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Oregon Association of Water Utilities

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

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H₂Oregon

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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.

41ST ANNUAL

Management & Technical Conference SUNRIVER, OREGON

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







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

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

Craig Smith, City of Lake Oswego Reg 1, Exp 2022

Dwayne Barnes, City of Salem, Reg 1, Exp 2022

Mark Beam, Ice Fountain, Reg 2, Exp 2022

Micah Olson, City of Columbia City, Reg 1, Exp 2022

At Wednesday's regular board meeting officer elections for 2019 occurred. They are: **Mike Edwards** as President, **Matt Johnson** as Vice President, **Craig Smith** as Secretary, **Micah Olson** as Treasurer, and **Ed Pugh** as Past President.

We would like to thank and recognize our retiring board members: **Gay Melvin**, City of Dufur, years of service 1995-2019; **Phil Davis**, Odell Water Company, years of service 2005-2019; and **Don Chandler**, Nantucket Shores Water Company, years of service 1998-2019. Thank you all for your many years of direction and service to OAWU.











Oregon Association of Water Utilities

Many attendees were present at the awards banquet on Wednesday evening, and several visiting attendee families. The steak and salmon were great, and many good conversations could be heard throughout the Great Hall, along with the amazing magic act of Hart Keene.

There were two special recognition awards, one to **Ed Pugh** for Board Service recognition for being OAWU's Board President 2017–2019 and an OAWU staff award to **Heath Cokeley**, Programs Manager/Circuit Rider, for 10 years of service, 2008–2018.

The 2018 Manager and Operator award recipients are:

The **Manager of the Year** award went to Marc Caldwell from Avion Water Company.

The **Wastewater Operator of the Year** award went to Dave Wilkie from the City of Enterprise.

The **Water Operator of the Year** award went to Alan Frost from the City of Sublimity.

The **Associate Member of the Year** award went to Lakeside Industries.

The **Friend of Rural Water** award went to Laura Schroeder, Schroeder Law Offices, PC.

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

The Best Tasting Water award recipients this year were the **City of Stayton** for Best Surface Water and **Warren Water Association** for Best Groundwater. The submissions are tested by 3 judges from the water community of Oregon and they decide the best groundwater and surface water, then these winners go head to head for best overall water in Oregon.

The winner of the **Overall Best Water category** was **Warren Water Association**. Their water will be flown to Washington, D.C. and submitted for judging in the Best Water in the Nation contest.



































At the Exhibitors' Hospitality Night on Thursday there was good food and drink, many door prizes, raffles, and an auction. We wish to extend a special thank you to all of those that took part in this year's auction and would like to thank Lori Bryson from General Pacific, Geoff Robinson from Frank J. Martin, Brian Anderson from American Flow Control, and Al French from Edge Analytical for donating the auctioned items this year. The money goes to support the Jeff Swanson Memorial Scholarship fund, all scholarship auction proceeds totaled \$2150. The winners for this year's Jeff Swanson Memorial Scholarship of \$1500 each were: Madison Schneider whose dad works for Schneider Water Services and Cori Biamont whose dad works for the City of Seaside. The application for the 2020/21 academic year can be found on our website, please apply if you have a child that is currently attending or going to attend college.

Congratulations to our raffle winners: the winner of the WaterPac Raffle took home a 308 rifle with a Leopold Scope, the winner of the Jeff Swanson Memorial Fund Raffle received a Glock 9 mm, and a BigHorn 19.1 CuFt gun safe was raffled to support OAWU activities.

The winners of the ping pong and cribbage tournaments were announced. First place in ping pong was Dave Bobbett from WECI, Clay Northrop from South Suburban Sanitary came in second and Erik Twenge from Badger Meter came in third. Jason Branske from the City of Woodburn came in first for cribbage, receiving the championship board. Josh Wyma from the City of Redmond came in second and Joe Holmgren from the City of Bend came in third. Find the Logo contest winner was David Orchard from Bob Belloni Ranch.

We wish to thank our Associate Members for their donations, time, and support of this conference and of course to the members who continue to believe in and support the Oregon Association of Water Utilities. Additionally, we would like to especially thank our Gold Sponsors of this year's conference: Core and Main and Lakeside Industries; our Silver Sponsor: HD Fowler Company, Inc.; and our Bronze Sponsor: CoBank.

Be sure to sign up for the Annual Conference next year, the first full week of March 2020, as there will be a slate of new classes to attend, people in our industry to visit with, food to eat, and fun to enjoy. See you there! Best wishes to you, our friends. •



























Oregon Association of Water Utilities

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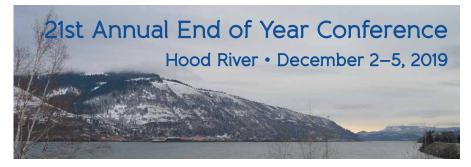
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UPCOMING CONFERENCES









Spaghetti Sauce

Heath Cokeley, Programs Manager/Circuit Rider

I like to cook and will get asked, from time to time, for the recipe for something I have made. To that I typically respond, "I can tell you how I did it; unfortunately, I don't have it written down." This isn't because I don't want to share my recipes, as hopefully will become clear with this article, but is because I don't tend to write any of them down and they change a bit depending on my mood. Even to write this article I had to make the spaghetti sauce so I could roughly account for the ingredients. With that I hope you enjoy this spaghetti sauce recipe. It makes a lot of sauce, but it cans or freezes well to be saved for later.

