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Spring 2013
Vol. 35, No. 2

35th Annual Conference Highlights
Sunriver, Oregon

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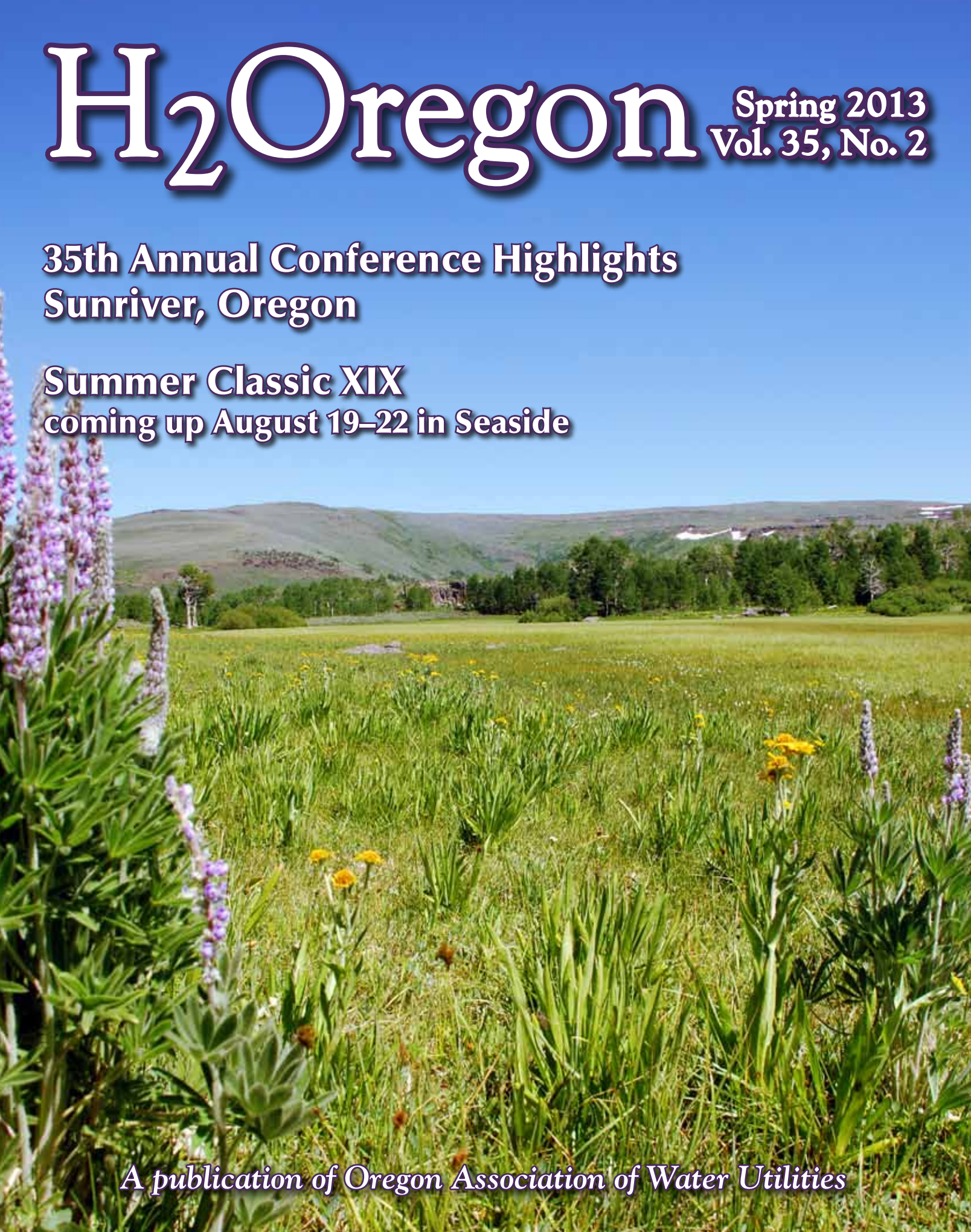
coming up August 19–22 in Seaside



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

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

Don't Find Fault— Find Remedy

by Heath Cokeley, Circuit Rider

"Don't find fault, find remedy," Henry Ford once made this statement and I believe these words to be as true today as they were when Mr. Ford was building his automotive empire. In my mind, this doesn't mean that one should never find fault with anything, we all know there are plenty of flawed things in our world. I think Henry Ford was saying; instead of only bringing a problem to the table, bring both the problem and at least one possible solution.

