negative impacts at the workplace. I left the class with much of the previous frustrations and value still intact.

I did make a mental note of the vast difference in concerns and responses in general age groups. Several, maybe more mature in years, might even describe some as offenses so great that they simply now have no respect for the person that had no consideration, honor or manners when speaking with someone who answered the phone or text messaged during a conversation. They might as well have slapped the person they were talking to or when the boss was attempting to visit with the employee (or visa-versa). What importance to the person or lack of, does phone checking convey during a conversation? I make a note here—there are many, mostly younger, that see a fact check or a text while talking to someone as simply normal and acceptable behavior. There is no infraction or offense. They were raised with a cell in-hand and have adjusted to this being acceptable and normal. It's that simple, or is it? How did we get here? Policies at work? I will mostly leave this alone except to mention, it is an easy conclusion that if an employee steals time from the company (personal interruptions from calls/texting during working hours), there will likely be a policy soon coming to prevent or limit personal cell use during working hours. A challenge to the possible nay sayer or I have a right to check my personal cell during working hours—how much time is spent on a personal cell during working hours? I bet fifteen minutes is reasonable, maybe more. Add the total impact to refocus after the interruptions. A usual work year is 2080 hours. 15 plus minutes each workday is how many hours per year? Now I'm beginning to see what I once thought was ok, might not be acceptable or right with my employer. Maybe some of the struggles my employer has with cell phones and personal use is more real than I once thought.

The influence is huge. Safety, relationships, marriage, cheating, gambling, porn, simply wasting time or one of the greatest tools to communicate with, help live and work. Love it, hate it, or a little of both? It is my opinion that the modern-day cell phone is an indispensable tool. It makes life tasks and living better, easier, faster, and yet with all the benefits, we somehow get ourselves in the way and sometimes so easily complicate our own lives with it! Take a break from your cell, if nothing else, just to prove you can. Guard your life and time and don't let the simple cell phone become a habit and rule and run your life with every beckoning call and ding! It's the person. The people are the gems and sometimes also the challenges rather than the tool! Wait! Did I just hear... My best to you! 💧

44TH ANNUAL Management & Technical Conference SUNRIVER, OREGON



This year's conference was a great success and we were blessed with a week of beautiful, sunny weather after the rain had stopped. Many 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 led off by Jason Green, OAWU Executive Director, Russ Cooper, OAWU NRWA Director, Cameron McKay, NRWA Executive Board Member, and Mike Edwards, OAWU Board President. They welcomed attendees, discussed the state of the Association, and provided an update on the issues the industry is facing at a national level. This was followed by Mark Landauer who presented an update of legislative issues at the state level.

The OAWU annual business meeting was held after class sessions ended on Tuesday. President Mike Edwards presided over the meeting as attending members heard committee updates and participated in board member elections. The slate of board members who were submitted by the Nomination and Development Committee and elected to the board were:

Craig Smith, City of Lake Oswego, Region 1, expires 2025

Luis Milera, City of Tualatin, Region 3, expires 2025

Mark Beam, Ice Fountain Water District, Region 3, expires 2025

Micah Olson, City of Columbia City, Region 2, expires 2025





At Wednesday's regular board meeting, annual officer elections for 2022 occurred. They are: **Matt Johnson** as President, **Micah Olson** as Vice President, and **Craig Smith** as Secretary/Treasurer. We would like to thank and recognize our retiring board members: **Ed Butts**, 4B Engineering, years of service 1998-2021 and **Phil Davis**, Odell Water Company, years of service 2005-2022; thank you for your many years of direction and service to OAWU.

Many attendees were present at the awards banquet on Wednesday evening, and several visiting attendee families. The roast and salmon were great, and many good conversations could be heard throughout the Great Hall.

The 2020 Manager and Operator award recipients are:

Manager of the Year: Joel Kuhnke, City of Lake Oswego

Wastewater Operator of the Year: Kyle Jentzsch, City of Gervais

Water Operator of the Year: Matias Mendez, City of Phoenix

Associate Member of the Year: Core & Main

Friend of Rural Water: Mark Kerns, Retired

Office Manager of the Year: Tracy Archer, City of Gates

The 2021 Manager and Operator award recipients are:

Manager of the Year: Ken Perkins, City of Independence

Wastewater Operator of the Year: Paul Wolford, Umpqua Indian Utility Cooperative

Water Operator of the Year: Curtis Olson, Hiland Water Corporation

Associate Member of the Year: Schroeder Law Offices, PC

Friend of Rural Water: Ed Butts, 4B Engineering

Rookie of the Year: David Morgan, City of Tigard

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 who you would like to nominate for next year's awards, submit the information to the OAWU office for consideration.

The Best Tasting Water award recipients this year were the **City of Stayton** for Best Surface Water and **Avion Water Company** 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 2022 winner of the Overall Best Water category is **Avion Water Company**. 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 Thursday, there was good food and drink, many door prizes, raffles, and an auction. We wish to extend a special thank you to all of those that took part in this year's auction. The money goes to support the Jeff Swanson Memorial Scholarship fund. The scholarship auction and raffle proceeds exceeded \$5,000. The selected candidate for this year's Jeff Swanson Memorial Scholarship of \$3000 was **Brenna Sheldon**, whose father works for the City of Sherwood. The application for the 2022-23 academic year can be found on our website, please apply if you have a dependent that is currently attending or going to attend college.

Congratulations to our raffle winners. Ruffled items were Christensen Arms Mesa 7mm Rem Mag 24-inch bolt action rifle with a 4-12X50 Scope for the WaterPac, a Springfield Armory Hellcat 3-inch 9mm Luger pistol for the Jeff Swanson Memorial Fund, and a LG 65-inch 4K UHD LED LCD TV.

The winners of the ping pong and cribbage tournaments were announced. First place in ping pong was **David Morgan** from the City of Tigard, **Larry Smith** from Starwood Sanitary came in second, and **Tim Brown** from Diversified Construction and Consulting came in third. **Andy Carlton** from Sunriver Water LLC came in first for cribbage, receiving the championship board. **Jason Devine** from the City of Sublimity came in second and **Tony Degn** from the City of Medford came in third. The winner of the Find the Logo contest was **Aric Vannier** from Delphian School.