To start a good spaghetti sauce, it takes a good base sauce. Now, I have done this step from scratch and, while I admit it is better, I have found a quick and easier way to do this. I start by mixing two 24-ounce cans of store-bought pasta sauce, 4 packets of store-bought dry spaghetti sauce seasoning mix, and 6 cups of water. Mix all this together, bring to a boil then reduce to a simmer. What is also important for this base sauce is a good bottle of red wine. It is totally up to you how much of the wine goes in the sauce and how much in your glass, but I will admit that sometimes the best sauces require a second bottle to be opened, especially if my wife and any of her friends are around.

Now that the base sauce is simmering, we can start to add some of the other stuff. I use 4 to 5 pounds of fresh tomatoes, and honestly, to me, this is what will make or break the sauce. I have experimented with different kinds of tomatoes for this sauce and have concluded that the most important factor is not the kind of tomatoes but their freshness. When the tomatoes are picked off the plants and travel 50 feet to my kitchen, that is the best scenario, but if that isn't possible then make sure they are good, fresh tomatoes wherever you get them. Cut the stem out and chop up the tomatoes cutting them into small pieces and dump into the simmering sauce. I know many people that would say you need to get the skin off the tomatoes but the only difference I notice is you can see some of the skin in the sauce when you are done (which I don't mind). That and blanching tomatoes not only takes a bit of time, but in my opinion, it takes some of the fresh taste out of them.

Then you will want to sauté 1 to $1\frac{1}{2}$ green peppers and onions in olive oil then add them to the simmering sauce, sauté 1 pound or more of mushrooms in butter and add to the sauce. Next is garlic, I like to use a real, whole clove of garlic here and yes it takes time to peel and chop it, but I would say the flavor is worth it. You can cheat and use already minced garlic from the store, but either way sauté the garlic in butter until it becomes fragrant or about 30 seconds and whatever you do, do not burn the garlic in this process.

Now brown a pound to a pound and a half of ground meat. What kind of meat is up to you. My wife likes it when I use turkey meat, which she says is healthier and I am sure she is technically correct here and I will say if you season it correctly at the end it turns out OK, but it just feels wrong to me and hurts my soul a little each time I do it. If you like ground turkey, then use it, but I see it as the same kind of difference as between bacon and turkey bacon. Yes, the word *bacon* is in both names, but I think most of us can agree that one of those things is not like the other. Now that I have sufficiently alienated people who like ground turkey,

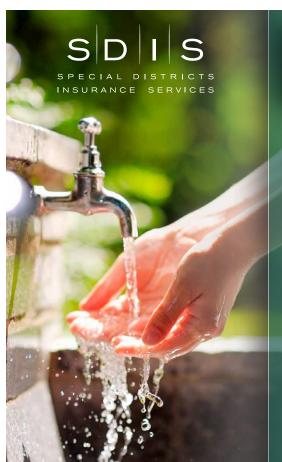
I will say, I typically either use beef or what I really like is a spicy Italian pork sausage for this. I have also used ground venison and didn't particularly like it in the sauce, but ground elk works great.

After browning and adding the meat you can chop up and add a little cilantro, salt and pepper and let the whole thing simmer for half an hour to 45 minutes, so everything blends together.

Now for the hardest part to describe in writing. Try some of the sauce and start to add salt and pepper a little at a time before trying it again. The amount needed changes every time I make this sauce; I believe it is because of using fresh ingredients and in different amounts. Sometimes I get to this stage and no extra seasoning is required and sometimes it takes a bit to balance it out. The bottom line is you will have a better idea of what you and your family's taste buds prefer because, like a system master plan, this recipe gives you a good place to start—but should be adjusted to fit your needs as you go. See what I did there, tying it back to something water and wastewater system relevant? And with that, I'll see you down the road. lack b

Heath's Master Plan Spaghetti Sauce

- 2 24-ounce cans pasta sauce
- 4 packets 1.37-ounce dry spaghetti sauce seasoning mix
- 6 cups water
- 1 bottle red wine
- 4–5 pounds tomatoes
- 1-11/2 green peppers
- 1-1½ onions
- 1+ pound mushrooms
- 1+ clove of garlic
- 1–1 ½ pounds ground meat of your choice cilantro, salt, and pepper to taste



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Buying into Apprenticeship

by Mike Collier, Deputy Director/Sourcewater Specialist

With 30-50% of the workforce in our industry retiring over the next ten years we are quickly finding that there is a shortage of skilled workers to be certified and support our local utilities. There are several two-year programs at different community colleges available. Sometimes this isn't the best option for some as it is hard to take the necessary time out of the workforce to complete such programs.

National Rural Water is now trying a different approach to bridge this gap through the creation of an apprenticeship program. Think of the electrician program as an example. A city or Utility will use the program to get a screened, lower level employee and train them up for two years. During which time the employee completes several courses to increase their knowledge while they are working on the job full time. At the end of the apprenticeship the utility and apprentice can decide to continue their working relationship or may end it. Also, the apprentice will be ready, or close to ready, to take their first certification test.

OAWU's role would be to manage the program, keeping track of the available apprentices, and a list of the utilities that are willing and able to house the workers. Along with this, OAWU will provide the information and list of the necessary training that will need to be completed for the apprentice to be certified, upon completion for the program, through the Oregon Department of Labor. Also, OAWU will be looking at different avenues to attract individuals into the apprentice program.

What we need from utilities is for those interested in having apprentices work at their utility to let us know who you are, please email a response to mcollier@oawu.net. This apprenticeship program can't work unless we have the journeymen that are willing to teach up the next generation of worker, and utilities willing to pay these workers to help ensure a quicker turnover in a quality employee who is, hopefully, knowledgeable and skilled in a shorter timeframe. Acknowledging that this is a program you are confident that you could use will provide OAWU the support we will need to take the next steps toward apprenticeship development. Thank you.





