

H₂Oregon

Winter 2020
Vol. 42, No. 1

MARK YOUR CALENDAR:

42nd Annual Management & Technical
Conference in Sunriver PAGE 13

A publication of Oregon Association of Water Utilities
Read H₂Oregon online at www.oawu.net

Smart Solutions. Clean Water.

tag-inc.us

541.359.3755



INTEGRATION | SCADA | CONTROLS | INSTRUMENTATION

On-Call Technicians Available 24 hours / 7 days a week.





H₂Oregon

Winter 2020
Vol. 42, No. 1

CONTENTS

WANTED

Your photos and articles for inclusion in H2Oregon. OAWU requests your best photos of Oregon water scenery for our magazine covers and artwork!

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

935 N. Main St.
Independence, OR 97351
(503) 837-1212
Fax (503) 837-1213

Cover photo by Scott Berry
Taken near Washington Family Ranch
— A Young Life Camp, Antelope, OR

The OAWU Service Paradigm by Mike Edwards, OAWU Board Member and President	3-4
Action by Mike Collier, Deputy Director/Source Water Specialist.....	5
Workplace Improvements by Hans Schroeder, Circuit Rider	6-7
Multitasking in a Digital Age by Heath Cokeley, Programs Manager/Circuit Rider	8-9
Driving — Hours or Miles — How Safe Are You? by Tim Tice, Projects Manager	10-11
Thanks to OAWU's 2020 Sponsors	11
NPDES Permits by Jeff Crowther, Wastewater Technician	12
Mark Your Calendar—Upcoming Conferences	13
Getting the Most Out of Contractors by Scott Berry, Operations Manager	14
Applying to Take the Wastewater Operator Certifications ABC Standardized Exam by Keith Bedell, Wastewater Technician/Circuit Rider	16-17
Well Drawdown Test by Bob Waller, Water Circuit Rider	18-19
Reflecting on the Past Twenty Years by Mark Russell, Office Manager.....	20-21
Training & Events Schedule	22
Quiz Corner	23
Municipal Water Rights: The Persistence of Persistent Conditions (Part One) by Laura Schroeder & Derek Gauthier	24-25
Breakfast with Jerry Throwing My Loop by Michael Johnson	26-27
Membership Application Form	29
Membership Roster	30-32

We Appreciate our Advertisers!

Please take a moment to view their ads.

American Flow Control	7	Oregon Health Authority.....	25
Bancorp Insurance	24	Oregon Meter Repair	23
BMI (Backflow Management Inc.).....	15	Owen Equipment	15
Branom Instrument Co.	9	PACE	9
Cascade Columbia Distribution Co.....	15	Pittsburg Tank & Tower.....	21
Core & Main	8	Special Districts Association of Oregon	4
Dan's Leak Detection	27	The Automation Group.....	Inside Front Cover
Ferguson Waterworks	9	The Ford Meter Box	23
H.D. Fowler	27	TriPac	22
Lakeside Utilities (EZ Street Cold Asphalt).....	21	Underground Tech.....	22
Neptune	Inside Back Cover	USA BlueBook.....	Back Cover
Oregon DEQ: Clean Water State Revolving Fund.....	19	Waterlab	17

Oregon Association of Water Utilities

935 N. Main St.
Independence, OR 97351
Ph: (503) 837-1212
Fax: (503) 837-1213

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.

OAWU has the right to reject any advertising deemed unsuitable for the OAWU publication. Acceptance of advertising by OAWU does not constitute endorsement of the advertiser, its products or services, nor does OAWU publication make any claims or guarantees as to the validity of the advertisers offer.

H2Oregon is the official publication of the Oregon Association of Water Utilities, and is published quarterly for distribution to representatives of rural and municipal suppliers. Issues are mailed free of charge to member and nonmember rural water/wastewater associations. Articles and photos are encouraged with payment in complimentary copies.

H2Oregon is published for the Oregon Association of Water Utilities by
Mt. Angel Publishing, Inc.
135 N. Main St., Mt. Angel, OR 97362
503-845-9499 fax: 503-845-9202
www.mtangelpub.com

OAWU Staff Members

Jason Green, Executive Director
jgreen@oawu.net

Mike Collier, Deputy Director
Source Water Specialist
mcollier@oawu.net

Mark Russell, Office Manager
mrussell@oawu.net

Donna Bernt, Administrative/Financial Assistant
dbernt@oawu.net

Heather Davis, Administrative Assistant
hdavis@oawu.net

Tim Tice, Projects Manager
ttice@oawu.net

Scott Berry, Operations Manager
sberry@oawu.net

Heath Cokeley, Programs Manager, Circuit Rider
hcokeley@oawu.net

Hans Schroeder, Circuit Rider
hschroeder@oawu.net

Bob Waller, Circuit Rider
bwaller@oawu.net

Jeff Crowther, Wastewater Technician
jcrowther@oawu.net

Keith Bedell, Wastewater Technician
kbedell@oawu.net

For advertising information,
contact the OAWU office:

935 N. Main St., Independence, OR 97351
(503) 837-1212

office@oawu.net • www.oawu.net

H₂Oregon

OAWU Officers & Board Members

PRESIDENT

Mike Edwards

City of Bend
62975 Boyd Acres Rd
Bend, OR 97701
Phone: (541) 317-3050
medwards@oawu.net
Rep. Reg. 1, exp. 2021

VICE PRESIDENT

Matt Johnson

City of Monmouth
151 W. Main Street
Monmouth, OR 97361
Phone: (503) 838-2173
Fax: (503) 838-0201
mjohnson@ci.monmouth.or.us
Rep. Reg. 5, exp. 2020

SECRETARY

Craig Smith

City of Lake Oswego
17601 Pilkington Rd.
Lake Oswego, OR 97034
Phone: (503) 260-7519
csmith@ci.oswego.or.us
Rep. Reg. 1, exp. 2022

TREASURER

Micah Olson

City of Columbia City
700 N. College St.
Newberg, OR 97132
Phone: (971) 563-3128
molson@oawu.net
Rep. Reg. 1, exp. 2022

NRWA DIRECTOR

Russell Cooper

City of Monmouth
151 W. Main Street
Monmouth, OR 97361
Phone: (503) 838-2173
Fax: (503) 838-0201
rcooper@ci.monmouth.or.us
Rep. Reg. 3, exp. 2021

PAST PRESIDENT

Mark Beam

Ice Fountain Water District
1185 Tucker Road
Hood River, OR 97031
Phone: (541) 386-4299
Fax: (541) 386-7228
mbeamifwater@hrecn.net
Rep. Reg. 2, exp. 2022

Board of Directors

Ed Butts

4B Engineering
4454 71st Ave. SE
Salem, OR 97317
Phone: (503) 881-7100
epbpe@juno.com
Assoc. Mbr. Rep. exp. 2021

Craig Sheldon

City of Sherwood
15527 SW Willamette St
Sherwood, OR 97140
Phone: (503) 925-2310
Fax: (503) 625-0620
sheldonc@sherwoodoregon.gov
Rep. Reg. 2, exp. 2020

Tim Lyda

City of Tillamook
801 Laurel Ave.
Tillamook, OR 97141
Phone: (503) 842-2343
tlyda@tillamookor.gov
Rep. Reg. 3, exp. 2021

Phil Davis

Odell Water Company
P.O. Box 166
Odell, OR 97044
Phone: (541) 354-1885
pkdavis@hrecn.net
Rep. Reg. 2, exp. 2020

Dwayne Barnes

City of Salem
1410 20th St. SE Bldg. #2
Salem, OR 97302
Phone: (503) 588-6333
dbarnes@oawu.net
Rep. Reg. 1, exp 2022

Mark Kerns

Avion Water Co.
935 N. Main Street
Independence, OR 97351
Phone: (503) 837-1212
bigkahuna1949@icloud.com
Rep. Reg. 3, exp. 2021

Konrad Dimmit

City of Lafayette
P.O. Box 55
Lafayette, OR 97127
Phone: (503) 864-2451,
pw@ci.lafayette.or.us
Rep. 3, exp. 2020



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

The OAWU Service Paradigm

by Mike Edwards, OAWU Board Member and President



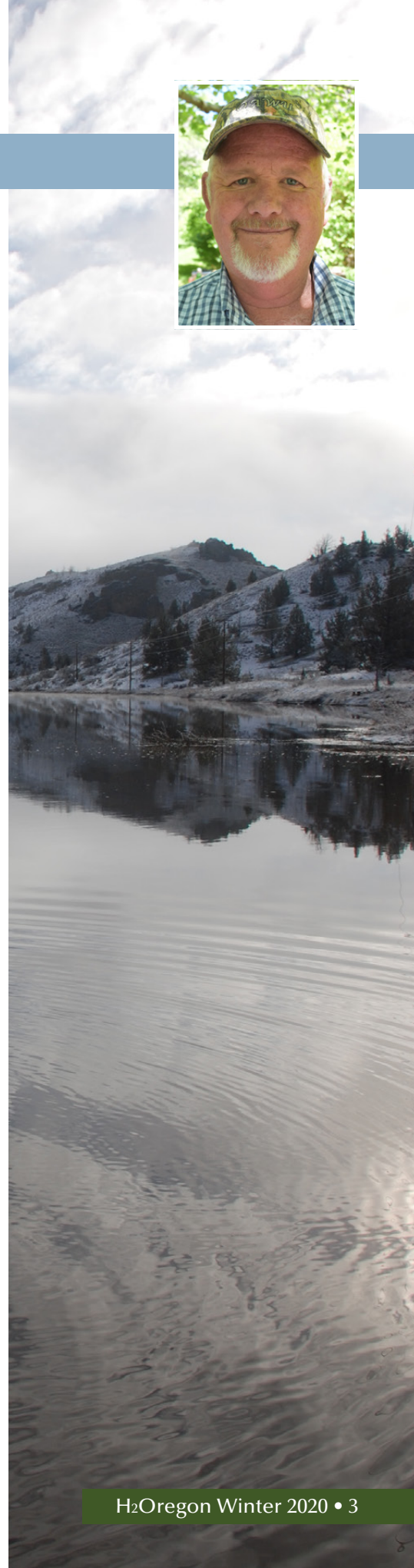
Greetings to all OAWU Members. As we enter into 2020, I have been reflecting on my time as an associated member of this great organization. My first exposure to OAWU was back in the very early 1990s. I was working for the City of Bend as their water, wastewater, and stormwater locator. At this time, the City of Bend was still a very small community of around 23,000 residents. Our Management Team required all City Staff to cross train as much as possible in every utility discipline possible. This offered me an opportunity to have broad exposure to both sides of the utility world, which seldom happens in communities the size Bend is now. It was during this time I had my first experience with OAWU and discovered the value this organization offered early on.

I have been a member of the OAWU Board since March 2014 and did not really know what to expect serving in this capacity. What I discovered, very quickly, is the amount of dedication and hard work this organization brings to and for its members. Originally, I had expressed an interest in becoming more involved with OAWU in the early 2000s. In 2003, then OAWU President, Mark Kerns, approached me and another co-worker and asked if we would be willing to put together a class on construction inspection. Mr. Kerns alluded to the fact that Bend was the fastest growing community in the United States at the time, and he felt we might have some good suggestions for other rural communities. We accepted this offer, and the following year we gave our first presentation to members of OAWU. For me personally, this drastically increased my desire to continue to present and to become more involved with this wonderful organization at all levels.