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 Sponsor of this year's conference: **Core and Main**; our Silver Sponsor: **HD Fowler Company, Inc.**; and our Bronze Sponsors: **EJ** and **PACE Engineering**.

Be sure to sign up for the Annual Conference next year, the first full week of March 2023, as there will be a slate of new classes to attend, people in our industry to visit, food to eat, and fun to enjoy. See you there! Best wishes to you, our friends. 💧



Decommissioning/ Abandonment of a Well

by Mike Collier, Deputy Director, Source Water Specialist



For groundwater systems, did you know that one of the greatest risks to your water supply are unused, uncased wells that form a direct conduit (straw) to your groundwater supply (aquifer)?

If a well is in close proximity to the wells for a water system and has not been used in many years, particularly if the well has a cracked seal or has no protective cap, this forms an area that is highly critical to deal with. This can be a well the system itself has, what a neighbor used to have in their yard, or what a farmer has. In any of these cases it is important to properly abandon the well to increase the protection of the drinking water supply and it is actually required for the owner to do so if the well has gone dry, or any other reason it will never be used again.

How might we find these wells? Ask around the area, there is a wealth of knowledge out there with some of the long-term residents and they may be able to point us in the right direction. Look at old maps, some of the old system maps or other maps of the area might point out areas where some of the old wells are. Survey the area for any abandoned well houses, pipes/well heads poking out of the ground, or maybe something else that is physical that could be an area of a well (windmill, old secondary electric pole, or concrete housing). We can also look at Oregon Water Resources Department's (OWRD) well database or well inquiry tool.

Once some wells are found, how would they properly be abandoned? To do this correctly we must work with OWRD and with a water well professional or certified well driller. The paperwork will need to be completed and the driller will usually put a slurry of cement mixed with bentonite into the well – this will create a protective area where water cannot easily leach into the aquifer through this hole anymore.

There are a few options to pay for this process, depending on the scenario. If the well is on the system's property, typically the system will be the one solely responsible for the cost – it may be worth saving for or putting it into next year's budget. If the well exists on a neighboring property, there are other options: the system can still bear the cost, the property owner can, or there is an option for a Source Water Protection Grant through Oregon Health Authority – Drinking Water Program. This grant can pay for this process. The grant application typically comes out in January every year and is due in by March. For more information, please look at: <https://www.oregon.gov/oha/PH/HealthyEnvironments/DrinkingWater/SRF/Pages/spf.aspx>

Or contact your association, OAWU 503-837-1212 for more information. 💧

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How Well do You Know Your Ordinances or Codes?

by Keith Bedell, Wastewater Technician

How well do you know your utility's ordinances/codes? Whether we are on the water or wastewater side, or both, we should be familiar with the city or utility ordinances/codes that we operate under. From what I have been seeing new industries and businesses coming into communities that are not prepared for them. This has been a burden on that community/utility. We don't want to have to be playing catch up.

When the microbreweries started coming in, people were glad to see them until the biochemical oxygen demand (BOD) and total suspended solids (TSS) from them started to upset their wastewater treatment facilities. Do you have an industrial pretreatment program (IPP) and is it up to date? Just because you don't have an industry currently causing problems, yet we want to be prepared.

I have checked on some city's influent pH limits, and some allow a pH between 5.5 and 11.5, that's a pretty big difference. What is the normal influent and effluent pH? Most effluent limits are 6–9. We don't want to have to add chemicals to adjust our pH up or down, that's if the plant can even handle the pH change. If our bugs are used to a pH of 7.5 coming in and we start getting 6, will they be able to handle the change or will it upset the plant? How about if we start getting high BODs? Will the plant be able to handle that? If we have an ordinance/code that is specific with BODs, TSS and pH, then we could possibly be covered. The average BOD and TSS used in permits are typically 250mg/L for each.

Also depending on what the utility has for billing of flow to the plant, if someone has a high flow we should be charging accordingly. I will use 200 gallons per day (which is 6,000 gallons per month) and equivalent dwelling unit (EDU) that is charged and used for planning. This is what we would use to charge for an average home. So, if someone sends 20,000 gallons per month that is 3.3 times more than we would receive from a home and we should be charging accordingly.

This should also be how we are charging for industries or businesses that have higher levels of BOD or TSS. They are reducing the capacity of the treatment or collection system from what it was designed to handle, requiring the upgrade earlier than was planned and costing extra money.

In another example of an ordinance/code, are we responsible for the sewer service lateral from the main to the property line, or is it the property owner's responsibility from the house/building all the way to the sewer main? Have we always used the main to the property line as our responsibility, but never checked to see? We might be spending more time and money helping out property owners when we shouldn't be. This makes it a lot easier if we get called at 1 a.m. by a homeowner that has sewage backed up in their bathtub and we check the manholes in the street, and everything is good.

This also relates to knowing what our wastewater permit says and what we are required to do, along with the requirements for our water system. Read up and be familiar with what is needed for our water and wastewater systems, don't just go along with the old "we've always done it this way." 💧



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Perceiving Hazardous

by Tim Tice, Projects Manager

The beginning of most work lives starts with a blue-collar position that relies on physical strength and has a tendency of getting dirty. Dating myself, the common sight of a shop towel hanging from a rear pocket, which was the only means of clean up, decontamination and personal protective equipment. Wow, we have come a long way! As standards and technology change, we can see just how naive we were as it relates to safety.

Not a lot of changes to safety regulations have happened in the past decade, this familiarity with procedures has allowed us to be complacent, hurriedness may cause injury to strike out like a desert rattler. That old saying that “familiarity breeds contempt,” should also be applied “familiarity breeds injuries.” In today’s industrialized processes, more and more procedures are being reconsidered to keep employees safe, yet we still hear of injuries and frightfully those injuries can result in death.

When dealing with hazardous situations, many aspects of the health and safety programs are lacking, due to time constraints, funding, or turn-over in personnel. People are often the key to a successful program and many times are the reason for the failure of such programs. How bad would we feel if we realized a short cut taken on our part injured someone or worse yet, terminated a life?