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Autopilot Safety

by Tim Tice, Projects Manager

There is a lot to be said about the number of times workers perform tasks without an injury, particularly when we consider the areas in which utility workers operate. Water/wastewater treatment plants have their own risks, which vary greatly from the risks associated with distribution/collection system duties. It is remarkable how the human brain functions, principally as it relates to muscle memory, a form of procedural memory. When we repeatedly perform a task, it can be performed without mindful effort. Riding a bicycle would be a good example.

There is a set of skills one develops when they have worked alone for a time on the same tasks and one can become nonchalant regarding safety. Small groups of workers (crews) often tend to become familiar with each other, thus becoming careless regarding safety. The water and wastewater utilities pose many risks for your work-alone employees. Are those same risks connected to the crews? With a crew, multiple personalities create camaraderie, but can also create competitiveness of strength, endurance, speed, etc. These contests, while "breaking up the day's monotony," can also lead to shortcuts in safety procedures. Combine the daily factors, distractions, long to-do list, limited personnel, resources and time with the art of multi-tasking and we are forced into auto-pilot safety.

According to the OSHA 2018 "Top Ten" list of most-cited violations, many violations reoccurring each year are seen in water and wastewater utilities. "Fall protection" has been the number one violation for the past two years. This bit of information challenges us to look at a deeper review of where "fall protection" is a concern at our facilities. Section 1926.501(b) (1) outlines areas of concern that are 6 feet or more above a lower level, which requires us to either install guardrails, a safety net system, or personal fall arrest systems. Is fall protection part of your confined space program? Do you have employees entering spaces where a fixed ladder is used to descend to a lower level? Are these employees working alone in the field? Applying to "general industry," four feet above the ground or a lower level is widely understood among general industry employers as the "trigger height" that requires you to act to protect your employees from falls.

It is easy to use the OSHA "Top Ten" list to consider areas where we can improve our safety programs and discuss with our crews the standard operating procedures that have been neglected because of auto-pilot safety.

Another key area, simply because of the number of hours each day we perform this task, is driving. The odds are most crews can go months or years without a single incident, but apply multi-tasking to the formula, and it can be disastrous.

Discuss with your crews, without blame, the "near-misses" they have encountered. We, as human beings justify many decisions, which from time to time, can get us injured. With as much windshield time as we collect, we can easily compromise our safety with a quickly answered phone call, or a single word text message. An acquaintance of mine stated the fine he received for texting while driving was \$800.

Oregon Association of Water Utilities

A distracted driving ticket, for a first offense, may be issued with a class B violation and a fine up to \$1,000. Second offenses within 10 years are considered class A violations and can cost up to \$2,000 in fines. Legislatively, the ten-year cycle rule emphasizes our State is taking distracted driving seriously. The rule ORS 811.507 (3) (e) speaks specifically about two-way radios in the utility sector and their use.

Distracted driving has gained much attention due to the growing number of incidences occurring on the highways and streets. How many incidences of distracted driving has involved a utility worker or the vehicle they use? Even a small fender bender

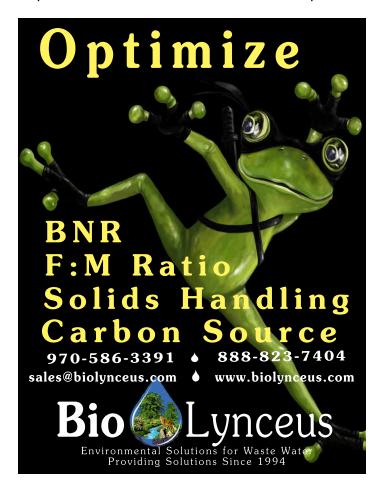
can add significant costs when the steps to see a claim to completion are taken into consideration. With so much attention on distracted driving, many auto manufacturers incorporate devices that will assist the driver when the vehicle is in motion.

We, as operators of vehicles, cannot compromise the safety devices like we can ourselves. Refresher courses can help to reduce complacency and heighten our awareness. Good driving habits and attitude can also play a role in decision making, hopefully making us better drivers. Has your entity incorporated a refresher course?

Fall protection and distracted driving are only two examples of tasks that

need coherent routine discussions. Reactionary safety can be regretful, and this is a road none of us wish to travel. With countless number of work hours performed, it is a compliment to our industries' workforce on just how well tasks are performed. This single point should not negate consistent training, but demonstrates the efforts put into a well-managed safety program. Not every task should be approached like a bicycle ride, but a quick minute review or discussion to the task at hand, (notably non-routine tasks) may eliminate a twisted ankle, broken finger or a bumped head.

May 2019 be a safe year, the best of everything in life! ♦







From Operator to Circuit Rider

by Bob Waller, Water Circuit Rider

I have been working for OAWU for a few months now and, being the new guy, I have given some thought to what subject to write my article on. I was thinking about a technical article or maybe something more general. But then it occurred to me, you only get one first article.

So, "From Operator to Circuit Rider" for OAWU:

After attending LBCC's environmental science program in the early 90s, I worked for a short time at the Corvallis WWTP, and then Sweet Home WWTP. The first full-time position I applied for was for the City of Scio, where I stayed for many years.

During my years as an operator I met many OAWU staff members. I got to know some Circuit Riders better than others. They would always stop, ask how things were, and if they could help with anything. I would usually have a question or two about a project and I was always given a thoughtful answer.