Fast forward nine years, and my vision of having an opportunity to serve on the Board became a reality. When this happened, Mark Snyder was the Association President, Mark Kerns was Vice President, Mark Beam - Treasurer, and Tim Bunnell was the Secretary. Since this time both Mr. Snyder, and Mr. Bunnell have passed away, but before they left for greener pastures, they, along with the other Board Members, were able to pass along their insight and wisdom of how OAWU has become increasingly successful over the years. I would like to share some of the insights of success with you at this time.

Because of EGO, I would like to say that the success of this Organization is because of the amazing Board Members it has had over the past 40 plus years. However, this would not be an absolute truth. Although the Board has had a role in this success, the credit truly goes to Executive Director Jason Green, but more importantly, and according to Jason, the OAWU Staff. In my humble opinion, it really is a combination of both, and this comes from seeing how this Organization operates from the inside out.

After spending the past 6 years quietly watching how the OAWU Management and Team operate, associate, cooperate, and promulgate the conferences, services, and overall customer services offered, I have been nothing short of amazed. Seldom does one have an opportunity to witness such high levels of professionalism over a long enough period to see what true success looks like from start to finish. Each member of this Team knows what their role is and executes to exacting precision. This is not to say there are not mistakes made along the way, but unless they point out the mistakes, one would never know. It is similar to watching a live band play on the stage that might make a mistake, but they just keep playing as if that was how they planned it from the beginning. The amount of work that goes into planning a short school or



a large conference receives the same level of attention every time, and this is why the trainings are typically (always) successful. Although the conferences are typically the center of attention, and what is usually on the members' radar, let's look at what else this amazing organization does for its members:

- Design specific trainings to meet the needs of an entity and ensure the proper trainings are given as designed
- Interim Operations (Between Operators, or DRC / System Supervisors)
- Serve as Operator of Record
- Project Management
- Water / Wastewater Rate Studies
- Water Management & Conservation Plans
- Project work
- Lagoon Profiles
- Vactor / light excavation services
- Utility Pot Holing
- Valve can cleanouts
- Meter box cleanouts
- Catch Basin cleanouts
- On-Site technical assistance

- Various Free Trainings
- Discounts on Training Course
- Discounts on Annual Conferences
- Access to on-site Training Programs
- Subscription to H2OREGON Magazine
- Legislative representation at the state and federal level
- Camaraderie with other water / wastewater professionals
- Job Referrals
- Well Testing
- Plan Review
- Disaster response assistance and planning

These are just some of the services you receive when you become a member of the largest Water and Wastewater Utility Association in the State of Oregon.

Finally, keep in mind that the cost of the conferences OAWU offers come at a reduction for members. For this article, I took the time to research the cost of other water and wastewater conferences. These organizations are valid, and provide relevant information,

but in a different setting. I do not need to name them, but I will tell you that their costs for a three to four-day conference range from: \$535.00 dollars and up to \$1,295.00 dollars. These fees do not include the costs of any pre-conference classes you might want to take. OAWU four-day conferences cost \$325.00 for members and \$425.00 for a non-member. Keep in mind that at the Sunriver Conference, this includes breakfast, lunch, and all the activities and tournaments one might want to participate in during the Conference.

I truly hope to see all of our valued members at Sunriver this year, but if not Sunriver, at other conferences I may have the pleasure of attending.

Thank you all for your valued membership and thank you all for being part of the OAWU Family and Community. It is because of you that OAWU continues to grow and network with all Operators throughout Oregon. 💧



Over 30 years of experience in providing specialized and affordable insurance services for Oregon's domestic water, sanitary, and irrigation districts.

SDIS has a broad offering of insurance coverages including liability, property, boiler & machinery, crime, workers compensation, and more. Members of the program also enjoy many benefits including, but not limited to:

- Training, loss control, safety consultations, risk management and claims management services
- Research and technical assistance
- Pre-loss legal services for members enrolled in the property/casualty program
- Background check and drug-free workplace program
- Member ownership of a program where surplus revenues are invested to stabilize rates and enhance service

Contact us today to learn why the majority of Oregon's special districts choose SDIS for their coverage needs.

Administered by Special Districts Association of Oregon

Toll-Free: 800-285-5461 | Phone: 503-371-8667

Email: underwriting@sdao.com Web: www.sdao.com

Action

by Mike Collier, Deputy Director/Sourcewater Specialist



Are you coming out of meetings where you realize it seemed like a waste of time and that nothing was really completed besides a date for the next meeting? What are the meetings for? Should there be a meeting with no action as a result? What is the point?

If several people are driving and taking time out of their work schedule to attend a meeting and there is nothing tangible that comes as a result of the meeting, could not that meeting have occurred through a basic e-mail? Maybe and maybe not – I understand that some meetings, even if there does not seem to be any results, are important to bring the team together and grow the bond and camaraderie between the team members. This is just something to think carefully through before scheduling the next meeting, it can be helpful to think of what the meeting is really for and what the expectation is at the meeting's conclusion.

A second part to this, but equally as important is that no great invention, company, discovery, etc., came about through lack of action. Sitting back and watching the world go by may be good occasionally for relaxation, but don't expect relaxation to cause major life changes, we must move, take the first step – action. I am not denying that rest is good for our wellbeing (physical, mental, and emotional health) and that it is wise to take some time to make decisions and not rush things that don't need to be rushed.

If in an emergency, or when there is a leak, we usually have an easy time acting; we are forced into it, but do we take action when it is not an emergency? Here is a simple, life, example: if we are at work and see that a hinge is loose, do we ignore it, tell someone else to fix it because "it's not our job," or that we have other important things to do, or do we act – and just go tighten the hinge without letting anyone know – not making a big deal of it.

Let's consider our daily work, meetings, plans and attitudes. What areas could be improved on when it comes to being a person of action, why it may be important to consider, and how it may improve the work environment, family life, and others around us. ♦

Need CEUs? Training at YOUR Facility!

Let us design a training program that can be brought to you. We will come to your utility and tailor the training to meet your needs. Presentations can include safety, management, operations, maintenance, certification, math, and more.



Call for more info: (503) 837-1212 www.oawu.net



Workplace Improvements

by Hans Schroeder, Circuit Rider

I have a few observations that are simple enough ways to improve the working relationships with the people you may run into throughout your day, and most importantly your family.

We all have those days when we really don't want to be at work for some reason or another. That's when we need to put our personal feelings aside and get down to the tasks that are laid out for us to do to keep our utility going. I can tell you from personal experience, I make lists. That helps me to complete my tasks on time and keeps my efforts focused on what needs to be completed for the day, week or month. Coming in a few minutes early to review the list is a great way to start the day.

Another area to consider is the communication that is going on that we may not be aware of. Does your spouse ever give you that eye roll? Well, remember when we are at our jobs, the eye rolls, crossed arms, shrug of shoulders, shaking of the head are all signs from our body that we may not even be aware of and what it might say to someone. Please be aware of your actions and the negative body language that can be misconstrued.

We all know those bubbly people that as soon as they get up, they are fluttering around getting things accomplished. On the other hand, there are people a little sluggish in the morning but once the afternoon hits they can stay up until midnight getting their things done. We all don't need to be bursting with energy the entire day at work, but we do need to come to work well rested and ready to complete our tasks.

If there is an aspect about our job that we don't particularly care for, it is very important to change our attitude about it. Negativity in the workplace can spread as fast as a wildfire and cause major disdain. So please check your attitude at the door and go in with positivity. Doing so can change those around you and how your whole day will turn out.

Another good way to recharge our batteries and improve our mindset is to attend one of our conferences, meet with the people in our industry, get some new ideas or visit with different systems that are close by. Have they had a particular problem or solution that could benefit our system? If you have a passion for your job it will never become mundane or unimportant to you.

I know, I know, you have worked there forever. Some new guy comes in and wants to suggest a few things he learned in college, at a math class, or conference. It's never too late to learn something new, so be coachable. Don't talk over the top of them when they are trying to ask a question or when they are giving you a new way to try something. Like my grandma always told me "it's a great day if you learned something new today."

Remember all of us here at OAWU are here to help you, whether it's a question over the phone, through an email, if you need help locating a water leak, small classes to prepare for the certification tests, or a conference to get those important CEUs.

I am looking forward to seeing you at the Sunriver Conference in March. I am bringing along our two foreign exchange daughters.

Leonie Ottmar is a 17-year-old junior attending Helix Griswold High School. She comes from Luneberg, Germany (a City of about 75,000 people) to our remote ranch in Holdman, OR. Although there is a big cultural difference, she is really enjoying school. As one of 12 kids in her Junior Class, she feels like it is more of a family than a school.

Our second exchange daughter, Giorgia Brega, is a 17-year-old student at Helix as well. She is from Milan, Italy and after living with us for two months, had a FaceTime conversation with her father in English for over twenty minutes. He is originally from Ireland and speaks perfect English; he was practically in tears when he hung up, saying that was the first conversation he has had with her in English where he knew she understood him. She enjoys living on the ranch



Leonie and Giorgia at Haystack Rock.

and helping with the chores. She loves horses and has done a little riding with my wife, Tina.

They are truly a blessing to our family, and we feel very blessed. They get along very well and are getting along well at school. Also, the principal even told us that sometimes he forgets they are foreign exchange students. ♦



IN 1929, AMERICAN INVENTED THE MECHANICAL JOINT. TODAY WE BRING YOU ALPHA™.

Few things in the waterworks industry have been as innovative as the Mechanical Joint. Times have changed. And so has AMERICAN. Introducing the AMERICAN Flow Control Series 2500 with ALPHA™ restrained joint ends. Now, you can use the same valve for ductile iron, HDPE, PVC, and even cast iron pipe. Unlike MJ, the restraint accessories come attached, leaving only one bolt on each end to tighten. That saves you time and money.

The AMERICAN Series 2500 with ALPHA™ restrained joint ends – it's the only gate valve you'll ever need.

ALMOST ANY MATERIAL.
NO TIME AT ALL.



AMERICAN
FLOW CONTROL
THE RIGHT WAY

www.american-usa.com
PO Box 2727, Birmingham, AL 35207 • Ph: 1-800-326-8051 • Fx: 1-800-610-3569

EOE/Vets/Disabilities
ALPHA™ is a licensed trademark of Romac Industries Inc. (U.S. Patent 8,894,100)

DUCTILE IRON PIPE FLOW CONTROL INTERNATIONAL SPIRALWELD PIPE STEEL PIPE



Multitasking in a Digital

Heath Cokeley, Programs Manager/Circuit Rider

I will start this article by saying this: I am not a good multitasker. Because of necessity I try sometimes, but typically when I try the quality of the tasks I am performing both suffer. I probably shouldn't admit that because as I write this article, I am also attempting to elk hunt. Because this article is due when I get back, I decided to find myself a nice little spot just inside the tree line close to a green meadow to write.