Mr. Ford needed to develop a way to bring cars to everyday American citizens. Many of us know that cars were around in the early 1900's, but they were very expensive and only the wealthy could afford them. Henry Ford wanted to solve the issue and bring cars to working class men and women. Car prices were high because of the time it took to hand build each and every car. Most of the cars from this era had parts built to fit that exact car, so the parts couldn't be transferred between cars. How could Mr. Ford streamline this process in order to bring the cost of every car built down and be able to pass that cost savings on to the customer? You may have guessed it; the assembly line. It is amazing how a simple idea could so drastically change the face of our country. How did Henry Ford come up with this great idea? He didn't. I hear how Henry Ford invented the assembly line and I even remember being taught that in school, but the simple truth is he didn't. He did come closer than anyone else to perfecting the assembly line by trying various methods and bringing it into the assembly process that we would recognize today.

But where did his idea for the process come from? Many believe it came from Beer. Do I have your attention now? I have read stories that Mr. Ford toured Breweries that used assembly lines in their bottling process, but the assembly line actually goes back further than that. Eli Whitney first used the assembly line in the United States in 1797 to build muskets with interchangeable parts and before that the idea was in a book by Adam Smith from 1776. My point is that Henry Ford did not need to come up with the idea of an assembly line in order to benefit from them.

Ever hear the saying "don't reinvent the wheel?" This idea is being practiced every time you use a form or a template to create a document. How did you write your Consumers Confidence Report (CCR) for the first time? This reminds me: make sure to get your CCRs out before July. I have said all of this to get to my main point of this article.

I continue to be amazed by the caliber of people I have met in this industry. I hear people say "we need to find a way to do this" more often than "it can't be done." The idea that something just can't be done has always puzzled me. If your system has a problem, chances are that someone else has dealt with that same issue and they possibly figured out a way to solve the problem. That is why teamwork is as vital in this industry as any tool you may carry in your utility truck. If you have a problem that seems impossible to solve, sit down with your crew and brain storm ideas, call another water or wastewater utility and discuss it with them, or give one of us Circuit Riders a call and we will throw our two cents in. Another set of eyes on an issue never hurts. Take the necessary time to use all the resources that are available in order to find a remedy; this will include one another. We have a common goal, so let's not get stuck because we don't feel we can turn to someone else, but move forward which may involve getting others involved in finding solutions. If you are one that is called upon to give input, try not to be critical of the one asking for help. They had to humble themselves to realize that they needed to ask for help; we should be kind and help if possible without degrading each other. With that said, I hope you are all geared up for good weather projects and I'll see you down the road.

HIGHLIGHT

35th Annual Management and

This year's conference was a success! The week gave us sunny weather mixed with a small winter storm that sent us some beautiful snow. Many of the attendees were able to catch up with old friends and make new ones within the industry. OAWU staff enjoyed serving the members of the association and providing assistance to those in need. Sunriver staff again provided genuine, friendly, excellent service, and great food.

The conference sessions were lead off by Jason Green, OAWU Executive Director, and Mark Snyder, OAWU Board President. They welcomed attendees and discussed the state of your association. They were followed by Russ Cooper, National Rural Water Association Director. Russ provided an update on the issues the industry is facing at a national level. Mark Landauer then presented an update regarding the legislative issues at the state level.

Back again to Sunriver this year, by popular demand, was Joe Chambers. Joe talked with us Tuesday and Wednesday about becoming an influencer. The attendees who went to this presentation were able to better understand the necessary interpersonal skills for communicating between employee, board, boss, coworkers, those you serve, and more. Joe, as usual, was inspirational and thought provoking.