Successful safety programs begin with a needs assessment from filling out a Job Hazard Analysis (JHA). This analysis will methodically carry personnel through the unique process that helps prioritize hazards, breaks hazardous situations into individual required tasks, with each task evaluated to find any hazards and how to mitigate them.

Learning to perform a correct JHA is an art that stands on its own. Remember that as a person becomes all too familiar with the ongoing processes or practices of such an industry, they may become habitual and forget a crucial step.

In the water and wastewater industries, tasks that are considered the riskiest are likely those which are performed sporadically, labeled non-routine. Something that raises the risk factor is if the worker is alone. Many of our members work alone. The single best approach to JHAs is to routinely review those tasks considered the highest risks. How will the list look at your location? The list that follows is not all-inclusive. If you think of a task not listed, pass it along to ttice@oawu.net and maybe an article will develop on that point.

Time¹ “on” the road Locates, meter reading, call outs,

Time “in” the road Repairs, traffic control, time of day, visibility

1

<https://www.scatterling.co/blog/safe-practices-for-workers-in-the-water-utility-sector>

Conditions

Treatment plants Confined Spaces, hazardous chemicals, electrical

Mechanical Shop Heavy parts, power tools, trip and falls
Developing protocols for the many tasks can be overwhelming and it's likely this step has been completed, but equally staggering is updating the paperwork, ensuring documentation and that the employees understand the importance of a good safety program. A program will fall short when a health and safety officer visits the facility, and the paperwork is incomplete.

We often think the timing of these visits is uncanny, but being truthful with oneself, every day prior to the safety inspection could have been a day for a safety review. Often our schedules are not our own, and even with the best intentions we end up completing a different task than originally scheduled. Carry this out per day, per week,

per month and before we realize it, the safety program is obsolete.

Personnel, time, and money or lack of are the primary parts of a well-rounded safety and health program. Accidents will happen; hence they are called accidents. Consider all the personnel hours spent on the delivery of water and the treatment and discharge of wastewater, the industry has been successful in the areas of safety.

Doing it better is important and with each succeeding year as design improves safety by lessening those precarious positions employees find themselves. With everything being thrown at being safer in the workplace, maybe an easier way to look at safety, is *look out for each other*.

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Getting Fire Ready

by Scott Berry, Operations Manager

Several years ago, I wrote an article to help water systems prepare for an upcoming fire season. In light of the damage caused by the past 2 fire seasons; it seemed appropriate to update and resubmit the article.

For those of us for whom a natural cover fire is a threat, and from what we've seen from the past couple of years, that's almost all of us. There are few things that we can do before, during, and after a fire that will help us return to normal operations as soon as possible.

Before fire season

- Restrict access to areas surrounding facilities and secure them.
- Remove debris, trees, shrubs, and other flammable materials to create a defensive space at least 20 feet from structures.
- Keep intakes clear of vegetation and debris.
- Keep enough water treatment chemicals and repair parts in stock.
- Review historical wildfire data to recognize how the past frequency and severity of wildfires may affect the utility. For more information on historical fires in your area, go to: <https://www.oregon.gov/odf/fire/pages/firestats.aspx>
- Have your local fire or forestry official do walkthrough of your facilities with you.
- Create a Wildfire Management Plan and add it to your ERP.
- Create copies of essential records and store them offsite.
- Record generator connection type, fuel consumption, and capacity load. Develop a backup fueling plan to prioritize which generators to fuel in case of shortage.
- **Personnel:**
 - Encourage staff to develop a personal preparedness plan for themselves and their family.
 - Plan for increased workload during an event.
 - Make sure proper safety gear is available for field employees.
 - Conduct training exercises with all staff.

During a fire

- Communicate with the fire command structure.
- Notify OHA/DWS when appropriate.
- Consider putting sprinklers on critical infrastructure. As we saw during the fires of 2020, many homeowners will likely be doing the same thing so monitor tank levels and prioritize any available water for fire suppression.
- If you have other sources or connections to neighboring water systems, open them when appropriate.
- If evacuation is necessary, make preparations and follow your established plan.

- When the evacuation order is lifted, move back in cautiously and be wary of downed power-lines, hazard trees, and flare-ups. Determine the extent of the damage to facilities and report to your command structure.
- Install equipment in the watershed and around the intake to prevent damage from erosion and debris flows.
- Monitor filters and increase backwashing as necessary.
- Monitor raw water quality frequently and perform jar testing to predict treatment needs.
- Prioritize your crew's time and give them the support they need.

After the fire

- OHA/DWS has some good guidance available on their website for water systems after a fire that include increased VOC and IOC monitoring and other considerations.



- There are some funding opportunities through the SRLP, USDA, and other lending institutions, we at OAWU can assist in finding the best funding source for you.
- Debrief. As soon as is feasible, sit down with your crew and discuss what went well, what could have gone better, and how to change your emergency response plan in accordance. Make some time to attend any debriefing sessions with the county Emergency Operations Center and the rest of the Incident Command Structure. 💧



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Pet Projects

Heath Cokeley, Programs Manager/Circuit Rider

I remember a long time ago being asked, “When you did this, how did you keep your sanity?” I appreciated the comment not only because it was from an individual, I have a great deal of respect for, but also was from the manager of the same system I used to manage. The answer was simple. Pet Projects. You see, when I was managing that system, I thought my situation was unique. A board that wanted one thing that appeared to change month to month, a membership that pushed in varying other directions and, of course, ever-changing rules and regulations that suddenly become the most important thing in the world that you were supposed to have done yesterday (please see new lead and copper inventory requirements). The bottom line is, after I became a Circuit Rider, I realized that situation was not unique and more often the plight of any operator.

I noticed that every week I started with a list of priorities and that list continually got longer and nothing I personally added to the list appeared to be coming off. That was the moment I started my “pet projects” list. What is best, of course, is when this list can be part of the priorities boards and councils have in front of them and want to move forward, but when that isn’t the case, I would encourage you to find a way to keep the project, whatever it may be, and keep moving it forward. You see, my observations have been that most individuals drawn to the water and wastewater field are not people who like to stay stagnant, they want or need to see that ball move down the field. I know in a previous article many years ago I mentioned coming up with those pet projects to keep staff engaged and interested, but I am not sure I admitted that sometimes it has taken the same for me to stay engaged.