I called this article *Multitasking in a Digital Age* because I am sure many of us find we are more likely to attempt to multitask today than we may have been inclined to before the advent of these lovely little electronic leashes so many of us now carry. While I will be the first to admit these devices' usefulness, I think they have also come with many unintentional consequences. For instance, how often do we pull our phone out to check a text or an email when we are having a conversation with a real-life person. What are we telling that person when we do that? Could the message be that the electronic conversation I am having is more important than the face to face one I am currently in? Being someone who finds great value in personal relationships, especially in the water and wastewater field, I would hate to have that be the case. So often problems are solved, not by just our own personal knowledge and innovation, but drawing from the wisdom of those that may have had that problem before and have found a solution to it that they are happy to share. But won't if they don't believe we are finding value in what they are saying.

I am not suggesting that pulling our phone out when someone is talking to us is the only form of multitasking that takes place by any means. I do believe; however, it is a common one in today's world and yet many other forms of multitasking may still involve our smart phone. Texting while driving for example. Not many forms of multitasking carry the same risk of death and

Joe Rowinski

Municipal Sales

joe.rowinski@coreandmain.com

m 503.680.3472

t 503.620.9123

f 503.684.7213

6720 SW McEwan Road

Lake Oswego, OR 97035



coreandmain.com

Age

dismemberment as this one does. Being someone who has a lot of windshield time in my job, as well as, being a utility worker previously has meant that I have been the first or second person on scene to several accidents. One included a small pickup that kept going straight when the road did not, dug into the mud with the passenger tires and ended up sliding on its side down the ditch for well over 100 feet before hitting a tree. I got the driver's door open that was now facing the sky and helped the kid that was driving, out of the truck, but not before he stopped and reached down to grab his phone.

Know I don't know for sure he was on his phone and that's why he missed the corner. What I do know for sure is if the truck had not slid on its side for all that distance, taking a lot of its momentum away before hitting the tree, it would have been a very different scenario.

I will admit that I have looked at my phone when I am driving in the past, but it is something that I make a conscious effort not to do anymore.

So, as we continue to get more and more digitalized in the modern world how do we keep sight of what is important? As for me—it is starting to snow and that, in conjunction with the very little moonlight we are supposed to have tonight, I am hoping it will encourage some elk to get to feeding out on the ridge in front of me. So, I am going to put this iPad to the side and focus on the task which is in front of me and the reason I am sitting here.

And with that, I'll see you down the road. 💧

FERGUSON[®] WATERWORKS

Darrin Andersson
(503) 507-1754
darrin.andersson@ferguson.com

©2017 Ferguson Enterprises, Inc.

1217 655849

Branom Instrument Co.

Since 1947



We are a manufacturer's representative that understands solutions for water/waste water applications and have a wide variety of products and solutions to meet your water/waste water needs.

Process Instrumentation for Control & Monitoring of:

- Flow
- Level
- Pressure
- Temperature
- Liquid Analytics

SALES • REPAIR • CALIBRATION • ON-SITE SERVICE • START-UP

www.branom.com
800-767-6051

Serving Washington, Oregon, Idaho, Alaska and Montana

Utility Design

Structural Engineering

Road Design

Planning

Survey

Stormwater Design

NPDES Compliance

Stream Restoration

Pump Stations

LID Designs

Bridge Construction

Retaining Wall Design

Water Treatment Facilities

Water Main Replacements

Trenchless Pipe Replacements



Kirkland
425.827.2014

Wenatchee
509.662.1762

Lake Oswego
503.597.3222

paceengrs.com



Driving – Hours or Miles

by Tim Tice, Projects Manager

The staff at OAWU probably travel over a half million miles each year within the Oregon borders, assisting both water and wastewater systems in technical support and training. Even though 35-40 thousand miles each year per person may not seem daunting, the fact of the matter is how fortunate we are to complete these goals without incident. Is there any single reason for this string of luck?

Consider your own situation and the miles you travel to do your job. Even though you may travel less than 10 miles to get to work, as a utility operator, your travels to perform your job may put you into some precarious situations. Some questions to consider:

- How many start and stops do you make in a day?
- How many times do you maneuver your vehicle near other vehicles?
- How many close calls, near misses can you remember?

Implementing a driver safety program, will help your organization keep employees safer and can potentially:¹

- Decrease risk of motor vehicle collisions and traffic violations
- Minimize exposure to liability risks and legal costs
- Reduce fleet insurance premiums and workers' compensation claims
- Lower vehicle repair bills and replacement expenses
- Protect business operations and brand identity
- Keep your employees safe on the road, on and off the job

When we consider a driver safety program, much of the focus is about speed, space around vehicles, and good decisions. Additional to the primary three talking points, distracted driving has gained recognition since the cellular phone has become such an important tool to do our job. Cell phones have created a change in habit. Cell phones are the single item that doubles our inability to safely commute as they are both a mechanical and visual distraction, or to better phrase it, "Cell phones are a cognitive distraction."¹

We live in a world of split seconds, more for first responders and medical field personnel, but for utility workers who work on the streets, you probably encounter split second decisions routinely, without being aware of it. Can we avoid the close calls and split-second decision-making moments?

One of the best activities someone can perform to keep our mental acuity at its highest level is a good night's sleep. So much has been studied on sleeping habits, or lack of, it has become another focal point for the United States Department of Transportation. Being fatigued is a direct response to lack of sleep, or a lack of quality sleep. Many factors play a role in poor sleep routines. Some of them are:²

Alcohol interrupts your circadian rhythm – poor quality sleep

Caffeine disrupts sleep patterns – avoid it 6-hours before bedtime

– How Safe Are You?

Non-routine be concise about the time you retire for the night

Screens emitting lights impede production of melatonin – relaxing hormone

Fatigue, if it can be measured against productivity, can cost millions of dollars for businesses and certainly increase the inclination towards higher risks. Have you ever taken a catnap, had excessive yawning periods, lack of concentration, inability to remember driving the last few miles? These are all indicators of drowsiness. Drivers' reaction times, awareness of hazards and ability to sustain attention all worsen the drowsier the driver becomes.

Driving after going more than 20 hours without sleep is the equivalent of driving with a blood-alcohol concentration of 0.08% – the U.S. legal limit. Driving on less than 7 hours of sleep can prompt us into a fatigued state. You are three times more likely to be in a car crash if you are fatigued.³

Add inclement weather and conditions to the mix of driving and its impact on awareness, the risk factors indeed increase, therefore the awareness levels need to be heightened.

There will be times that we work late into the evening, and getting home is our only thought. One simple method to assist us in getting home, is closing your eyes for two minutes prior to leaving. This reduces eye strain, a

temporary condition that improves on its own, but without the break can make the drive more difficult.

OAWU will be offering defensive/distracted driving classes in 2020, both on the calendar and “as requested” at your facility. A real-life training that presents situations, hazard recognition and techniques to be safer both while driving and working in the roadway. This is not a replacement for a traffic control class, but will allow employees to understand that often we become complacent. Consider the class as a tool to reduce insurance rates by focusing on risk reduction through better skills in avoiding a collision.

I have been on the road my entire life and I will say, my decision-making process regarding driving has changed significantly. The night-time hours have been reduced or eliminated. The space kept around my vehicle has increased. The idea of “having to be in front of someone” has disappeared. With so much time being behind the wheel, in and out of company vehicles, one can be in awe at the level of safety we achieve. Is it a string of luck, good decision-making or a blend of both?

The best that life has to offer! 💧

1- National Safety Council -Defensive Driving Course

2- <https://www.fmcsa.dot.gov/safety/driver-safety/cmv-driving-tips-driver-fatigue>

3- https://www.cdc.gov/sleep/about_sleep/drowsy_driving.html

Special Thanks to Our 2020 Sponsors

GOLD SPONSORS

Core & Main • Lakeside Industries

SILVER SPONSOR

CoBank • HD Fowler

BRONZE SPONSOR

EJ

DIAMOND, **GOLD**, **SILVER**, and **BRONZE** sponsorships are available.

TO BECOME A SPONSOR, CALL 503-837-1212



NPDES Permits

by Jeff Crowther, Wastewater Technician

A lot of us with NPDES permits are aware that DEQ has been working hard over the last year to reduce the backlog of permits that have been expired and administratively extended. In the past, the DEQ compliance staff have worked with the jurisdictions to issue permits. When this was the policy the permits didn't seem to be consistent. A permit written in southern Oregon might not look like a similar discharger in northern Oregon, raising questions between agencies, as well as, issues between DEQ region staff.

DEQ has now streamlined the process and have eight staff members that are focused only on issuing permits. This should help with consistency and being able to reduce the backlog of permits. The permit specialist will work with the compliance staff's input when developing the permit.

If your jurisdiction is on schedule for a new permit, it is important that the agency includes the treatment plant supervisor, at a minimum, for their input. A lot of times the permit renewal process goes to the City administrator or City engineer for review and plant staff don't get an option to review and make suggestions for changes. Operations staff may have suggestions that could improve sampling locations or testing parameters that may save the jurisdiction time and possibly money. Conversely, a small change in the permit might cost the jurisdiction money in staff time or possibly a compliance issue that could require a major facility upgrade.

During the draft stage of the permit is when you should be getting your concerns addressed. Once the permit goes to public comment it is hard to make changes. Once the permit is issued changes can occur, but the process is difficult. DEQ permit staff want to have issues worked out in the draft phase. Our goal as a utility employee is always to provide the best wastewater effluent, that meets or exceeds the State and Federal requirements.

I am including the links to DEQ's website showing the facilities scheduled for NPDES permit renewal in 2020 (<https://www.oregon.gov/deq/FilterDocs/NPDESP2020.pdf>), as well as, those scheduled during the next five-year period (<https://www.oregon.gov/deq/FilterDocs/NPDES5yearplan2020.pdf>). If you would like a second set of eyes to look over your draft permit feel free to call our office and one of the field staff can assist you. 💧

Vactor Services

- Light excavation
- Pot holing
- Valve can clean outs
- Meter box clean outs
- Catch basin clean outs
- Buried infrastructure locating
- And more!



Call for more info: (503) 837-1212 www.oawu.net

MARK YOUR CALENDAR



26th Annual Summer
Classic Conference
Seaside, OR
Aug. 17–20, 2020



42nd Annual Management &
Technical Conference
Sunriver, Oregon • March 2–6, 2020

UPCOMING CONFERENCES



2020 Fall Operators
Conference
Florence
Sept. 28–Oct. 1, 2020



2020 Spirit Mountain Casino
Operators Conference
Grand Ronde
November 2–5, 2020

*Sunrise at Baskett Slough
Danny Spaulding, Oregon Department of Transportation • CC BY 2.0*



Getting the Most Out of Contractors

by Scott Berry, Operations Manager

The question of how to get the most, strike that, how to get the BEST out of the contractors that you hire is not as complicated as it may seem. The focus for this article will be smaller projects such as simple service installs, leak repairs, etc. it all starts with knowing the project goal.

I've had the benefit of seeing both sides of the challenges of employing contractors. In my opinion, it doesn't matter whether you're the one hiring the contractor, or the contractor hired to complete a job; the goal is the same. Complete the job in the best and most efficient way possible. Clearly define the expectations.