Like many of you, most of my interactions with OAWU have been through annual conferences like Seaside, Hood River, Sunriver, and even short schools, all sponsored by OAWU. I could always count on a good conference and great food. Of course all I was there for were the CEUs—ha, ha.

In 2017 I tried retirement for a few months and am now happy to be working for OAWU as a Circuit Rider. I try to show the same level of professionalism that I had seen through the years from other OAWU staff.

I now see OAWU in a much different light and realize what a valuable resource it is. A system will call the office with a question or will have one when a circuit rider is on-site. The question may be about a process or the need for a service—whatever it is, either the circuit rider will have an answer, or texts and emails go out to all staff, and responses will start to pour in.

I have found myself working for an organization where all the staff are committed to helping systems. These people are professional, and I could not be more proud to be part of this association.

I encourage everyone reading this to take advantage of this fine organization, and we will see you soon. ♦

2019 TRAINING & EVENTS

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Preparing for a W System Survey & WW System Inspection	Independence	0.3 Water/Wastewater	3561	Fee
W. Treatment & Dist. Level 3,4 & Filtration Endorsement	Port Orford	0.6 Water/Onsite	3370	Fee
Emergency Response Plan	Grants Pass	0.4 Water/Wastewater	3915	FREE
Hazardous Communication Standard (Global Harmonization)	Grants Pass	0.3 Water/Wastewater	3459	Fee
Leak Detection	Grants Pass	0.2 Water/Wastewater	3709	Fee
4th Annual OAWU EXPO	Rickreall	0.4 Water/Wastewater	3907	FREE
Confined Space and Jobsite Safety	Independence	0.6 Water/Wastewater/Onsite	3563	Fee
Water & Wastewater Field Operations & Safety	Island City	0.4 Water/Wastewater	3568	Fee
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Water Treatment, Water Distribution Certification Review	Salem	1.4 Water/0.5 Wastewater/Onsite	3394	Fee
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Pumps and Pumping	Redmond	0.3 Water/Wastewater/Onsite	3560	Fee
Water Treatment, Water Distribution Certification Review	Redmond	1.4 Water/0.5 Wastewater/Onsite	3394	Fee
25th Annual Summer Classic Conference Wastewater Treatment/Collections Certification Review	Seaside Salem	2.3 Water/Wastewater 1.4 Wastewater/0.7 Water/0.1 Onsite	TBA 3559	Fee Fee
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	W. Treatment & Dist. Level 3,4 & Filtration Endorsement Emergency Response Plan Hazardous Communication Standard (Global Harmonization) Leak Detection 4th Annual OAWU EXPO Confined Space and Jobsite Safety Water & Wastewater Field Operations & Safety Wastewater Treatment/Collections Certification Review Water Treatment, Water Distribution Certification Review W. Treatment & Dist. Level 3,4 & Filtration Endorsement Math for Operators Pumps and Pumping Water Treatment, Water Distribution Certification Review Water Treatment, Water Distribution Certification Review Water Treatment, Water Distribution Certification Review	W. Treatment & Dist. Level 3,4 & Filtration Endorsement Emergency Response Plan Hazardous Communication Standard (Global Harmonization) Hazardous Communication Standard (Global Harmonization) Hazardous Communication Standard (Global Harmonization) Grants Pass Grants Pass Grants Pass Ath Annual OAWU EXPO Confined Space and Jobsite Safety Water & Wastewater Field Operations & Safety Wastewater Treatment/Collections Certification Review Water Treatment, Water Distribution Certification Review Water Treatment & Dist. Level 3,4 & Filtration Endorsement Math for Operators Pumps and Pumping Water Treatment, Water Distribution Certification Review Water Treatment, Water Distribution Certification Review Water Treatment, Water Distribution Certification Review Salem Redmond Water Treatment, Water Distribution Certification Review Redmond Water Treatment, Water Distribution Certification Review Seaside	W. Treatment & Dist. Level 3,4 & Filtration Endorsement Emergency Response Plan Hazardous Communication Standard (Global Harmonization) Leak Detection Grants Pass Grants Pas	W. Treatment & Dist. Level 3,4 & Filtration Endorsement Emergency Response Plan Hazardous Communication Standard (Global Harmonization) Harm Annual OAWU EXPO Hickreall Hazardous Communication Standard (Global Harmonization) Harm Annual OAWU EXPO Hickreall Hazardous Condined Space and Jobsite Safety Hazardous Confined Space and Jobsite Safety Hazardous Canter Wastewater Hazardous Canter Pass Hazardous Canter Pass Hazardous Communication Confined Space Hazardous Communication Confined Space Hazardous Communication Confined Space Hazardous Communication Confined Space Hazardous Canter Pass Hazardous Communication Confined Space Hazardous Pass Hazardous Communication Confined Space Hazardous Pass Hazardous Communication Confined Space Hazardous Pass Hazardous Communication Confined Space Hazardous Conference Hazar

Levels 1-4 Water Operator Exams

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

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

More Resources

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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 or visit www.oawu.net.

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On Retirement

by Bruce Hemenway, Training Specialist (Retired)

Hello everyone, I'm Bruce Hemenway. Some of you may remember me, I was the Training Specialist for OAWU for five years, 2006–2011; then I retired from OAWU. That was preceded by 36 years of working in the water industry from which I had already retired, for a week and a half. I was headed for the mothball side of life, but Jason Green said, "no way, that ain't gonna happen, not yet anyway."