So, what is the most important thing in your mind that would benefit your system in the long run? It can be small like a short mainline replacement, or it can be big like a groundwater filtration system that may only be solving aesthetic problems but can see the long-term benefits for our system. Take that project, I would say run with it, but realistically, it will take time. So, push it, continue to push and when it is realized, even if you are one of the very few to see the true benefit to the system as a whole, revel in it because it is a success and with that I will see you down the road. 💧



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Lead and Copper Rule R

by Bob Waller, Water Circuit Rider

Let's talk a little about the lead and copper rule revision. The lead and copper rule revision was published in the federal register on January 15 of 2021. This rule change was expected to be finalized several times during the 2021 year and was finally finalized on December 16, 2021. The effective date for compliance was going to be January 16, 2024 and has been delayed to October 16, 2024.

So, it looks like we have two years and five months before the effective compliance date. We would expect parts of the rule to be required prior to that October 16 date. The copper action level has not changed and remains at 1.30 mg/L. This revision is in response to the Flint Michigan lead incident of 2014 and the dangers of lead in drinking water. Lead's current action level is 15 parts per billion or 0.015 mg/L which has not changed, but we now have a trigger level of 10 parts per billion or 0.010 mg/L.

So, if a system has an action level violation we now have to do "distribution of public notice within 24 hours." This means having updated contact information for our customers is critical to meet this 24-hour notification timeline. Now might be a good time to update phone numbers, email addresses, etc.

The number of samples taken will increase if we have at least one elementary school and at least one daycare that we serve.

The lead service line inventory is the foundation of this rule change. This rule is designed to remove lead service lines across the country. The locations we use for our lead and copper samples will change based on this inventory. Also, the way we sample could change if we have any lead service lines or any unknown service lines, because an unknown service line will count as a lead service line until proven otherwise.

Let's say our system has 1,000 service connections and we have no lead lines but 50 unknowns. Now let's say we have an action level violation; the rule says we will replace 3% of the lead service line inventory which includes those unknowns. So, we dig up 2 lines and find no lead, in the new rule they don't count toward our 3%, so we dig up 2 more....

Let's go through a few of the possible prerequisites to the compliance date of October 16 of 2024.

Lead service line inventories: Mandatory inventory for all systems regardless of size. All systems will conduct a service lines inventory both on the system side as well as the customer side. How the information is disseminated will be based on the size of the system. This inventory is something a system can start working on now, while we are changing meters, servicing meters, repairing leak, start recording what we are seeing in the ground. This step will go a long way toward those inventory requirements.

Revision

Outreach & public education: The rule also requires annual information on lead and the health risks that may be associated. This may include where customers can get testing, a list of EPA accredited labs, assistance on sampling, websites where customers can get easy-to-find information about lead and how to protect their families. Updating our CCR is a good place to get this information to the public.

Lead service line replacement plans: If our system has any lead lines or unknown lines, we will be required to have a plan to identify and/or replace those lines. This will include where they are, how they will be replaced, how will we pay for the replacement, how will the customer pay for the replacement, and what about low-income residents. Loans and grants will be allocated through the SRF to help offset these replacements.

Sampling plans: Based on our inventories the lead and copper sample sites will change. Also based on whether our system has lead lines or unknown lines, the way we sample may change.

Tier Criteria Change

- Tier 1. Single family homes with lead service lines
- Tier 2. Multi-family homes with lead service lines
- Tier 3. Single family homes with galvanized currently or formerly proceeded by lead
- Tier 4. Single family homes with copper pipes and lead solder
- Tier 5. Representative samples of the plumbing system

As we get more information we will pass it along, and as always, if you have questions call OAWU. 💧



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Don't Wait to Start Your Inventory

Your Lead Service Line Inventory is foundational to Lead and Copper Rule Compliance—and while it may be tempting to put off this project until further legislative steps are taken, systems should begin the process now to keep up with compliance deadlines.

Inventory Deadline: 2024

LCR will go into effect in 2024, and we believe it will only get more complex.

After nearly a year of review in accordance with Presidential directives issued on January 20, 2021, The Biden administration passed the Lead and Copper Rule Revisions on December 16, 2021. However, the EPA and administration pointed out that more should be done to improve LCRR. With that, the Biden Administration is developing a new proposed rule called the Lead and Copper Rule Improvements (LCRI), which the Administration hopes to be finalized by the LCRR compliance deadline of October 16, 2024.

At that time, systems will need to submit the first draft of their inventories—inventories that not only show where lead can be found in your communities but have been **validated to confirm its presence**. The validation process is essential to verify your current data set and fill in gaps. For tips on what validation techniques make sense for your system, check out our Inventory Validation Guide.

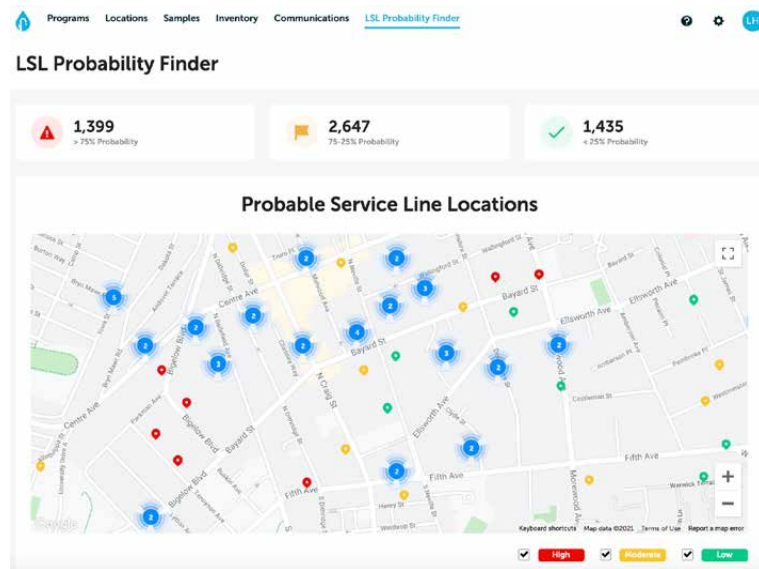
Understanding the requirements of the Revisions, progress toward compliance should begin now to allow ample time.