Communication is where a successful project starts and ends. Knowing what the finished project should look like and being able to articulate it to the contractor is critical. Have the construction standards and material specifications available to the contractor. Problems often come up when there is a lack of detail in the plans or specifications. Have a preplanning meeting, when possible, and get the contractor's perspective on the project.

Avoid Change Orders Unexpected changes during a project can quickly derail a project and cause it to go over budget and over time. Change orders are often caused by unforeseen conditions, errors or oversights, and additional requests. Some change orders may be inevitable; some can be avoided by taking the right steps and identifying possible complications early in the project planning. During the project, use face-to-face communication and follow that up with written summaries of those communications. If a situation comes up that requires a change order, put it in writing.

Inspection and Quality Control Our final tip for avoiding change orders and reducing costs is to establish a quality control process for all stages and levels of the project. Quality control shouldn't just begin on the job site; it should also include processes for ensuring quality by formally adopting construction standards if your utility has not already done so.

OAWU provides other services, such as full system leak detection, leak repairs, service installs, fire hydrant repair and replacement, and many more. Call today for a quote on your project. 💧

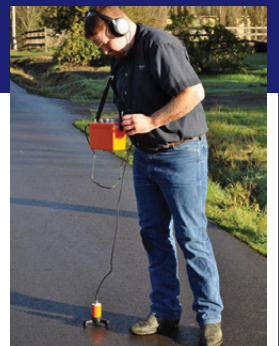
Services from OAWU

Call OAWU for...

- Interim operations
- Operator of Record
- Project management
- Project work
- Lagoon profiles

OAWU can complete your...

- Water & Wastewater Rate Studies
- Water Management & Conservation Plans



Call for more info: (503) 837-1212 www.oawu.net



WE PROVIDE COST EFFECTIVE WAYS TO MEET ALL YOUR WATER SYSTEM NEEDS

CONTACT US AT:

(800) 841-7689

www.bmi-backflow.com

- **TRAINING**
- **CONSULTATION**
- **PUBLIC EDUCATION PACKETS**
- **ASSEMBLY TRACKING SOFTWARE**
- **ENFORCEMENT DOCUMENTS**
- **WRITTEN PROGRAM PLANS**

"BMI is dedicated to the pursuit of clean, safe drinking water through education"



**CASCADE COLUMBIA
DISTRIBUTION COMPANY**
Water Treatment Chemical Supplier

Primary Coagulants Alum • PAC • ACH • Organic Polymers

Filter Aides

Chlorine Sod Hypochlorite • Cl Cyl • Dry Calcium Hypochlorate

Dechlorination Sodium Bisulfate • Calcium Thiosulfate • Ascorbic Acid

pH Control Sodium Bisulfate

Corrosion Inhibitors Ortho & Poly Phosphates • Sequestering Agents • Potassium Permanganate • Copper Sulfate

Fluorides Activated Carbon • Hydrogen Peroxide • Ferric Chloride • Phosphoric Acid • Citric Acid • Sodium Silicate

Specialty Products Defoamers • Odor Control

**SPECIALIZING IN A COMPLETE LINE
OF MUNICIPAL WATER TREATMENT CHEMICALS**

Call for anything special!

Jeff Zachman & Joe Price, Technical & Sales

Jeff: Office/Fax 503-636-8252, Pager 503-299-0775, jeffz@cascapecolumbia.com

Joe: Office 503-266-2959, joep@cascapecolumbia.com

Orders: Portland 503-625-5293, Toll-Free 887-625-5293

Fax 503-625-4335

Serving the Pacific Northwest since 1926



EQUIPMENT & ACCESSORIES FOR PUBLIC WORKS

SEWER CLEANING	VALVE OPERATING
HYDRO-EXCAVATING	ROOT CONTROL
PIPELINE INSPECTION	GREASE/ODOR CONTROL
LINE LOCATING	STREET SWEEPING
LEAK DETECTION	PATHOGEN PROTECTION



CHECK OUT OUR ONLINE STORE
shop.owenequipment.com

**VACTOR
2100i**



NEW

owenequipment.com/2100i
Info • Specs • Videos • Demos



The revolutionary new boom telescopes 10 feet out and extends the debris hose down 15 feet.



IntuiTouch
New, reliable touch buttons with backlit feedback enables operators to know if a selected function is active.

REQUEST A FREE DEMO

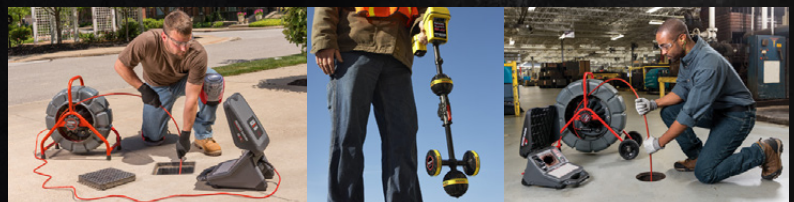
(800) 992-3656

**4 FULL SERVICE
LOCATIONS**

Portland • Fairfield
Kent • Salt Lake City

Now Your Authorized RIDGID Dealer.

shop RIDGID's entire product catalogue including line cameras and locators



RIDGID

owenequipment.com/RIDGID

CALL NOW FOR A FREE DEMO OF ANY OF OUR PRODUCTS (800) 992-3656



Applying to Take the Wastewater Certification ABC Standard

by Keith Bedell, Wastewater Technician/Circuit Rider

Multiple applications that are submitted every month for the wastewater operator certification must be returned for minor mistakes, which slows down the application processing for everyone. DEQ (Department of Environmental Quality) must have them corrected by the applicant; otherwise, they would be making changes that the applicant didn't approve or know of, and that isn't their job.

Most errors are overlapping dates, duties not matching previous records on file, and missing information. Complete and accurate information must be provided so DEQ can calculate your experience correctly and have factual data on file.

For the operators that have been in the field for a while, the process is relatively simple, but a good review of the application is advised before sending it to DEQ.

First, we will start with the "simple" applicant, aka, someone who has been working in the field for some time.

- Download the correct and latest application form from the DEQ website: <https://www.oregon.gov/deq/wq/wqpermits/Pages/Wastewater-Operator-Certification.aspx>.
 - If you are applying for collections, make sure that you download the one that says, "Collection Exam Application – Grades I through IV," and the one for treatment if applying for treatment certification. An operator has been known to fill out the collection application when in fact they were applying for the treatment certification, and if not caught in time, you will have to send in another application with the possibility of having to pay twice.
 - Also, make sure to have the qualifying experience at applicable facilities when applying for Grade III or IV certification.
- If you haven't applied before or it has been quite a while, send a copy of your High School/GED diploma or transcripts, as some of the earlier operators' documents are not on file with DEQ.
- In the "Supervisor's Statement of Applicant's Routine Tasks and Duties," make sure your supervisor or other system representative/owner fills out this section by hand in their own words. It should not be done by the applicant with the supervisor just signing the form.

Now for the "more involved" applications, which is largely trying to document evidence of your qualifying experience.

Wastewater Operator Standardized Exam

- Small systems where an operator is responsible for all wastewater-related duties in the city makes it untrue to say that you worked at the treatment plant or in the collection system for 1 full year if you've been doing both types of duties for only one year.
- Depending on your education, you may only need 6 months of experience (e.g. if you have a Water, Environment, and Technology AAS) and up to 1 year of experience (at least half of which must be direct experience at a classified facility) to qualify for the Small WW System or Grade I certification.
- For example, if you work 25% in drinking water, 25% in miscellaneous duties, 25% at the wastewater treatment plant, and 25% doing collections, it will

take you two years of full-time work experience to get your Wastewater Treatment or Wastewater Collections Grade I exam approval.

It can be frustrating for small cities or utilities to have someone that is working in the wastewater field to have to wait so long to become certified, and DEQ understands this, but their hands are tied with the Oregon Administrative Rules spelling out the requirements.

Once you are approved to take the exam and pass it, your certificate will be issued.

Reminder: DEQ does not give refunds. Always remember to read the instructions and have someone proofread your application before sending it in! ♦

Identify corroding waterlines the easy way!

Test water from fire hydrant flush.

Testing will be targeted to the type of pipe and material in the water system:

- Cement-Coated Ductile Iron Pipe
- Cement-lined mains
- Copper
- Asbestos Cement
- PCCP
- Cast Iron
- Polyethylene
- Galvanized Steel/Steel
- Other coatings
- Other types of metal in system such as brass or bronze

Data for decisions

WATERLAB

Waterlab Corp. 2603 12th
St. SE, Salem, OR 97302

503-363-0473

waterlab@comcast.net



Well Drawdown Test

by Bob Waller, Water Circuit Rider

Water system operators today have a lot on their plate from sampling, testing, well I could go on and on. There are some things that we, as operators, may overlook or not realize the importance of. Some regulatory agencies may require water systems to monitor and report static water levels, drawdowns, or yield of a well.

Static water level is the level of the water table when the pump is off. This test is best done early spring when the water table is high and again in late summer when the water table is low (or more often if needed).

Drawdown is the drop in the level of water in a well when water is being pumped out. Performing a drawdown test is very important. One of the most important reasons for measuring drawdown is to make sure that our source is adequate and not being depleted. The data collected to calculate drawdown can tell us if our supply is slowly declining. Early detection of this can give time to explore alternative sources, establish conservation measures or obtain funding to get a new water source. During prolonged dry periods excessive drawdown can get close to a pump and cause excessive air in the water being pumped and could result in milky colored water, or cavitation, or even well or pump damage.

Yield tests consist of determining the balance between the maximum amount of water that can be pumped and the amount of recharge back into the well from the surrounding ground water.