The OAWU annual business meeting was held after class sessions ended on Tuesday. President Mark Snyder presided over the meeting as attending members heard committee updates, saw board members re-elected. The slate of board members who were re-elected to the board were:

- Mark Snyder, K-GB-LB water district.
- Don Chandler, Nantucket Shores Water Co.
- Mark Beam, Ice Fountain Water District.
- Micah Olson, City of Columbia City.

Many attendees were present at the awards banquet, on Wednesday evening, as well as some of their families. The food was great and many good conversations could be heard throughout the Great Hall. At the end of the night we had a light hearted Q and A session with some of the OAWU staff. The 2013 Manager and Operator award recipients are as follows:

- The Manager of the Year award went to Jerry Arnold from West Slope Water District.
- The Water Operator of the Year award went to Jerry Anderson from the City of Wilsonville.
- The Wastewater Operator of the Year award went to Kevin Turner from the City of Scappoose.
- The Rookie of the Year award went to Chris Sutherland from Seal Rock Water District.
- The Friend of Rural Water award went to Roger Prowell from Chenowith Water PUD.

Special Awards for 2013 included: one to our board President, Mark Snyder-Kernville-Gleneden Beach-Lincoln Beach Water District, for 2 years of service as President. The awards for Integrity Committed to Excellence 2012 went to: Scott Berry - OAWU Programs Manager/ Circuit Rider, Tim Tice - OAWU Projects Manager/Training Specialist, Hans Schroeder - OAWU Circuit Rider, and Mark Russell - OAWU Office Manager.

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

Our Best Tasting Water award recipients this year were Arch Cape Domestic Water District for Best Surface Water and Deschutes Valley Water Dis trict for Best Ground Water. The submissions are judged by 5 individuals who hold different responsibilities in the water community of Oregon for best ground water and surface water, then these winners go head to head for best overall water in Oregon. The winner of the Overall Best Water category was Deschutes Valley Water District. Their water will be flown to Washington DC and submitted for judging in the Best Water in the Nation contest.

At the Exhibitors Hospitality Night on Thursday there was good food and drink, many door prizes, raffles, and we had an auction for a massage, Sunriver stay, and Golf package for four, won by Kriss Schneider from Schneider Water Services, the money went to support the Jeff Swanson Memorial Scholarship fund. Afterwards the "hat" was passed around the room for additional contributions to the Scholarship fund, raising the total to $1182.25. Special thanks go to Dale Fletcher at GC Systems for previously supporting this scholarship fund with a substantial donation during 2012. DJ Ezell from Rivergrove Water District won the Best Hard Hat contest.

The raffle winners were: Dale Fletcher from GC Systems won the 47" LG LED TV/LG Blu-Ray DVD Player and the winner of the WaterPac raffle, a Remington 700 CDL .30-06 rifle with a Leupold scope, was Todd Crawford, City of Lebanon.

The winners of the ping pong and cribbage tournaments were announced. First place in ping pong was Darryl Walker from the City of Cannon Beach. Kris Smith from Avion Water Company came in second. Jason Devine from the City of Sublimity came in 3rd. David Crider from Water Wonderland came in first for cribbage, receiving a championship board. Jeremiah Wooden from Sunriver Water, LLC came in second. Scott Dixon from Seal Rock Water District came in third. Find the Logo contest winner was Susan Bush from Greenhoot Properties.

We wish to thank our Associate Members for their donations, time and support of this conference and of course the members who continue to believe in and support the Oregon Association of Water Utilities. Be sure to sign up for Sunriver next year, the first full week of March 2014, as there will be a slate of new classes to attend, people in our industry to visit with, food to eat, and fun to enjoy. See you there! Best wishes to you, our friends.

TS REVIEW

Technical Conference in Sunriver

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OAWU thanks our speakers for sharing their time and expertise at the 35th Annual Conference.