A Validated Inventory Leads to LCR Compliance

Knowing where the lead is—and having that location verified—will be the basis for the majority of the LCR compliance requirements. For a full list of requirements and due dates as they stand, view our LCR Pipeline. The revisions introduce numerous new mandates that will be based around this validated inventory—without it, your system could use up valuable resources trying to make up for lost time.

Your inventory will be the basis of the LSL Replacement plan required by the revisions, providing the foundation for the next several years of work as lead pipes are removed. You'll also need to notify all customers served by LSLs or unknown materials in 2024, a significant communication challenge that won't happen without accurate inventory data.

The inventory will also dictate your Tier Site Monitoring, where utilities will soon be required to provide 1st and 5th liter



sampling at any home with a known LSL. Accurate Tier Lists can only come from an accurate inventory.

A Project of Unprecedented Scale

The scope of the LSL inventory project will require years of planning and collaboration.

Inventory is a massive project, and utilities need time to unravel all the moving pieces. In what is essentially a large-scale data puzzle, gathering and validating the numerous relevant parts will be a big undertaking. According to polls conducted during 120Water webinar sessions, 82.7% percent of utilities are missing complete data on private-side line materials. Tools such as 120Water's Inventory Management Solution can expedite this process but performing an audit of the current data in your utility will help to build a realistic timeline.

In addition to data complications, you'll need to bring together multiple departments to collaborate on this project, including contractors and third-party services to empower your team. Building the inventory, validating materials, and completing replacement efforts is potentially a decades-long process, and postponing the process is one more day your community has to live with the possibility of lead in their drinking water.

Take Advantage of Federal Funding

Make yourself eligible for funding opportunities with a "shovel-ready" inventory. Numerous funding sources have been made available to systems for infrastructure, including water quality and LSL-related projects. Utilities should focus efforts on LSL inventorying if they hope to capture a piece of this funding pie.

Why Creation & Validation Should Be Your Top Priority by Lowell Huffman, 120Water

Many of the sources will prioritize “shovel-ready” projects, which implies at the very least an estimation of lines, and most likely a complete inventory. Replacing service lines will be a costly endeavor, and you’ll likely need to utilize funding that’s been made available waiting to begin your inventory will not put your system in a position to capitalize on those opportunities.

Save Time & Money

The Lead and Copper Rule Revisions are certainly the most important legislative changes in the world of drinking water in decades, however, regulations will continue to evolve as we learn more and as public pressure to remove all lead from the ground mounts. We recommend operating under a future-proof definition of what constitutes a lead service line, collecting public and private information on the following up front:

- Lead Pipes
- Lead Fittings
- Copper with Lead Solder
- Galvanized Lines
- Unknown Materials

This is a project large enough you don’t want to have to do it twice. Approaching it with a broader mentality of what may constitute a replaceable service line will save your utility valuable time and money down the road as regulations evolve.

Where to Begin

Systems are juggling a lot of priorities right now, and it can be easy to assume that with no immediate deadlines, this project can wait until next year.

We hope you’ll consider the reasons it’s important to start now so your system is set up for success in the future.

If you’re wondering exactly how to get started, schedule a call with our team and we’ll walk alongside you to assess the best next steps for your system. 💧

Lowell Huffman is director of business development at 120Water, the nation’s leading solutions provider for managing lead programs.



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Servanthood and Sacrifice

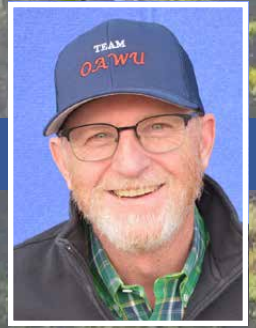
by Hans Schroeder, Circuit Rider

In my perspective on what it takes to be successful in our industry boils down to two qualities: servanthood and sacrifice.

Our internal make-up should be to please others. We deal with customers that need our service in a timely manner and handled with professionalism. We make sure those are provided however, do we provide the service with a smile on your face, talking to the customer that is home and telling them to have a great day? We are task driven. In order for me to accomplish those tasks in a timely manner, I am a list maker. Sometimes my wife makes fun of the sticky notes on my desk, the grocery list on the fridge, the tasks on my daily calendar to make sure I complete ALL the tasks for the day. Not just my work tasks, but also my personal tasks. Let's face it, when your spouse asks if you will do something or attend something the last thing, we want to forget is our family. That quality is "servanthood." Try not to get in a habit of prioritizing work over family. We shouldn't get in a habit of sacrificing our personal life and family for work, but it does require a balance.

Servanthood goes with another quality called "sacrifice." They go hand in hand. We sacrifice our days off, our family time, dinner out with friends, vacations, or sporting events. We answer the call at any hour to provide that servanthood nature to the citizens of our community. I remember when our local gas station/mini mart caught on fire at the convenient hour of midnight in the small town where I was the public works director. I worked through the night helping with what I could, then went to work in the morning to provide the services our town needed. We look for opportunities to assist and help in any situation. When the occasion arises that a citizen notices the gravel spread, asphalt patch done, the snow removed, or any other daily function completed and comes up to say, "thank you," that is what feeds many of us in this industry. 💧

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QUIZ CORNER

1. On which kind of day would you expect the most evaporation from the surface of a pond?
A. cold, rainy C. warm, rainy
B. cold, sunny D. warm, sunny
2. Water is the only substance on earth that can be naturally found in three forms.
A. True B. False
3. How much of the human body is water?
A. 55% C. 77%
B. 66% D. 83%
4. How much of the Earth's surface is made of water?
A. 50%
B. 60%
C. 75%
D. 80%
5. What is the current Maximum Contaminant Level for Arsenic?
A. 10 parts per billion
B. 0.01 part per million
C. 0
D. Both a. and b.
6. What is the current Action Level for Lead?
A. 15 Parts per billion
B. 0.015 parts per million
C. 0
D. Both a. and b.
7. How long should samples be refluxed before COD analysis?
A. 15 min.
B. 30 min.
C. 1 hour
D. 2 hours
8. Organic nitrogen is determined using?
A. An ammonia selective probe
B. The total kjeldahl method
C. A cadmium reduction
D. Nessler tubes
9. What can produce harmful and obnoxious gases in a collection system?
A. Air curtains
B. Scouring velocity
C. Solids buildup
D. Turbulent flows