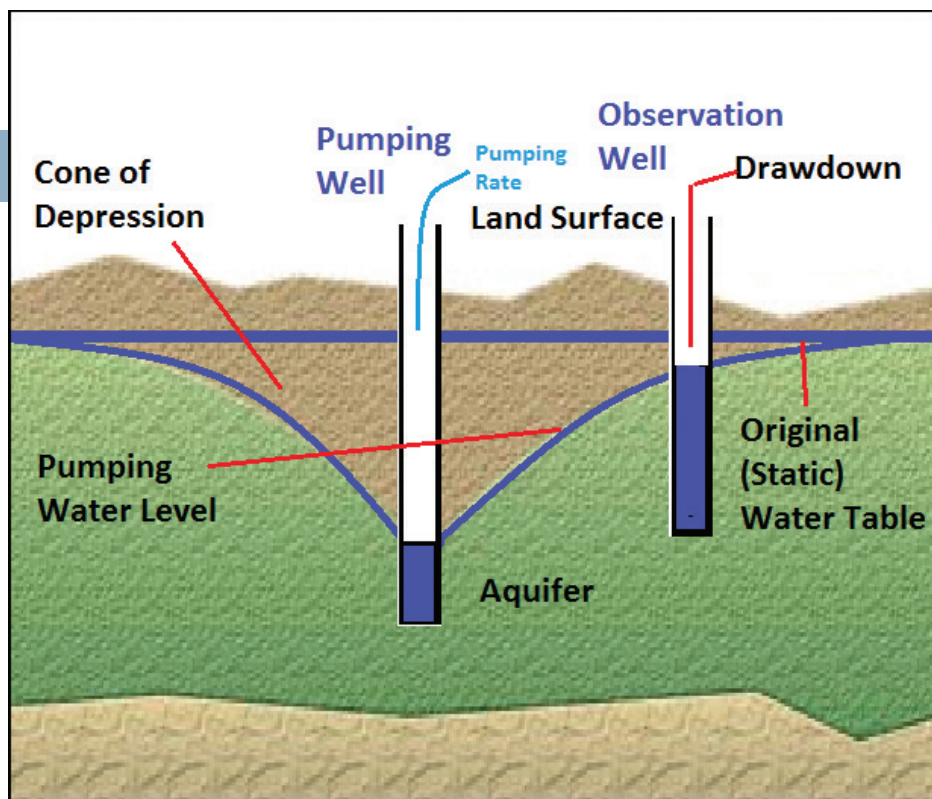
Testing is done by continuously pumping water from the well for an extended period. During pumping, measurements are made of the water flow from the well and the water level in the well itself. This is known as the well's drawdown. Equilibrium is achieved when the drawdown remains stable for a given discharge rate. Once equilibrium is achieved, less pumping should result in less drawdown. Professionals rely on this pump yield test to place the well pump at the correct depth in the borehole. The standard is to maintain a water level of 25 feet above the top of the submersible pump. This allows for a comfortable margin of safety during drought conditions, to keep the pump motor cool, and running properly during use.

Having historical records of static, drawdown, recovery time and levels are great ways to track the changes in the well. There are several methods of getting static and drawdown levels.

Transducers, water level meters, air lines, electric sounders and more. Also getting a drawdown test and comparing it to the yield of the well over time is a good window into the health and longevity of any well. The well yield can be found in the well log created when the well was drilled, and the pump installed. A yield test is sometimes required when a private property is bought or sold.

I would encourage operators to develop a plan, check the static level of the well, conduct a drawdown test, and time the rate of recovery back to the static level. Record all the information and compare the results year to year or even month to month during dry months. Try to do the tests on a regular basis whether it's annually or semiannually. Whatever the case, it's a good practice.

Remember OAWU is always ready to give technical support. 💧



Low Cost Loans to Improve Wastewater and Stormwater

Contact CWSRF for the **BEST LOAN RATES** to public agencies for the planning, design or construction projects that prevent or mitigate water pollution.



(503) 229-LOAN
CWSRFinfo@deq.state.or.us

Scan QR code to visit:
www.deq.state.or.us/wq/loans/loans.htm





Reflecting on the Past

by Mark Russell, Office Manager

In April 2017, I gave Jason Green my 3-year notice to retire on March 31, 2020.

How is it going? Amazingly, I am still on track to finish the race on schedule. Not that it's a track event like a 50-yard dash, but more like my whole career with OAWU has an end goal to be completed and my desire is to end well.

As I look back 20 years over the various events and activities, there are many notable events and changes to reflect upon. Those that are in our world, work, and my personal life.

Briefly, in our World: disastrous things did not happen when we moved into the year 2000; September 11, 2001 changed our defense and brought a new standard in worldwide travel security; advances in technology have changed the internet and electronic communications (don't you just love how you can video/talk/share-photo to nearly anyone around the world almost instantly). However, some things have not changed, Queen Elizabeth II has been the queen of England my whole life and still is.

At OAWU: moved from renting an office in Silverton, to purchasing our own office/property in Independence (Mortgage was paid off June 2018); Circuit Riders communicated to the office via pagers and calling cards; legal documents that required original physical signatures and delivered by US Snail mail, which sometimes took several days, now are accepted electronically and processed within minutes or even seconds; and who uses a camera with film that could be developed at a Foto-Mat? We've come a long way since the Y2K Millennium Bug, also called Year 2000 bug or Millennium Bug, a problem in the coding of computerized systems that was projected to create havoc in computers and computer networks around the world at the beginning of the year 2000.

Personally: all 4 of our grandkids were born during my employment here; in 2009, lost a good friend/co-worker Jeff Swanson to cancer; from 2007 to 2010, my wife and I hosted 7 high school foreign exchange students from Europe; and it seems the OAWU staff attended Linfield College with me as I took all the courses needed to complete my Bachelor of Science Degree in Accounting in 2010. Travel: my wife and I have been blessed with travel adventures; 2006—14 days in Israel, 2010—one month in Europe (visiting exchange students), 2018—two weeks mission trip to Kathmandu, Nepal.

There are so many events and activities that I can't possibly list them all. Certainly, some of my favorite times have been getting to know our OAWU members at the Sunriver, OAWU Expo, and Seaside Conferences each year. It has occurred to me that my time remaining is dwindling too quickly. With the new office manager beginning soon, my desire is to introduce him/her to this wonderful and amazing industry.

Twenty Years

There is a great book that is required reading for all new OAWU staff, *Who Moved My Cheese* by Spensor Johnson, M.D. It is a simple parable that reveals profound truths about change and four characters who live in a "Maze" and look for "Cheese" to nourish them and make them happy.

When you see the change coming, you can discover for yourself how to deal with the change in your work and your life. I recommend you all read it. My "cheese" is changing and is moving as I find myself getting excited for retirement.

Retirement Countdown app: 2 months, 18 days, 12 hours, and 42 minutes to go.

But who's counting?

See you at Sunriver for the 42nd Annual Management & Technical Conference. 💧



EZ STREET[®] ASPHALT

SHOWING UTILITY CUTS WHO'S BOSS

GUARANTEED PERMANENT • WORKS IN WATER

503-222-6421

Bill.Bailey@lakesideindustries.com

www.lakesideindustries.com



EZ Street[®] & EZ Street Logo are registered trademarks of Asphalt Research Technology, Inc. ©

STRUCTURE. & INTEGRITY.

**PITTSBURGH
TANK & TOWER
GROUP**

Since 1919

"100 years and still climbing"

**CREWS
AVAILABLE
GLOBALLY**



INSPECTIONS

REPAIR

TANKS

Wet

Code

Elevated

Dry

Updates

Ground

ROV

Paint

Relocation

In-Service
Cleaning

Insulation

Erection

Dismantles

If you are interested in having us as your partner, feel free to contact one of our department representatives below

NEW TANKS – Rick DiZinno

(270) 826-9000 ext. 2601

EXISTING TANKS – Patrick Heltsley

(270) 826-9000 ext. 4601

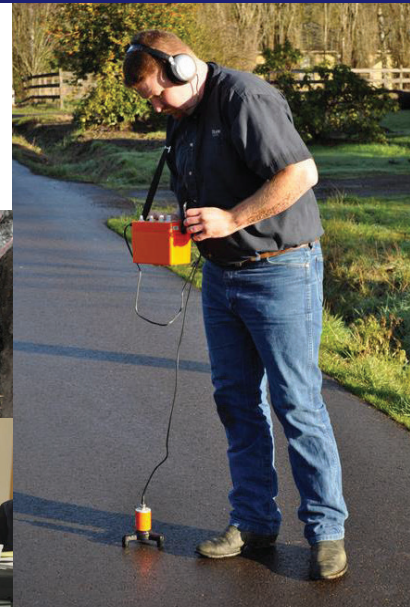
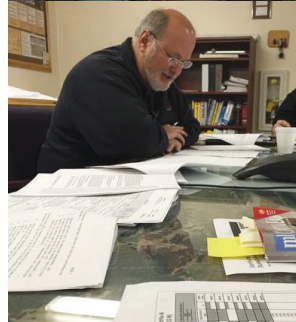
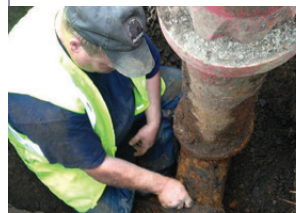


WWW.PTTG.COM

OAWU Does More

Call OAWU for...

- Interim operations
- Operator of Record
- Project management
- Project work
- Lagoon profiles



OAWU can complete your...

- Water & Wastewater Rate Studies
- Water Management & Conservation Plans

(503) 837-1212

www.oawu.net

2020 TRAINING & EVENTS

Date	Class Title	Location	CEU Information	ESAC#, Fee/Free	
February 25	Math for Operators	Salem	0.4 Water/Wastewater	3562	Fee
February 25	Preparing for a W System Survey & WW System Inspection	Salem	0.3 Water/Wastewater	3561	Fee
March 2	Effective Utility Management	Sunriver	0.6 Water/Wastewater	4066	FREE
March 2	Flagger Certification	Sunriver	0.4 Water/Wastewater	4066	Fee
March 2	Cross Connection Specialist Update	Sunriver	0.6 Water	TBA	Fee
March 2-6	42 nd Annual Management & Technical Conference	Sunriver	3.0 Water/Wastewater	4066	Fee
March 10-11	Wastewater Treatment/Collections Certification Review	Salem	1.4 Wastewater/0.7 Water/0.1 OS	3559	Fee
March 18	Job Site Safety	Salem	0.3 Water/Wastewater	3890	Fee
March 31 – April 1	Water Treatment, Water Distribution Certification Review	Tillamook	1.4 Water	4036	Fee
April 2	W. Treatment & Dist. Level 3,4 & Filtration Endorsement	Tillamook	0.6 Water/Onsite	4034	Fee
April 7	Math for Operators	Newport	0.4 Water/Wastewater	3562	Fee
April 7	Preparing for a W System Survey & WW System Inspection	Newport	0.3 Water/Wastewater	3561	Fee
April 7	CPR/First Aid	Independence		N/A	Fee
April 8	Defensive Driving	Independence		N/A	Fee
April 28	Water & Wastewater Emergency Response Plan	Canby	0.4 Water/Wastewater	3915	Fee
April 29	Hazardous Communication Standard (Global Harmonization)	Oregon City	0.3 Water/Wastewater	3459	Fee
April 29	Confined Space	Oregon City	0.3 Water/Wastewater/Onsite	3841	Fee
May 13	EXPO - 2020	Rickreall	0.4 Water/Wastewater	TBA	FREE
May 14	Math for Operators	Redmond	0.4 Water/Wastewater	3562	Fee
May 14	Pumps and Pumping	Redmond	0.3 Water/Wastewater/Onsite	3560	Fee
May 27	Distribution and Collections	Newport	0.6 Water/Wastewater	TBA	Fee
June 9-10	Water Treatment, Water Distribution Certification Review	Salem	1.4 Water	4036	Fee
June 11	W. Treatment & Dist. Level 3,4 & Filtration Endorsement	Salem	0.6 Water	4034	Fee
June 11	Math for Operators	Island City	0.4 Water/Wastewater	3562	Fee
June 11	Pumps and Pumping	Island City	0.3 Water/Wastewater/Onsite	3560	Fee

Levels 1–4 Water Operator Exams

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

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

More Resources

Drinking Water Data Online <https://yourwater.oregon.gov>

Drinking Water Services <https://www.oregon.gov/oha/PH/HEALTHYENVIRONMENTS/DRINKINGWATER/Pages/index.aspx>

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.