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Doug Anderton, NRWA, President
Jeff Austin, Utility Service Company, Inc.
Walter Barkan, Vineyard Mountain Water and Improvement Dist
Chris Bayham, DEQ
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Rich Varalla, Tripac Fasteners
Bob Willis, RH2 Engineering, Inc

New Threshholds for

by Tim Tice, Projects Manager

Discussions for proposed confined space regulation changes began in 2011. The changes will emphasize looking at the rule through realistic practices. Below is a link to the Oregon OSHA website where the proposed changes can be viewed: http://www.orosha.org/pdf/notices/proposed2012/txt_chngs_div23-03212012.pdf.

The administrative order adoption is tentatively set for spring 2013, but no effective date has been set. The requirements of this standard are similar to the requirements of the existing standard, but the proposed changes are written to clarify employer obligations and eliminate confusing requirements.

The most recent document in the Federal Registers that mentions confined space rulings, Volume 76 No. 248 page 80739, Dec. 27, 2011, merely discusses the use of barriers and practices to provide pedestrians a vehicle or other barrier, as necessary, to protect entrants from external hazards. It is recommended to review how both the Oregon OSHA and the Federal OSHA rules to see how they reflect one another instead of assuming the Oregon rules are directly adopted from the federal rules.

Both the current rule and this proposed rule require a written permit space program. This proposal also requires that, on fixed sites, the program identifies all confined spaces and the reason why permit spaces are classified as permit spaces.

The new rule eliminates the distinction between a permit-required confined space (permit space) and a non-permit required confined space. Under the current rule a space with no actual or potential hazards is a confined space. A space with actual or potential hazards is a permit-required confined space. Under the proposed changes a permit space is always a permit space and can only be entered with a permit or under alternate entry procedures.

Taken directly from OAR 437-002-0146, section 9, "Alternate Entry", the new proposed rule seems to simplify the process in the following manner:

(a) Permit spaces may be entered without a permit when:

(A) All hazards have been eliminated; or

(B) All physical hazards, if any, have been eliminated and all atmospheric hazards are controlled with continuous forced-air ventilation.

Note: For purposes of this rule, "hazard elimination" means that specific measures are taken to ensure that hazards cannot exist within the space.

Note: Continuous forced-air ventilation does not eliminate atmospheric hazards. It only controls the hazards.

The space is still classified as a permit required confined space, but alternate methods are allowed for entry. Alternate entry is allowed when all hazards have been eliminated, or all physical hazards are eliminated. Atmospheric hazards must be controlled with constant ventilation and checked/verified with constant monitoring. It also requires that the entrant have an effective means to communicate with others outside of the space to summon help if necessary.

The single exception to the rule is as follows:

(b) Exception: Alternate entry cannot be used to enter a continuous system unless you can positively isolate the area to be entered from the rest of the space or can demonstrate and document that all hazards from the system cannot exist during the entry.

In the proposed rule a higher level of safety is incorporated when using equipment. All equipment must be used and maintained per the manufacturer's instructions and the employees expected to use the equipment are trained on how to properly do so. This point holds true operation of multi-gas monitoring instruments.

Confined Spaces

Be aware, another rule that is habitually forgotten is personal protective equipment. Can the attendant be exposed? At what level of exposure is the attendant subjected? What type of substance could cause the exposure? A disposable coverall will provide some level of protection, especially when you're working in the messy stuff.

Another aspect to working in and around confined spaces is rescue, the type of rescue, who will perform the rescue, etc. Evaluate the rescue method your place of employment has established. Confirm that those established methods are understood and practiced, because some of the recommended features may be neglected.

Through many conversations, people have shared their methods and approaches to staying in compliance with these rules. They are summed up in the following:

Evaluate your workplace for confined spaces and categorize those spaces in a method that makes sense to your team. Criteria may be space hazards, design, or purpose. Note: Each space comes with a unique set of circumstances; classify your spaces as such.