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



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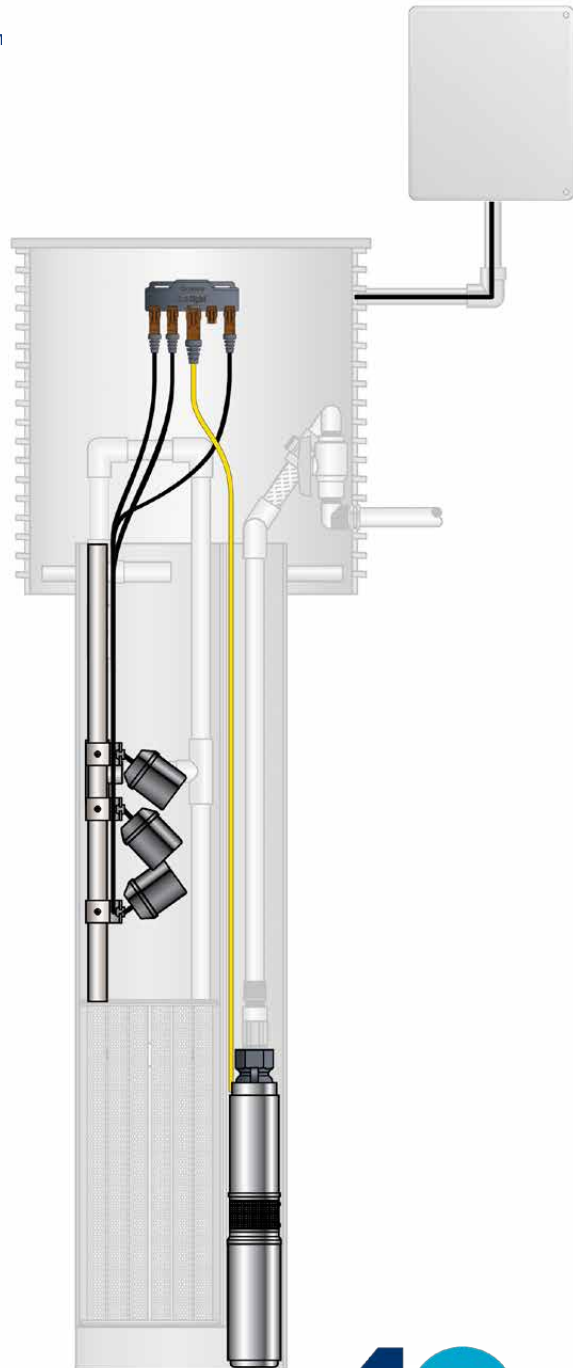
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UPCOMING TRAINING & EVENTS

Date	Class Title	Location	CEU Information	ESAC#, Fee/Free
April 27	Developing your Operations & Maintenance Manual	Canby	0.4 Water/Wastewater/0.2 Onsite	4116 Fee
April 27	Leak Detection	Canby	0.2 Water/Wastewater	4396 Fee
April 28	Confined Space	Canby	0.3 Water/Wastewater	4193 Fee
April 28	Hazardous Communication Standard (Global Harmonization)	Canby	0.3 Water/Wastewater/Onsite	TBA Fee
May 11	Math for Operators	Redmond	0.4 Water/Wastewater	4329 Fee
May 11	Pumps and Pumping	Redmond	0.3 Water/Wastewater/Onsite	4395 Fee
May 26	Confined Space & Job Site Safety	Newport	0.6 Water/Wastewater/Onsite	4331 Fee
May 31 – June 1	Water Treatment, Water Distribution Certification Review	Keizer	1.4 Water/0.5 Wastewater/Onsite	4036 Fee
June 2	W. Treatment & Dist. Level 3,4 & Filtration Endorsement	Keizer	0.6 Water	4034 Fee
June 28	Math for Operators	Hermiston	0.4 Water/Wastewater	4329 Fee
June 28	Pumps and Pumping	Hermiston	0.3 Water/Wastewater/Onsite	4395 Fee
July 6	Developing Your Operations & Maintenance Manual	Springfield	0.4 Water/Wastewater	4116 Fee
July 6	Leak Detection	Springfield	0.2 Water/Wastewater	4396 Fee
July 19–20	Water Treatment, Water Distribution Certification Review	Redmond	1.4 Water/0.5 Wastewater/Onsite	4036 Fee
August 3	Lock Out Tag Out	Bend	0.3 Water/Wastewater/Onsite	4397 Fee
August 4	Hazardous Communication Standard (Global Harmonization)	Bend	0.3 Water/Wastewater	4193 Fee
August 4	Confined Space	Bend	0.3 Water/Wastewater	TBA Fee
August 9–10	Wastewater Treatment/Collections Certification Review	Salem	1.4 Wastewater/0.7 Water	4227 Fee
August 22–25	28th Annual Summer Classic Conference	Seaside	2.3 Water/Wastewater	TBA Fee
September 21	Confined Space	Baker City	0.3 Water/Wastewater	TBA Fee
September 21	Job Site Safety	Baker City	0.3 Water/Wastewater	3890 Fee
Oct. 31 – Nov. 3	Spirit Mountain Casino Operator's Conference	Grand Ronde	2.7 Water/Wastewater	TBA Fee
November 16	Distribution Basics	Salem	0.6 Water	4117 Fee
November 17	Developing Your Operations & Maintenance Manual	McMinnville	0.4 Water/Wastewater/0.2 Onsite	4032 Fee
November 17	Leak Detection	McMinnville	0.2 Water/Wastewater	4396 Fee
December 12–15	23rd Annual End of Year Operators Conference	Hood River	2.7 Water/Wastewater	TBA Fee