DOUG TROYER
owner
CCB# 220488
WWW.UNDERGROUNDTECH.NET

541.990.2791
1280 W 3rd St
Halsey OR 97348
doug@undergroundtech.net



Bill Foster
President

951.280.4488 x112
951.272.4445 Fax
billf@tripaconline.com

475 Klug Circle
Corona, CA 92880
WWW.TRIPACONLINE.COM

QUIZ CORNER

1. A degreasing agent is added at a 16.0 ft. diameter wet well that is 18.4 ft. deep, 4.5 lbs. is required for every 1 ft² of surface area. If the degreaser weighs 8.5 lbs. per gallon and has a concentration of 13.8 mg/l, how many lbs. of chemical must be added to the wet well?
A. 16,639.5 lbs. C. 6,764.3 lbs.
B. 0.78 lbs. D. 904.3 lbs.
2. What capacity blower is required to ventilate a manhole 54 in. in diameter and 49 feet deep, if 8 air changes are required every 60 minutes?
A. 13 cfm C. 6231 cfm
B. 104 cfm D. 249 cfm
3. How much does 9.3 gallons of water weigh?
A. 9.3 lbs C. 77.6 lbs
B. 200 oz D. 83.4 lbs
4. Floatable Solids are easy to measure.
A. True B. False
5. What is the current action level for lead in drinking water?
A. 0.15 parts per billion C. 15 parts per billion
B. 0.015 parts per million D. Both B and C
6. What is the current action level for copper in drinking water?
A. 1.3 parts per billion
B. 1.3 parts per million
C. 0.13 parts per million
D. 0.013 parts per million
7. What is the proper following distance from a vehicle in front of you when conditions are dry weather and good visibility?
A. 2 seconds
B. 3 seconds
C. 5 seconds
D. varies on who is in front of your vehicle
8. Is fall protection covered as part of the confined space rule?
A. yes
B. no
C. only if the space is "permit" only
D. both B and C
9. If 40 pounds of chemical are added to 120 gallons of water, what is the percentage strength of the solution by weight?
A. 2.1% strength C. 5.2% strength
B. 3.8% strength D. 8.4% strength
10. Groundwater occurs in what 2 types of aquifers?
A. Stable and unstable aquifers
B. Confined and unconfined aquifers
C. Impermeable or permeable aquifers
D. Saturated and unsaturated aquifers

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

**OREGON METER REPAIR, LLC**

DAVE SCHLUCKEBIER
President

Mobile: (503) 970-7881 meterdave@hotmail.com

**Secura-Lok**
Ford Meter Box®
Locking Ball Valves



SECURE YOUR DECISION
Lock Open • Lock Closed • Lock Operational
www.fordmeterbox.com • 260-563-3171

Municipal Water Rights: The Persistence

Part One: Municipal Rights

Oregon water law states that all water in the state, from all sources, belongs to the public. The state has moved away from the pure common law prior appropriation system through legislation creating a statutory regime that provides few exceptions to the requirement to obtain a water right permit. Oregon's water law, although now a permitting system, maintains the common law prior appropriation elements of intent, diversion, beneficial use, and priority.

Upon obtaining a municipal water right permit, the municipality is required to construct a system to divert water from a surface source, or construct a well (or wells) to appropriate groundwater. The holder of a municipal water right permit is required to construct a delivery system from the water source and deliver the appropriated water for beneficial use. Beneficial use under a municipal water use definition encompasses domestic use, commercial use, industrial use, fire protection, and even street washing, among others.

Municipalities, typically, have a portfolio of permits that allows a larger appropriation than their current need.

This "speculation" is allowed in some states under the growing communities' doctrine to accommodate growth as more people move into cities. However, Oregon does not recognize the growing communities' doctrine. In Oregon, the time to develop permitted water is limited by the development period stated in the municipality's permit, so that "speculating" for growth by tying up water use through undeveloped permitted water is limited.

Oregon water law requires that a municipality holding a water use permit must complete construction of the proposed diversion and delivery works within 20 years from the date the permit is issued. If a municipality is unable to develop the full permitted use within 20 years, but wants to keep the undeveloped portion for its future growth, the municipality must seek an extension of the permit development timeline.

Under Oregon Revised Statute ("ORS") 537.230 the Oregon Water Resources Department ("OWRD" or "Department") may allow an extension of time to a municipality to



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

Attn: Private & Association Water Companies

**Finally An Insurance Policy Designed Specifically For You,
Save up to 26% off Your Current Premium and Get
Individualized Protection for Your Water District!**

Most water districts end up purchasing costly inadequate insurance protection that fails to provide you protection from the every day risks your water district faces. **WaterPro's** insurance program protects your district's property and its liability exposures including protection for risks like **Accidental Pollution, Failure to Supply, Equipment damage** to pumps, gages, and electrical boards, **Wrongful Acts of Boards, Employment Practices** along with a whole smorgasbord of other add-ons too numerous to list here! Stop paying for mediocre insurance coverage upgrade your protection now! **Call Rex 800-452-6826**

Don't Take Our Word for It, Our Customers Say It Best:

Rex provides EXCELLENT service, he recently went to bat for our little **Water District** and obtained **payment on a claim** that the insurance company denied! **We Don't Worry, We Have Rex**, *Erica Anderson, Christmas Valley Domestic Water Supply, Christmas Valley Or.*

"Rex's WaterPro program is one of the most comprehensive insurance programs I've ever seen. He was able to provide the Oregon Association Water Utilities with a quality program at a great price." *Jason Green, Executive Director*

**Water
PRO**

**BANCORP
Insurance**

Don't Worry, Call Rex at 1-800-452-6826 Today!

of Persistent Conditions

by Laura Schroeder & Derek Gauthier

complete construction or perfect the permit into a water right certificate through completion of beneficial use. The overriding consideration in granting an extension is “good cause.” In determining good cause, the Department will consider the cost of developing the appropriation to beneficial use, good faith, the present demands (population), and whether other governmental requirements have delayed completion or perfection.

Under the current municipal extension law adopted in ORS 537.230(3), the municipality must submit a water management and conservation plan (“WMCP”), which must be approved by the Department. The WMCP will include conditions on the future use of undeveloped permitted water (“green light water”). The most significant condition OWRD will impose is the condition “to maintain the persistence of the fish species that are listed as sensitive, threatened, or endangered.”

Oregon Administrative Rule 690-086-0150 provides a list of conservation measures required in a WMCP, such as an

annual water audit, full metering, leak detection, public education, and rate structure based on quantity of water used. For suppliers that serve a population greater than 1,000, there are enhanced requirements. For example, leak repair, water reuse or recycling, and rate structures or billing schedules that encourage water conservation.

In a second article, we will discuss the implementation of fish persistence conditions on municipal water right permit holders seeking an extension.

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. Derek Gauthier is an associate attorney with Schroeder Law Offices and is licensed to practice in Oregon. 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/>.

An opioid overdose can happen anywhere, anytime.

**Train your team to help save a life at
ReverseOverdose.org**



Breakfast with Jerry

Throwing My Loop by Michael Johnson

In 2003, sportswriter Mitch Albom wrote a book called *Tuesdays With Morrie*. Albom, while sitting out a newspaper strike, found himself free on Tuesdays. He spent fourteen of those days visiting with his old professor who was dying of ALS - a disease it is said that "leaves your soul perfectly awake." That book touched me. It touched me because I had someone like Morrie. Not just for fourteen days though, but for fifty years. His name was Jerry Lytle.

Jerry was born in the East Texas town of Commerce. He went to high school there, worked at his daddy's dairy, played football, and during all that time, his team never won a game. After graduating from high school, he enrolled at the local East Texas State University and played football as well. During his time there, his team never lost a game. A bruising all-conference fullback, he also led the nation in punting in the early fifties. After receiving his degree, he taught school and coached for a number of years before returning to his alma mater. After a time, a new program opened at the university and Jerry was selected to be the administrator. The position was called "Director of Financial Aids." A short time later, Jerry Lytle fell right in the middle of my life. The year was 1969, and I wish I had another word for this but there is only one...I was just a mess.

At age 18, I had achieved the rank of "rodeo bum" and not a very good one at that. Blessed with really good parents, I was an irresponsible ne'er do well. Not evil, not in trouble with the law (well, not much) but silly, immature, and completely without focus. I had achieved one thing though. Somehow after attending college for two years, I had managed to make thirteen...13...consecutive Fs. Still a record somewhere, I'm sure. Then my daddy died suddenly at a very young age. Black despair.

If there was one thing my father wanted more than anything on this earth, it was for me to do well in school. I never did that for him. He never saw me do that. Sliding down into a frightening grief after his death that was lasting too long, I came up with a plan. I would make it up to him! (A bit late you might say, and I agree, but a typical plan for an 18 year old.) So I loaded my cowboy hat in my old truck, along with two pairs of jeans, two shirts, and my boots and set sail for East Texas State 100 miles to the west. I arrived at 5:00 p. m. on a Friday afternoon.

I made my way to the Financial Aids Office and asked the pretty lady there behind the desk if I might talk with a counselor. She informed me everyone was gone for the weekend and I should come back Monday. As I turned away for two more nights in my truck, a voice said, "I'll talk with you." That was the first time I saw him.

He was a handsome young red-haired man - maybe ten years older than me. You could tell from the way he carried himself that surely he had been an athlete considering that powerful body. "Come on in and sit down," he said.

Let me stop here and ask you a question...How many people do you know at any university, business, or large church who would talk to a rather unkempt 18 year old at 5:00 o'clock on a Friday afternoon?

For the next hour I told him my story. I concluded by saying, "That's it, Mr. Lytle. I want to make my daddy proud." He hadn't said a word the entire time. He just listened. Finally he said, "Let's take a ride." We got in his truck and drove eight miles out in the surrounding country finally coming to rest at an old farmhouse. Hay was visible jutting from most windows.

"This is mine and my daddy's," he said. "We can move that hay out this weekend. It's not a bad place at all. This old house has running water, electricity, and heat. We have two large ponds on this place. You can catch some fish. There's plenty of rabbits and squirrel if you want. I'll pay you a dollar an hour to help us work cattle. It's really more fun than it is work. Lots of people come to help. There's my farm gas tank over there. Don't steal me blind, but you can get enough to make it to class. I'll come get you Monday morning and we will start work on your financial aid."

As he spoke those words so fresh in my memory now and so long ago then, thoughts ran through my mind..."Why is he saying these things? Why is he doing this? If I could run a hundred in ten flat, I could see it. If I was a math whiz, yes. If I was a violin prodigy...but I have nothing. I truly am the least of these. The only thing I have is 13 Fs. Why is he doing this?" Little did I know that now five decades later, I would still wonder about his words and on this day, still feel the magic and mystery in me I felt then. And on that day as we were about to leave, he turned to me and said, "You know what we are going to do?"

"No sir," I said. "What are we going to do?"

He was standing next to a small tree in front of that old house. I drive out there sometimes now...where the house was and that little tree was. They are both gone now, but not while I'm standing there remembering they're not. He pointed his finger at me and he smiled.

"I'll tell you what we're gonna' do," he said.