Heath Cokeley mentioned to me a short time back that an article from an old duffer like me, that has already retired, could be informative. That was said because there are now many in our industry that are close to that time in their life.

Life can be so many things to so many people. There is no absolute that will cover everyone all the time. I wondered what an article about retirement would look like. What came to me was to share both some positives about retirement and, along with that, a few cautions.

The positive slant first. Let me explain it in this way, fishing season is upon you. You will no longer have a need to leave after work on Friday, arrive in the dark, and set camp up in the middle of the night. No sir, you can leave in the morning, arrive in the daylight, set up camp at your leisure, and fish that evening.

Elk camp is much the same. Leave your home for elk camp in the morning, leave a week ahead of elk season if you want. Take a whole day to get everything arranged. Set up your Traeger because you can, and have a BBQ whenever you want, because you brought your generator too. And you don't have to be in the woods at 0'Dark Thirty every morning, because you aren't in any rush to get back to work. Sounds good right? But I did leave out one small detail. Your spouse MUST be on board with this kind of activity. If not, male or female, once your spouse begins to understand retirement, other types of special activities will begin to present themselves. If you know what I mean.

I believe that you probably understand what I'm trying to portray already, life does not need to be on fast forward once you retire. The old saying "plan the work and then work the plan" can be adapted to fit each person's retirement.

Before retirement l had often wondered, how will l know when it's time to call it quits? For me, one that loved his work, and had a deep passion for what I did (Workaholiac) I knew when it was time because l found that l had lost my passion, my drive if you will. I continued to accomplish all my responsibilities in an acceptable fashion, but the excitement for me was gone. It was then that l told Jason, "it's moth ball time for me now."

Okay, so now I'd like to offer a few cautions. Or they can be called considerations if you like. These are a few, but not all, of the details that should be worked out so that your retirement can and will be a pleasant experience.

Budget: Be honest, how much money will you need, each month, to have the funds to meet your responsibilities as well as some money for the non-essentials. Build in some wiggle room for the unknowns... like your Visa bill from Cabela's. Unplanned expenses can and will come up.

Health Insurance: This issue will need to be planned out beforehand. Medicare is good, but to really have quality health insurance, you will need a good supplemental insurance plan as well.

Activity: Don't let your retirement lead you into a state of lazy. Keep active, don't quit accomplishing what you have planned, to keep you busy and productive. I'll make a confession. I was addicted to television. This is what I did. I'm not suggesting this is the answer for everyone, but it worked for me. We have not had a television signal in our home since 2010, one year before I actually retired. For my news, I read. The newspaper, magazines, internet articles among other sources.

Debt: I am a firm believer that a person should not start their retirement with a huge amount of debt. A raise with the Social Security System is, \$10-\$18 per month per year. We people, on the other side of the working fence, call retirement funds a fixed income. I would suggest, that for you younger folks, ten years out is not too soon to begin planning for your senior years.

My belief: 3-5 years before your retirement date, visit a Social Security Office to get a projection on what your monthly income will be. Also have a projection on any other retirement income you will have. Use this confirmed information to build a solid budget.

Another consideration that I will offer: Working at your job is a social activity. My question is, after you retire, who are you going to socialize with? Becoming an introvert is not healthy. I would suggest, that before that magic day comes, you have friends and/or family to interact with on a regular basis.

Lastly: And I really don't know if this is a positive, or a caution, but it is for sure and for certain a reality, often times I don't even know what day of the week it is without consulting my smart phone. And I've discovered, I'm not the only one.

There is a popular saying among the cotton tops of our time, "The only thing golden about the golden years is the color of your urine". I disagree. Age, without having some dreaded disease, is only a number. Live, Love, Laugh, and Enjoy Life.

I still miss my OAWU family. And all the water system folks that I was able to visit. It was a two-way street, I got to help, and I also got to learn. Thanks.

So I'd like to thank Heath for the idea, God for the ability to put my thoughts into words, and Jason Green for being the best boss I ever had. And for 5 years having the privilege of being part of the best Association on Earth, OAWU.

Bruce Hemenway Happily Retired



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Easements

by Jeff Crowther, Wastewater Technician

We all know that our jurisdictional right-of-way is a key component in our roadway and utility system. Although it is ideal to keep all our public utilities in the right-of-way, sometimes this is not possible due to constraints such as the existing drainage pattern, roadway grades, or any number of other factors. When these utilities leave the right-of-way, it is critical that we maintain a legal framework to access them for maintenance or to replace them when they outlive their useful life.

The way we obtain this right is to work with the private landowner to place an easement for the public infrastructure. This easement will still be owned by the landowner, but the city will have the right to utilize the property for any number of activities. Because the easement impacts the property owner's ability to use the land, we can expect to have to purchase this right, and we should follow any applicable local, state, or federal laws when making the purchase.

When we are determining the size of the easement, we should think about more than just the physical improvements. This easement will be the only land we can place construction equipment on, therefore we need to verify that the easement is large enough for the equipment to access the site and navigate around any trenching that could be required for maintenance activities. This often leads to an easement that can appear much larger than people expect for a small utility line.

When we work out the details of the easement, we may need the assistance of a surveyor on the project. They will detail the exact location of the proposed easement so that it can be marked in the future. We should record all easements with the applicable jurisdiction, so that it is on file and can be found in the future. When the easement is recorded it also guarantees that if the property is sold the purchaser will be made aware of the encumbrance with the property title information. •

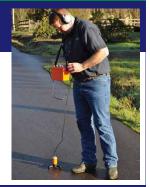
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To Screen or Not to Screen?

by Keith Bedell, Wastewater Technician/Circuit Rider

That's not really the question, but can we afford to screen, or can we really afford to not screen?