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

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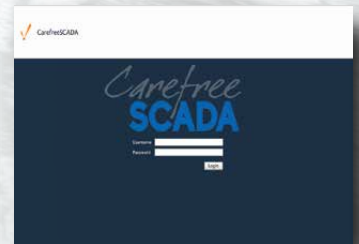
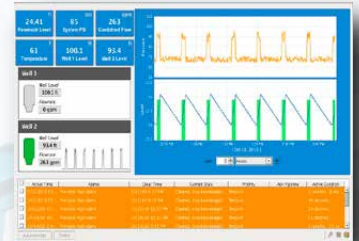
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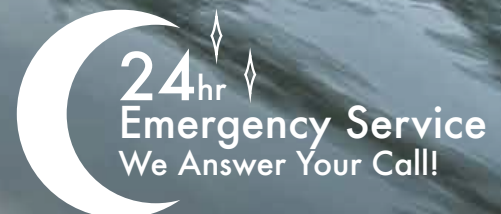
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See schedule below |
| <input type="checkbox"/> Associate Member | \$500.00 |
| <input type="checkbox"/> Individual Member | \$100.00 |

Regular Member Dues Schedule

1 to 100	\$75 + 42 cents per connection
101 to 500	\$85 + 42 cents per connection
501 to 1,000	\$90 + 42 cents per connection
1,000 and up	\$100 + 42 cents per connection
Maximum dues is	\$1,200.00

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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. 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 about upcoming training courses in your area
- 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
- Positive contacts with other organizations
- Camaraderie with water and wastewater professionals
- Operator Of Record services
- Job referrals, announcements and searches
- Well testing, plan review, rate studies, WMCP plans
- System performance evaluation and options
- Additional programs and services
- Disaster response assistance and planning



MB22

MEMBERS

62nd Court Mutual Water Company
 Adair Village, City of
 Adams, City of
 Adrian, City of
 Agate Water System
 Albany, City of
 Albany Rifle & Pistol Club
 Alfalfa Water LLC
 Alpine Crest Improvement Dist.
 Amity, City of
 Ananda Center at Laurelwood, Inc.
 Arch Cape Water & Sanitary District
 Arlington, City of
 Arrah Wanna Water Company
 Arrowhead Mobile Home Park
 Aspen Lakes Utility Company, L.L.C.
 Astoria, City of
 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
 Bayou Water Improvement District
 Beaver Water District
 Beaverton, City of
 Bend Research Inc.
 Bend, City of
 Benton County Service District
 Bents Court Water Co.
 Berndt Creek Water Corp.
 Beverly Beach Water District
 Biggs Service District
 Black Butte Ranch
 Black Mountain Water District
 Blue River Water District
 Blue Spruce Estates
 Bly Water & Sanitary Dist.
 Boardman, City of
 Bonanza, Town of
 Boring Water District #24
 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
 Bunn's Village Properties, LLC
 Burlington Water District
 Burns, City of
 Burnside Water Association
 Butte Falls, Town of
 Camp Baker BSA
 Camp Rilea
 Canby, City of
 Canby Utility
 Cannon Beach, City of
 Cannon View Park, Inc.
 Canyon City, Town of

Canyonville, City of
 Carlton, City of
 Cascade Locks, City of
 Cave Junction, City of
 Cedarhurst Improvement Club, Inc.
 Central Coast Clean Water Company
 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
 Corvallis Waldorf School
 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 Sanitary District
 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
 Deer Creek Estates Water Association
 Deerhorn Community Water Association
 Delphian School
 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 Summit Association
 Dietz Airpark Water System
 Donald, City of
 Drain, City of
 Drifter's MHP
 Dry Creek Airpark HOA, Inc.

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
 Emerald Meadows HOA
 Emerald Valley Wastewater Co.
 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 Grove HOA
 Fir View Water Company
 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
 Grants Pass, City of
 Grass Valley, City of
 Green Area Water & Sanitary Authority
 Green Oaks Park
 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
 Hermiston, City of
 Hidden Valley Improvement District

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 Highland Subdivision Water District
 Hiland Water Corporation
 Hillsboro, City of
 Hines, City of
 Hood River, City of
 Hopewell Water Co.
 Hubbard, City of
 Hunnell Hills Community Water System
 Huntington, City of
 Ice Fountain Water District
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 Imbler, City of
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 Indian Meadow Water Company
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 Interlachen Water PUD
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 Irrigon, City of
 Island City, City of
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 Jasper Knolls Water District
 Jewell School District
 John Day Water District
 John Day, City of
 Johnson Creek Water Services Company
 Joseph, City of
 Junction City, City of
 Keizer, City of
 Kellogg Springs Camp
 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 Creek Lodge
 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
 Laurelwood Water User's Co-op
 Lawrence Subdivision Water Assn., Inc.
 Lebanon, City of
 Lexington, Town of
 Lincoln City, City of

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 Lostine, City of
 Lowell, City of
 Luckiamute Domestic Water Co-op
 Lusted Water District
 Lyons-Mehama Water District
 Madras, City of
 Madrone Hill Mobile Home Park
 Madsen Springs Water Assn.
 Malin, City of
 Manzanita, City of
 Mapleton Water District
 Maupin, City of
 McKay Acres Improvement District
 McKenzie Palisades 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
 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 Powder, City of
 Northwest Newberg Water Association
 Nyssa, City of
 Oak Lodge Water District
 Oakland, City of
 Oakridge, City of
 Oakwood Water Systems, Inc.
 Oceanside Water District
 Ochoco West Water & Sanitary Authority
 Odell Sanitary District
 Odell Water Company

Olney-Walluski Water Association
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 Oregon Shores II
 Oregon Water Utilities-Cline Butte
 Oregon Water Utilities-Mtn. Lakes
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 Perrydale Domestic Water Association
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 Phoenix, City of
 Pilot Rock, City of
 Pine Grove Water District
 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
 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
 Rieth Water & Sanitary District
 Rimrock West Improvement District
 River Meadows Improvement District
 River Point Farms, LLC
 Riverbend-Riverbank Water District
 Rivergrove Water District
 Riverside Water District
 Roats Water System, Inc.
 Rock Creek Water District
 Rockaway Beach, City of
 Rockwood Water PUD
 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
 Salem, City of
 Salmon Valley Water Company
 Sandy, City of
 Scappoose, City of
 Scio, City of
 Scotts Mills, City of