"We are going to make your daddy proud."

And now it's today, fifty years from that first day with him. I'm sitting beside his hospice bed. His grown children I have loved all my life are in the room. The room is still and quiet. We are all thinking about our time with him. My thoughts are about breakfast with him most every day for the last ten years at the local cafe where all the old cowboys go. I notice that red hair is gone now. So is that athletic body. Parkinsons and dementia have taken them both. He opens his eyes and points at me. He wants to tell me something. I lean down to hear him whisper. "You are a good boy," he says.

I take his hand and kiss it for the longest time. "If I am a good boy," I say back to him, "it is because of you."



Michael Johnson Books

HEALING SHINE

Michael Johnson
Award Winning Author
- Cowboy
- Former Academic Failure

Michael Johnson Books

The Most Special Person
Susie, The Whispering Horse
Cowboys and Angels - "Best Non-Fiction 2002"
Little Blue
Great Roping Horse
Tad Pole and Dr. Frog
A Gift For Ida and Bell
Weed Ya!!
Healing Shine - A Spiritual Assignment - "Spur Award 2007"

michaeljohnsonbooks.com

Ed. note - In 1969 Michael began his journey with Jerry Lytle. In three years Michael graduated with his Bachelors With Honors in Psychology. After receiving his Masters from Texas A&M in Kingsville, he returned to Texas A&M Commerce for his doctorate in 1974. After eight books, two national literary awards, and 1200 stage presentations to educators about the value they have in the lives of others, in 2008 Michael was named a Distinguished Alum of Texas A&M - Commerce University. The award has been given to approximately 100 of the 100,000 graduates of the institution.

At the presentation ceremony, Dr. Jerry Lytle sat in the front row.

"Like the Son of Man, he did not come to be served but to serve. To give his life as a ransom so that others could be set free."

—Matthew 20:28

In honor and memory of Dr. Jerry Lytle.
October 1933 – August 2019

dansleakdetection@comcast.net


Dan's Leak Detection
"A Water Conservation Company" LLC

Dan Schaffner
owner/operator

Saving fresh water today ... for generations tomorrow

503.569.5560 www.dansleakdetection.com

Now Serving Municipal & Residential



H.D. FOWLER COMPANY

28800 SW Boberg Rd
Wilsonville, OR 97070

503-783-3490
Cell 503-476-2804
edp@hdfowler.com

Ed Pettett
Outside Sales

WHY AREN'T YOU A MEMBER OF OAWU?

Serving Water & Wastewater Utilities Since 1977

- We provide **onsite technical assistance and training**, meaning that we will come to you and help with any problems you may be encountering with water or wastewater.
- We provide water and sewer **rates and lagoon profiling**. Call OAWU at 503-837-1212 for a bid or estimate. We can save you money!

These are just a few facts about OAWU. The next time you are in need, pick up the phone and call us before hiring outside help. We are here to help. ***It's our industry. It's what we do.***

To join or for more information,
visit **www.oawu.net** or call 503-837-1212.

Oregon Association of Water Utilities
935 N. Main Street
Independence, Oregon 97351
Phone (503) 837-1212
Fax (503) 837-1213 www.oawu.net



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

2020 OREGON ASSOCIATION OF WATER UTILITIES

MEMBERSHIP APPLICATION

Member Name: _____

Mailing Address: _____

City/State: _____

County: _____ ZIP: _____

Email: _____

Phone: _____

Contact Person: _____

Number of Hook-ups: _____

Were you referred? By whom _____

Type of System:

☐ Water ☐ Wastewater ☐ Both

Membership Category

☐ Regular Member

☐ Associate Member

☐ Individual Member

Membership Dues

\$ _____
See schedule below

\$500.00

\$100.00

Regular Member Dues Schedule

1 to 100	\$75 + 38 cents per connection
101 to 500	\$85 + 38 cents per connection
501 to 1,000	\$90 + 38 cents per connection
1,000 and up	\$100 + 38 cents per connection
Maximum dues is	\$1,100.00

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

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

Membership Types

Regular Member

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

Annual Dues: See Regular Member Dues Schedule

Associate Member

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

Annual Dues \$500.00 per year

Individual Member

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

Annual Dues \$100.00 per year

Benefits of Membership

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



Please return to OAWU:

935 N. Main St., Independence, OR 97351
or email: office@oawu.net or fax: 503-837-1213

MB20



MEMBERS



62nd Court Mutual Water Company
 Adair Village, City of
 Adams, City of
 Adrian, City of
 Agate Water System
 Albany Rifle & Pistol Club
 Alpine Crest Improvement Dist.
 Amigo Villa Water Service, Inc.
 Amity, City of
 Ananda Center at Laurelwood, Inc.
 Arch Cape Water & Sanitary District
 Arlington, City of
 Arrah Wanna Water Company
 Arrowhead Mobile Home Park
 Aspen Lakes Utility Company, L.L.C.
 Athena, City of
 Aumsville, City of
 Aurora, City of
 Avion Water Company
 Baker City, City of
 Bandon Dunes Resort
 Bandon, City of
 Banks, City of
 Barlow Water Improvement District
 Barlow, City of
 Bay City, City of
 Bay Hills Water Association
 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
 Bradley Lake Estates
 Brandy Bar Landing, Inc.
 Breitenbush Hot Springs
 Bridge Water District
 Brightwood Water Works
 Brooks Community Service District
 Brownsville, City of
 Buell-Red Prairie Water District
 Bunns Village Properties, LLC
 Burns, City of
 Burnside Water Association
 Butte Falls, Town of
 Camp Rilea
 Canby, City of
 Canby Utility
 Cannon Beach, City of
 Canyon City, Town of
 Canyonville, City of
 Carlton, City of
 Cascade Locks, City of
 Cave Junction, City of
 Cedarhurst Improvement Club, Inc.

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 Water Supply &
 Improvement District
 Creswell, City of
 Crooked River Ranch Water Co-Op
 Crystal Springs Water District
 Culver, City of
 Dallas, City of
 Dayton, City of
 Dayville, City of
 Deception Creek Mobile Park
 Deer Creek Estates Water Association
 Deerhorn Community Water
 Association
 Depoe Bay, City of
 Deschutes Valley Water District
 Detroit, City of
 Dexter Oaks Mobile Home Park
 Dexter Sanitary District
 Diamond Peaks at Leisure Woods I & II
 Diamond 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
 Fir View Water Company
 Fischer's Place Mobile Home Park
 Fishhawk Lake Recreation Club, Inc.
 Florence, City of
 Forest Park Mobile Village
 Fossil, City of
 Garden Valley Water Association
 Garibaldi, City of
 Gaston, City of
 Gates, City of
 Gearhart, City of
 Georgia Pacific-Wauna
 Gervais, City of
 Gilchrist Water Co., LLC
 Gladstone, City of
 Glendale, City of
 Gleneden Sanitary District
 Glenmorrie Co-op Association
 Glide Water Association
 Goble Water Association
 Gold Beach, City of
 Gold Hill, City of
 Government Camp Water Company
 Grand Prairie Water Supply Company
 Grand Ronde Community Water
 Association
 Grand Ronde Sanitary District
 Granite, City of
 Grants Pass, City of
 Green Oaks Mobile Ranch
 Greenhoot Properties
 Haines, City of
 Halfway, City of
 Hall's Trailer Court
 Halsey, City of
 Harbor Water PUD
 Harrisburg, City of
 Hebo Joint Water/Sanitary Authority
 Heceta Water PUD
 Helix, City of
 Heppner, City of
 Hermiston, City of
 Hidden Valley Improvement District
 High Lostine Owners Association
 Highland Subdivision Water District
 Hiland Water Corporation
 Hillsboro, City of
 Hines, City of
 Hood River, City of

Hopewell Water Company
 Hubbard, City of
 Hunnell Hills Community Water
 System
 Huntington, City of
 Ice Fountain Water District
 Idanha, City of
 Idleway Improvement District, Inc.
 Imbler, City of
 Independence, City of
 Indian Meadow Water Company
 Interlachen Water PUD
 Lone, City of
 Irrigon, City of
 Island City, City of
 Jackson County Parks
 Jacksonville, City of
 Jasper Knolls Water District
 Jewell School District
 John Day Water District
 John Day, City of
 Johnson Creek Water Services
 Company
 Johnson Park & Water Co.
 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 Grove Water District
 Lake of the Woods Resort, LLC.
 Lake Oswego, City of
 Lakeshore Terrace
 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
 Association, Inc
 Lebanon, City of
 Lexington, Town of
 Lincoln City, City of
 Little Beaver School, Inc.
 London Water Co-op
 Long Creek, City of
 Lostine, City of
 Lowell, City of



MEMBERS



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

Oregon Caves Nat. Monument & Preserve
Oregon Shores Beach Club, Inc.
Oregon Shores II
Oregon Water Utilities-Cline Butte
Oregon Water Utilities-Mtn. Lakes
Oregon Water Utilities-Southview
Oregon Water Wonderland II Sanitary District
Orient Drive Mobile Estates, LLC
Otter Rock Water District
Pacific High School
Paisley, City of
Paradise/Rogue Meadow WS
Parkdale Water Company, Inc.
Perrydale Domestic Water Association
Philomath, City of
Phoenix, City of
Pilot Rock, City of
Pine Grove Water District
Pinecrest Water Company
Pioneer Park Water Co-op
Pioneer Village Water Company, Inc.
Pleasant Valley Water Company
Pleasant View Water Company
Polehn Heights Water Association
Ponderosa Pines Water Company
Port Orford, City of
Power City Water Co-op
Powers, City of
Prairie City, City of
Prineville, City of
Quincy Water Association
Rainier, City of
Redmond, City of
Redwood Water Service, Inc.
Reeder Ranch, Inc.
Reedsport, City of
Rhododendron Water Association
Richland, City of
Rickreall Community Water Association
Riddle, City of
Rimrock West Improvement District
River Meadows Improvement District
River Point Farms, LLC
Riverbend-Riverbank Water District
Rivergrove Water District
Riverside Water District
Riverview RV Park
Roats Water System, Inc.
Roberts Creek Water District
Rock Creek Water District
Rockaway Beach, City of
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-Keizer School District
Salem, City of
Salmon River Mobile Village
Sandy, City of