Screening of the influent stream to a wastewater treatment plant is a critical part of the operation. All larger wastewater treatment plants have some type of screening and most have multiple set ups, which include grit removal. We will spend less time unplugging our check valves, pulling the submersible pumps, and pulling rags and wipes out of the system. Allowing for more time to be spent on the other functions of the job such as water leaks, reading meters, mowing the parks, or filling potholes.

For smaller plants that have lagoon systems or minimal treatment, screening is still an important factor. These systems have limited funds for maintenance, manpower and purchasing of new equipment. This means that anything that comes down the collection system ends up at the last lift station or headworks (lift station) plugging the pumps. This takes time and manpower to remove, unless we are lucky enough to gravity flow to the lagoon. Even if we can gravity flow to the lagoon, we still end up filling the lagoons with rags and other solids that will not be removed until the lagoon is dredged.

The longer we can go without needing to dredge our lagoon the better off we are. Saving money on both the cost of dredging and disposal of materials, as well as, the required testing for metals and other constituents. If we can install a screen it will save us a lot of headaches and, ultimately, a lot of money.

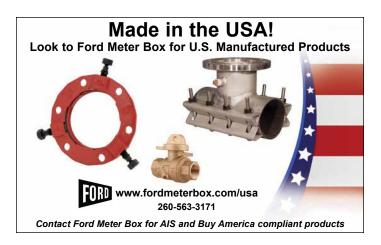
OK, now what kind of screen should we get? There are so many types and configurations that it will make your head spin just looking them all up. How about one that is not too expensive, is easy to install, works from the start, requires simple maintenance and has a local rep.?

There are many options: fine screening, coarse screening, then do we want screenings handling?

Fine screening is 0.06" to 0.25" and coarse screening is 0.25" and larger. Fine screening will take care of pretty much everything that comes down the line in most small systems. The coarse screening starts with the traditional manually cleaned bar screen and gets more sophisticated and expensive with addition of bells and whistles. Smaller systems probably don't want any screenings handling equipment that moves the screenings from one place to another. If it can be screened and dumped into a wheel barrow, 55-gallon drum or dumpster that reduces the cost and steps that are required for disposal.

Along with the types of screens comes the footprint of the screening equipment. Vertical alignment has the smallest footprint, with less disruption of the existing setup. Then there is the angled type, from 35° on up to 90°, which takes up more room.

So, now with a little bit of information we can start doing the research and get a screen in before the lagoons need dredging.





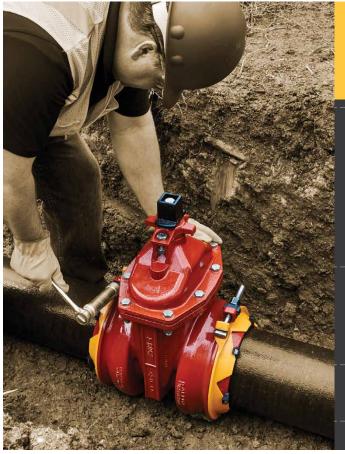




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George Vorhauer

by Hans Schroeder, Circuit Rider

In December, we lost a man of our industry who will be sorely missed. He had the passion and understanding to keep us and our work environment safe.

George Vorhauer worked for OSHA for over 25 years and before that worked as a foreman for construction companies. Many of you may recall his interesting stories as he was a presenter at many of our conferences as well as OSHA conferences.

George had an exhilarating way to share life experiences with an audience or across the table having a cup of coffee with anyone that wanted to listen. A wonderful, colorful, story teller he exemplified the importance of any person that was in his presence.

Vickie's husband Rick Blackmarr and George were best friends for over 20 years. Even though Rick and Vickie have only been married eight years, she wrote this tribute to George as if she had been there right alongside them their whole friendship. I know it is from all George's great storytelling of his and Rick's many adventures together fishing, hunting or just hanging out.

I want to thank Vickie Blackmarr for allowing me to share what she has composed about her dear friend. ♦



George Vorhauer

He was a Proud U.S. Marine...

A great Husband...

Loving His Wife dearly...

A wonderful Father of two Daughters and a Son...

A Daughter In-Law and Son In-Law...

And loved his Sister In-Law...

His Grandchildren of five (six)...were His life...

Three beautiful Granddaughters...and...

Two handsome Grandsons...and one sweet Young man...

He was a Family Man...

Always keeping in touch with His Mom and Dad...

His Sisters and Brothers...

And He was a Best Friend to Many...

Young adults loved Him as "their Dad"...

And lots of kids loved Him as "their Grandpa"...

In the Spring and Summer...

You'd find Him...

Fishing from one of His two boats...

Or from a river bank...

Camping with Family was always enjoyed...

When Fall arrived and the leaves fell...

Up went "Elk Camp"...

And He'd be Elk hunting with His Son, Grandson and Friends...

The cold of Winter was time for indoor sports....

Watching the Seattle Seahawks win a game...

Or watching NASCAR on the fast track...

And watching old classic cars on TV...

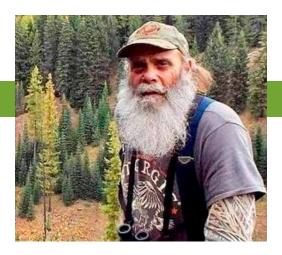
The Athena Christmas Bazaar...

Was a favorite of His...

He'd represent a famous man...

Known as Santa Claus...