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 Seal Rock Water District
 Seaside, City of
 Seneca, City of
 Shadow Hills Park Water Cooperative
 Shangri-La Water District
 Shelley Road Crest Acres W.D.
 Sheridan, City of
 Sherwood, City of
 Siletz Community Water System
 Siletz, City of
 Silver Falls School District 4J
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 Sisters, City of
 Skylane Farm
 Skyview Acres Water Company
 Sleepy Hollow Phase 1 Water
 Sodaville, City of
 South Fork Water Board
 South Hills Water System, Inc.
 South Umpqua Water Assn.
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 Southwood Park Water District
 Spirit Mountain Gaming, Inc.
 Sportsman's Park Water Association
 Spray, City of
 Springwater Estates HOA
 St. Paul, City of
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 Stanfield, City of
 Star Satellite Improvement District
 Stayton, City of
 Steeves Mobile City
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 Sumpter, City of
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 Sunny Acres Water Co.
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 Sunrise Water Authority
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 Sunset Hills Domestic Water Assn.
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 Sutherlin, City of
 SW Lincoln County Water PUD
 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
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 Toledo, City of
 Tollgate Water Company
 Tone Water
 Tooley Water District

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 Troutdale, City of
 Tualatin Valley Water District
 Tualatin, City of
 Turner, City of
 Twin Island Community Water
 Twin Rocks Sanitary District
 Tygh Valley Water District
 Ukiah, City of
 Umatilla, City of
 Umatilla Indian Conf. Tribes Reservation
 Umpqua Basin Water Assn.
 Umpqua Indian Utility Co-op
 Union, City of
 Vale, City of
 Valley View Water Co-op
 Valley View Water District
 Valley Vista Estates Water Improv. Dist.
 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
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 Warrenton, City of
 Wasco, City of
 Water Wonderland Improvement District
 Wedderburn Sanitary District
 Weiss Estates Water System
 Welches Water Company
 Weldon Mobile Home Park
 West Hills Water Company
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 West Slope Water District
 Western Heights Water Association
 Westfir, City of
 Weston, City of
 Westport Water Association
 Westridge Water District
 Wheeler, City of
 Wickiup Water District
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 Wilsonville, City of
 Winchester Bay Sanitary
 Wi-Ne-Ma Christian Camp, Inc.
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Lee, Jon
McFall, William Bryce

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Ramsey, Tyler
Sibert, Donald

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Tualatin, City of

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Brown, Rick
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Clark, Jamie
Clark, Joshua
Clement, Tony
Close, Greg
Conant, Charles
Cowley, Sean
Cox, Hanna
Crosby, Ty

Degn, Tony
DeHaan, Josh
Durfee, Kenneth
Eggleton, Vincent
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Evans, Peter
Free, Derek
Freel, Milton E.
Gallino, Joseph
Gentry, Mike
Gil, Riley
Gott, Craig
Halverson, Bruce
Hamilton, Megan
Hamilton, Mitchell
Hand, Eric
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Hartley, Stewart
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Hoefler, Matthew
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Klinger, Martin
Kunders, Aaron
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Marshall, Chad

Marshall, John
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McElroy, Kerry
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McGinnis, Lee
McLaughlin, Gary
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Miranda, Michelle
Mitchell, Michai
Moffit, Jeremiah
Monnin, Brian
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Morrow, Jason
Neal, David
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Odell, Mark
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Pino, Patricio
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Thayer, Bradley
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Valencia, Albert
Vangrunsven, Tom
Vega, Braden
VonPinnon, Michael
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Wabschall, Steve
Wesely, John
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Williams, Scott
Winterton, Robbie
Woodward, Steve
Zuniga, Antonio

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120Water
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A.Y. McDonald MFG. Co.
Adkins Engineering & Surveying
Advanced Control Systems
Aegion-Insituform Technologies, LLC
AKTIVOV Asset Management
American AVK Company
American Flow Control
Anderson Perry & Associates
Aqualitec Corp.
Backflow Management, Inc. (BMI)
Badger Meter, Inc
Bainbridge Associates, Inc
Bancorp Insurance
Big Dog Sales, NW
BioLynceus, LLC
Business Oregon Development Dept.
Cascade Columbia Distribution Co.
Cascade Waterworks
CIMCO-GC Systems, Inc.
CIMCO Sales and Marketing
Civil West Engineering Services
Clow Valve Company
CoBank
Columbia Food Laboratories

Columbia Laboratories
Consolidated Supply Co.
CORE & MAIN
Correct Equipment, Inc.
Ditch Witch West
Diversified Construction and Consulting, LLC
DN Tanks
Edge Analytical Laboratories
EJ
Energy Trust of Oregon
Enviro-Clean Equipment, Inc.
Ferguson Enterprises
FloHawks
Frank J. Martin Company
Frost Engineering Service Company NW
Furrow Pump, Inc.
G.T. Gordon & Associates, Inc.
General Pacific, Inc.
Harmsco Filtration Products
Harrang Long Gary Rudnick PC
HASA Inc.
HD Fowler Company, Inc.
Heard Farms, Inc.
Hose Solutions
Hurley Engineering Company

HYMAX by Mueller
InfoSense, Inc.
Instrument Technology Corporation
Lakeside Industries/EZ Street
League of Oregon Cities
Madewill Products Crop.
Master Meter, Inc.
Metolius Engineering LLC
Mueller Company
Neptune Technology Group
Nurnberg Scientific
Olson Engineering
One.7, Inc.
Optimal Control Systems
Oregon Meter Repair
Oregon Public Utility Commission
Owen Equipment Company
Owens Pump & Equipment
PACE Engineers, Inc.
Pacific NW Sales
Pittsburg Tank & Tower Co.
PumpTech Inc
Puttman Infrastructure, Inc.
RDO Equipment
Reiner Pump
Romac Industries, Inc.

Romtec Utilities, Inc.
Schneider Water Services
Schroeder Law Offices, PC
Sensus USA
SHN Consulting Engineers & Geologists
Smart Earth Technologies
Smith & Loveless Inc.
Special Districts Assn of Oregon
SUEZ Water Advanced Solutions
Tesco Controls, Inc.
The Automation Group
The Ford Meter Box Co., Inc.
TMG Services
Trade Tool
Tripac
U.S. Cellular
UGSI Solutions
Umpqua Research Co.
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