Scappoose, City of
Scio, City of
Scotts Mills, City of
Scravel Hill Water Co-op
Seal Rock Water District
Seaside, City of
Seneca, City of
Shadow Hills Park Water Cooperative
Shangri-La Water District
Sheridan, City of
Sherwood, City of
Siletz Community Water System
Siletz, City of
Silver Falls School District 4J
Silverton, City of
Sisters, City of
Skylane Farm
Skyview Acres Water Company
Sleepy Hollow Phase 1 Water
Sodaville, City of
South Fork Water Board
South Hills Water System, Inc.
South Umpqua Water Assn.
Southwood Park Water District
Spirit Mountain Gaming, Inc.
Sportsman's Park Water Association
Spray, City of
Springwater Estates HOA
St. Paul, City of
Staffordshire Water System, Inc.
Stahlman Summer Homes Assn.
Stanfield, City of
Star Satellite Improvement District
Stayton, City of
Steeves Mobile City
Storlie Water Company Inc.
Sublimity, City of
Suburban East Salem Water District
Sumpter, City of
Sun Mountain Water System
Sunridge Estates
Sunrise Water Authority
Sunriver Environmental LLC/Sunriver Water LLC
Sunset Acres Water Company
Sunset Lake RV Park
Sunset Water Systems, Inc.
Sunshine Village Water Association
Sutherlin, City of
SW Lincoln County Water District
Sweet Home, City of
Talent, City of
Terrace Mobile Plaza
Terrebonne Domestic Water District
The Dalles, City of
The Rim at Aspen Lakes
Three Rivers School District
Tierra Del Mar Water Company
Tigard, City of
Tillamook Bay, Port of
Tillmook County Creamery Association
Tillamook, City of
Timber Water Association
Toledo, City of
Tollgate Water Company
Tone Water

Trappist Abbey
Tri City Water & Sanitary Authority
Troutdale, City of
Tualatin Valley Water District
Turner, City of
Twin Island Community Water
Twin Rocks Sanitary District
Tygh Valley Water District
Ukiah, City of
Umatilla, City of
Umpqua Basin Water Assn.
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
Warren Water Association
Warrenton, City of
Wasco, City of
Water Wonderland Improvement District
Wedderburn Sanitary District
Welches Water Company
Weldon Mobile Home Park
West Hills Water Company
West Linn, City of
West Slope Water District
West Yamhill Water Company
Western Heights Water Association
Westfir, City of
Weston, City of
Westport Water Association
Wheeler, City of
Wickiup Water District
Willamette Water Company
Willamina, City of
Wilsonville, City of
Winchester Bay Sanitary
Wi-Ne-Ma Christian Camp, Inc.
Winston-Dillard Water District
Wood Village, City of
Woodburn, City of
Yachats, City of
Yamhill, City of
Yoncalla, City of
Young Life's WA Family Ranch
Young's River Lewis & Clark WD
Zig Zag Water Cooperative, Inc.

WELCOME, NEW MEMBERS!

UGSI Solutions	James Hughes	Jeff Buskirk	Lynn Wahle	Richard A. Howard Sr.	Ross Lambert
King Sales NW	Chad Marshall	Bill Diemer	Michael Fery	Rick Abbott	Michael Murphy
Continental Utility Solutions, Inc.	Douglas J. Rumpel	Tracy Heide	Conrail Smith	Andrew Gates	Eric Kopf
	Logan Warrick	Joe Cable	Ryan Sticka	Daniel Houglum	L. Wayne Stonelake
South Umpqua Water Assoc.	Timothy Sanders	Jeff Smith	Keith Turner	Tim Anderson	
		Dave Terrusa	Tim Falk	Jonathan Ketterman	

INDIVIDUAL MEMBERS

Abbott, Rick	Clark, Joshua	Gott, Craig	Katrena, Scott	Merry, Mark	Schroder, Michael C.	Thayer, Brandley
Alexander, Sandra	Clement, Tony	Graham, Doug	Kelly, Seth	Monnin, Brian	Schumann, Jeff	Thompson, Kamen
Allison, Danny	Close, Greg	Greene, Michael	Kessler, Dale	Monroe, Donald Jr.	Schwab, Jeremy	Thompson, Matt
Anderson, Kenneth	Cohen, David	Halverson, Bruce	Ketterman, Jonathan	Mooney, Gregory	Scott, Brett	Tupper, Sean
Andre, Alistair	Cooper, Mark	Hanks, Kevin	King, Andy	Mooney, Ronald W	Scott, Keri	Turner, Keith
Anson, James	Cox, Hanna	Hardy, Vance	Kirby, Derek	Mordhorst, Casey	Scowden, Mark	Valencia, Albert M.
Anthony, Joe	Crockett, Manuel	Hart, Steven	Klinger, Martin	Morris, Brady S	Seelye, Shawn	Van Houten, Boz
Barnes, Chase	Daniel, Morgan	Hawkins, David	Kopf, Eric	Murphy, Michael	Sherlock, Christopher	Vanderkin, Rick
Bartlett, Randy	Davis, Guy P.	Hawkins, Michael	Kunders, Aaron	Neal, David	Simmons, Edward	Vangrunsven, Tom
Bell, Ron	Desroche, Ron	Heath, Corey C.	Lane, Larry	Nelson, Ron	Smith, Conrail	Vollmer, Jodi
Bock, Paul	Diemer, Bill	Heide, Tracy	Leahy, Terrance	Newberg, Leo	Smith, Jeff	Wabschall, Steve
Boyd, Jeff	Dillard, Bob	Henrickson, Brooke	Lease, Janet	Northrop, Raymond	Smith, Larry	Wahle, Lynn
Braden, Larry	Durfee, Kenneth	Higgins, Chuck	Leeper, Clifford	Novac, Samuel	Spaulding, Claudia	Warrick, Logan
Branch, Jean	Elder, Dave	Hinzman, Terry	Lerma, Patricio	O'Connor, Monty	Springer, Rondi	White, Philip
Brenneman, Scott	Evans, Peter	Hoefler, Matthew J.	Liepzig, Mitch	Odell, Mark	Stark, Chris	Whittenburg, Gregory
Bruketta, Andrew	Falk, Tim	Houglum, Daniel	Lockard, Darrel	Orchard, David	Statchwick, Jeff	Williams, Benjamin
Buckley, John	Farthing, Laura	Howard, Richard	Lyons, Nathan	Perry, Richard	Steadman, Brian	Wimberley, John
Burton, Howard	Fery, Michael	Howe, Phebe	Marshall, Chad	Petersen, Cody	Steele, Mark	Winders, Kristal
Buskirk, Jeff	Fitzwater, Jim	Hubbard, Tom	Marshall, John	Pointer, Todd	Steidler, Matthew B.	Winterton, Robbie
Cable, Joe	Folsom, Jamaal	Huerta, Osbaldo	May, Ryan	Porter, James	Sterger, Justin	Woll, Art
Campbell, Mike	Fonoti, Ray	Hughes, James	McFadden, Tim	Rader, Jonathan	Sticka, Ryan	Woodward, Steve
Carlson, Rob	Franklin, Henry	Hume, John	McKinney, Donald S.	Robinson, Rob	Stirling, Ethan	York, Gary
Ceballos, Oscar	Free, Derek	Jacob, David	McLauchlin, Gary	Rumpel, Douglas J.	Stonelake, L. Wayne	
Chamberlain, Brian	Gates, Andrew	James, William K.	McMahan, Boaz	Runge, Michael	Strait, William	
Chipman, Kenneth	Gentry, Mike	Johnson, Grady	Meadows, Steve	Sanders, Timothy	Strassner, Bob	
Clark, Harvey	Gettman, Tim	Jones, Uriah	Menninger, Terry	Schaafsma, Eric	Terrusa, David	
Clark, Jamie	Gordon, Matt	Judah, Dave	Merrell, Thomas	Schmidt, Lonny	Tew, Shawn	

ASSOCIATE MEMBERS

Advanced Control Systems	Diamond Maps	Kennedy/M&H Valve	Rosemount Analytical & Detection
AKTIVOV Asset Management	Ditch Witch West	King Sales NW	Schneider Water Services
American AVK Company	DN Tanks	Lakeside Industries/EZ Street	Schroeder Law Offices, PC
American Flow Control	Edge Analytical Laboratories	League of Oregon Cities	Sensus USA
Anderson Perry & Associates	EJ	Lehr	Special Districts Assn of Oregon
Aqualitec Corp.	Empower Retirement	Madewll Products Crop.	SUEZ Water Advanced Solutions
Backflow Management, Inc. (BMI)	Enviro-Clean Environment, Inc.	Master Meter, Inc.	Superior Tank Co., Inc.
Badger Meter, Inc	Ferguson Enterprises	Mountain States Pipe & Supply Co.	Taurus Power and Controls, Inc.
Bainbridge Associates, Inc	FloHawks	Mueller Company	Taylor Made Pump Stations
Bancorp Insurance	Frank J. Martin Company	Neptune Technology Group	Tesco Controls, Inc.
BergerABAM	Frost Engineering Service Company NW	Nicor, Inc.	The Automation Group
BioLynceus, LLC	Furrow Pump, Inc.	Olson Engineering	The Ford Meter Box Co., Inc.
Branom Instrument Co.	G.T. Gordon & Associates, Inc.	Optimal Control Systems	TMG Services
Business Oregon Development Dept.	GC Systems, Inc.	Oregon Meter Repair	Tripac
Calhoun & DeJong, Inc.	General Pacific, Inc.	Oregon Public Utility Commission	Trumbull Industries
Cascade Columbia Distribution Co.	Harmsco Filtration Products	Owen Equipment Company	U.S. Cellular
CIMCO Sales and Marketing	Harrang Long Gary Rudnick PC	Owens Pump & Equipment	UGSI Solutions
Clow Valve Company	HASA Inc.	PACE Engineers, Inc.	Umpqua Research Co.
CoBank	HD Fowler Company, Inc.	Pacific NW Sales	Underground Tech.
Consolidated Supply Co.	Heard Farms, Inc.	PCE Pacific, Inc.	US SAWS
Continental Utility Solutions, Inc.	Honeywell Smart Energy	Pittsburg Tank & Tower Co.	USABluebook
Copperhead Industries	Hose Solutions	Process Engineered Water Equipment, LLC	Vision Municipal Solutions
CORE & MAIN	Hurley Engineering Company	PumpTech Inc	Waterlab Corp
Correct Equipment, Inc.	HYMAX by Krausz	Puttman Infrastructure, Inc.	Whitney Equipment Company, Inc
CUES	Instrument Technology Corporation	RDO Equipment	Xylem, Flygt Products
Dan's Leak Detection, LLC.	Jacobs	Romac Industries, Inc.	
DFW Plastics Inc.	Kamstrup Water Metering		



Innovate and win your day using

Neptune[®] 360[™]

Manage, share, and secure your data.

Neptune 360 makes useful insights and analysis easy to share. Take action with a solution designed to grow with your utility's needs without added IT infrastructure costs.

neptunetg.com/neptune360



Oregon Association of Water Utilities
935 N. Main St.
Independence, OR 97351
503-837-1212 Fax 503-837-1213
Address Service Requested

PRSRT STD
U.S. POSTAGE
PAID
SALEM, OR
PERMIT NO. 463

USABlueBook is proud to be the only 18-year Diamond Sponsor of the National Rural Water Association



USABlueBook[®] is **THE SOURCE** for On-Line Analytical Equipment

Automate your process and free up your time

Shrinking staffs and regulatory pressures make it tough to run a plant these days, but automating your system can take some of the burden off your team. We stock process analyzers, accessories and reagents from Hach, Endress+Hauser and other trusted brands. Plus, our Technical Support reps can help you put together the right system for your specific needs. Check out our complete selection of process analyzers on pages 1186-1249 of Master Catalog 129 or at www.usabluebook.com.

Request your **FREE** catalog today!
800-548-1234 • www.usabluebook.com

USABlueBook[®]
Get the Best Treatment™