And the kids ALL loved Him...



He was known for His photos... Especially....Of the Moon...

And pictures of "Hooty the Owl"...

Or of the wheat fields outside of town...

He'd share these on "Fart Face"...

(Also known as Facebook)...

He was so proud to have worked for Oregon OSHA...

Having retired after 25 some years on the job...

Driving through Eastern Oregon...

Making sure people stayed alive at their jobs...

He took His job very seriously...

He enjoyed speaking at numerous Oregon OSHA

Conferences...

He was known for and shared many "sayings"...

When you finished visiting and said goodbye...

He'd send you off with... "Keep'er between the ditches"...

Or... "Keep'er rubber side down"...

If you asked Him...how ya doing...

He'd reply... "Another day above ground"...

Which...sadly to say won't be anymore...

So...we'll lift a glass of whiskey...a can of beer...or a cup of coffee...

Raise it high...and look up into the sky...

Where we'll all see a new star...a brighter star...

Looking back at us...

We'll always Love You and Miss You George...

This Place called Earth won't ever be the same again...

Semper Fi...our dear Friend...Semper Fi

Written with Love, Vickie Blackmarr



Rule changes from OUNC

by Scott Berry, Operations Manager

On January first of 2019, the Oregon Utility Notification Center rolled out changes to Chapter 952 of the Oregon Administrative Rules. These are the rules that govern the "Locate" laws in the state of Oregon. See below:

Two Full Business Day Amendment

Old 48 Hour Rule:

OAR 952-001-0010 Definitions:

(2) "Business day" means any 24-hour day other than a Saturday, Sunday or federal or state legal holiday.

OAR 952-001-0070 Operators to Mark Underground Facilities or Notify Excavator that None Exist

(1) Except as provided in section (3) of this rule, within 2 business days (48 hours) after the excavator notifies the Oregon Utility Notification Center of a proposed excavation, the operator or its designated agent must:

Revised 2 Full Business Days:

OAR 952-001-0010 Definitions:

(2) "Business day" means any 24-hour day other than a Saturday, Sunday, or federal or state legal holiday as provided in ORS 757.542. A business day begins at 12:00 a.m. and ends at 11:59 p.m.

OAR 952-001-0070 Operators to Mark Underground Facilities or Notify Excavator that None Exist

(1) Except as provided in section (2) of this rule, within two full business days following the day an excavator notifies the Oregon Utility Notification Center of a proposed excavation, the operator or its designated agent must:

45 Calendar Day "Ticket Life" Adoption

OAR 952-001-0010 Definitions:

(23) "Ticket life" means the 45 calendar day period after an excavator provides notice to the Oregon Utility Notification Center under OAR 952-001-0050(1) and the Center opens a ticket for a locate request based on this notice.

OAR 952-001-0090 Delay of Excavation Until Response from Facility Operators; Duty of Excavator to Use Reasonable Care; Damage to Facilities

- (a) Maintain marks during the excavation period to ensure that the original marks remain effective for the life of the project or the ticket life, whichever is the shorter period;
- (9) An excavator must not begin an excavation more than 10 business days after providing notice to the Oregon Utility Notification Center of the excavation, or continue excavating at a location following expiration of its ticket life unless the excavator has re-notified the Oregon Utility Notification Center of the excavation as provided in OAR 952-001-0050

There are also rule changes affecting the definition of Reasonable Accuracy, Excavator Responsibilities, Federal Guidelines for Damages to Gas/Liquid Pipelines, addition of a Documented Agreement Option, Large Project language adoption, and changes to the APWA Color Coding system. Please find a full description of all at: https://digsafelyoregon.com/wp-content/uploads/2018/11/OUNC-OAR-Revision-2019.pdf •

QUIZ CORNER

- 1. What units are used to measure water pressure?
 - A. Kilowatts

- C. Horsepower
- B. Kilopascals
- D. Head units
- 2. Which of the following is NOT an example of PPE (Personal Protective Equipment)?
 - A. Exhaust fan
- C. Face shield

B. SCBA

- D. Traffic vest
- 3. Which of the following are operators-in-training NOT allowed to do?
 - A. There are no restrictions on the duties of an operator-intraining
 - B. Any operational duties if not in the presence of another operator
 - C. Anything which could affect the quality of the water/
 - D. Be the operator with overall operational responsibility of the system
- 4. Define the term "head" as used in hydraulic systems.
 - A. The block of an internal combustions engine
 - B. The ability of a piston pump to overcome the force of gravity
 - C. The height or energy of water above a specified point
 - D. The distance between the liquid level and the cover of a well
- 5. During confined space work, may an individual enter a space classified "alternate entry" without assistance or stand-by attendant?
 - A. Yes
 - B. No
 - C. Only with mechanical ventilation
 - D. Both a and c
- 6. Fall hazards in a confined space must be addressed in an "alternate entry" permit paperwork.
 - A. True
 - B. False
 - C. Fall hazards are not included as atmospheric hazards
 - D. None of the above

7. If all community water systems had to be replaced, what would be the cost?

A. 50 billion

C. 175 billion

B. 100 billion

- D. 250 billion
- 8. A motor pulling 4 amp at 440V uses:

A. 110 watts

C. 176 watts

B. 444 watts

D. 1,760 watts

- 9. Proportional control means that a valve will:
 - A. Fully open or fully close
 - B. Go to halfway and stay
 - C. Travel from closed to open depending on signal input
- 10. A pH of 9 is considered?

A. Acidic

C. Neutral

B. Basic

D. Synthetic

11. Which of the following is part of a Centrifugal Pump?

A. Rotor

C. Diaphragm

B. Impeller

D. Piston

- 12. What is the world's tallest building?
 - A. One World Trade Center, New York
 - B. Shanghai Tower, China
 - C. Empire State Building, New York
 - D. Burj Khalifa, Dubai
- 13. Where is the Sea of Tranquility?

A. FloridaB. Atlantis

C. The Moon

D. Washington DC.



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Resolve to Review Water Development

by Lindsay Thane and Laura Schroeder

We often wait to address issues until a problem arises hoping that if we wait long enough the issues will evaporate! Yet as we settle into another year, and in the midst of budget planning, this is a good time to dust off the "problem" pile and craft goals to act preemptively, addressing potential problems before they develop. For water suppliers, water development planning can, and should, be a part of those goals.

A new water right, a transfer, or a permit amendment cannot be completed and instantly approved by the Oregon Water Resources Department (OWRD). In fact, approval will take months and may take longer than one year depending on the application type. The time to obtain approval does not account for the time involved in infrastructure planning and construction associated with changes to a water system.

Conducting periodic water supply planning is not only beneficial to assist in financial planning and obtaining the appropriate approvals before the water system is in a bind, but it is likely a condition of keeping the system's water rights in good standing. An inability to make time to plan for the water system's future, whether it is strategizing how to meet growing demand or how to provide redundancy in a system that relies on declining springs or poor-quality groundwater, can lead to unsatisfactory outcomes including moratoriums on future water connections or complaints from upset customers. The following are items to consider as your water system looks ahead in this year and (hopefully) to the next decades.

Development of Additional Water Sources

In Oregon, there is little to no surface water availability, especially during summer months when instream rights, minimum stream flow conditions, and irrigation all call for water. Accordingly, new water use likely must come from groundwater sources. Groundwater development,



Rex Lesueur, Licensed Agent & Consultant, National Speaker & Author

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Plans & Reporting Requirements

aside from any quantity and quality challenges, presents increasing permitting challenges.

For example, if a water supplier seeks to add a well as an additional point of appropriation under a water use permit or certificate, OWRD will review whether the well meets current well construction requirements, even if the well has been used for decades under another water use permit. If the well is not compliant with current well construction requirements, OWRD will likely require that reconstruction occur before it will allow any changes to the water use permit.

Another consideration in groundwater source development is whether a new well that is intended for use as an additional point of appropriation draws water from the same aquifer as the well(s) under the already existing permit/certificate.1 Permits and certificates typically do not describe from what aquifer or water bearing zone the well(s) withdraw water. Therefore, if additional



groundwater sources are required to meet a water supplier's demand, determining the feasibility and potential challenges of adding an additional groundwater source to an existing water use right, or applying for a new water use right, is important.

System Capacity and Demand

A component of water supplier planning includes considering the amount of water necessary to serve projected population growth and future supply demands. Future demand considerations should look at the affects on water quality or quantity if the current water sources are pumped harder or more water is diverted. It is important to identify system limitations and establish a water right development plan to allow time to complete and receive approval of any necessary water right applications.

Water Right Requirements

Water use permits and certificates for water rights contain conditions of water use and reporting. A common condition in most water use permits is the requirement that municipal water suppliers complete a Water Management and Conservation Plan ("WMCP"). Upon approving WMCPs, OWRD often requires a municipal water supplier to submit five-year progress reports on its implementation of conservation and water supply measures.2 Failure to timely comply with water right conditions will hinder a water supplier's ability to obtain OWRD approval of water permit amendments and water right transfer applications necessary for a water supplier to adapt to changing demands.

Good luck in your future water planning!

ABOUT THE AUTHORS

Schroeder Law Offices, P.C., was founded by Laura Schroeder and represents water-rights clients in six western states and consults internationally. Lindsay Thane is an associate attorney with Schroeder Law Offices and is licensed to practice in Oregon, Montana, and Washington. You can read more about this topic and other water rights issues at Schroeder Law Offices' Water Law Blog, http://water-law.com/home/blog/.

- 1 Or. Admin. R. 690-200-0043.
- 2 Or. Admin. R. 690-086-0915(4) and (7).

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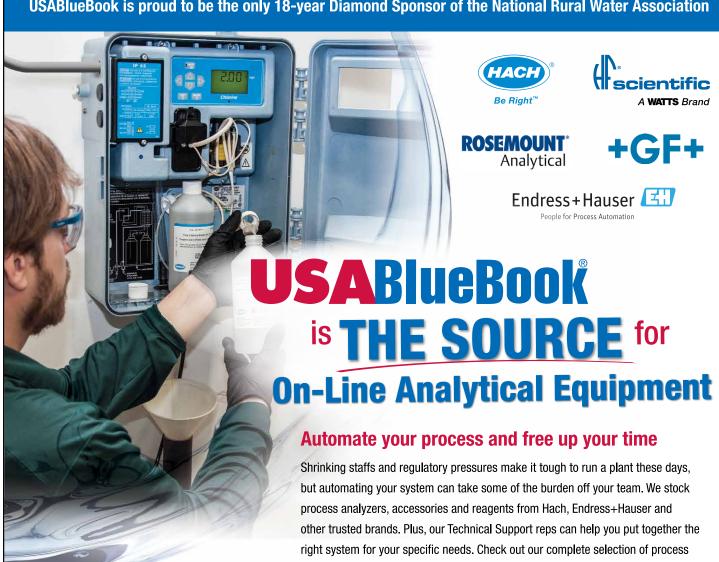
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