Create a permit that coincides with the catalogue of spaces. Each permit will provide details of the space, protection factors, equipment required, etc. as it relates to the individual space.

Example: Reservoir versus Booster Station. Are both similar in configuration, atmospheric hazards, lock out tag out procedures, etc.? No! Then why would we have a single confined space document to determine safe entry into both of these spaces? Previously, we would write a checklist to ensure all of the policies and procedures were covered, but in a new age of thinking safety, maybe we should look at varied approaches. The single document often caused more confusion when it was encountered than provide answers. A single document does not do a good job at recognizing and dealing with all the hazards associated with multiple spaces.

Outline your paperwork in a fashion that specifies a permit used for a particular set of spaces; we can call that permit "CAT-1". Format the permit to provide yes and no answers for the questions that convey the possible concerns associated with that particular space. Create permit "CAT-2" for a space that has other concerns or potential hazards.

With this approach field supervisors can go directly to the safety binder, find the space identified with the day's task, and pull the appropriate permit associated with said space.

Confusion creates inhibition, therefore specifics become overlooked, and the task misunderstood. Initially, additional work is required to develop this type of permit paper system. Once the permit system has been streamlined, risks are reduced due to a more direct approach in the paperwork. There is no better feeling than to have a crew come in from the field having completed a task with no injuries. I believe we forget this point all too often.

Prior to the construction season beginning, take some time to review the policies and procedure for your place of employment. Reread your "confined space program" and recommend that your co-workers do the same. A good wager would be that questions arise after reading the written outline.

Please note: It is recommended that a review of the most current OR-OSHA and Federal OSHA rules pertaining to and regulating confined spaces/entry prior to writing, amending, or implementing your confined space program. Additionally, it is strongly recommended to consult an attorney and OR-OSHA when writing a new plan or amending an existing plan and to regularly review your existing plan and practices.

If you wish for assistance in understanding the rule changes, look at our training calendar for an upcoming class or call the office to schedule an on-site visit.

The best that life has to offer!

2013 Threats to Our Water

by Jack Hills, Source Water Specialist

Is Our Water Supply Being Threatened—Globally, Nationally, Locally?

Seems like you can look anywhere and find items pertaining to the dire straits we are in when it comes to our drinking water supply; how much we need personally, how long we can survive without it, how it is being polluted globally, how it is coming into short supply, how energy production is consuming it, how weather affects the supply (like droughts) how to provide for survival, and a myriad of other challenges for our water.

With our instantaneous information highway, the internet, we now have become addicted to "surfing" the web to find immediate answers to all of our questions and our hunger for ideas, details, and "what's going on over there?" It's all available to us with a few clicks or swipes of the finger. How soon will it be that we only have to "think" about or imagine the information we want? Well that's out of my league. Let's just concentrate here on the threats to our drinking water.

A search of global drinking water will show you that the lack of clean water is the leading cause of sickness and death; nearly a billion people need water from improved sources. Did you know there is a Global Drinking Water Quality Index Development and Sensitivity Analysis Report, released by the United Nations Environmental Program? If you have a bent for a global view you will be excited to read about the Drinking Water Quality Index (DWQI), Health Water (HWQI), and Acceptability Water (AWQI) in Europe, Asia, Oceania, Africa, and the Americas; try reviewing the data and evaluating the calculation formula. You can also compare the drinking water guidelines of World Health Organization (WHO), European Union, (EU), United States EPA, (USEPA), and Australia. Seriously, if that interests you, here is a web site: http://www.un.org/waterforlifedecade/pdf/global_drinking_water_quality_index.pdf.

Personally, I am more interested in seeing the articles where there are "boots on the ground;" where organizations, companies or small businesses have put in operational wells, piping systems and delivered safe drinking water to villages and peoples who were without access to clean water and sanitation. Again, on the internet you can find so many sites that are working hard to make these improvements. It is not my intent to endorse any group or activity; I just came by this information by surfing the web. Here's one (randomly) where drinking water improvements have made clean water accessible to families in need: Global Water "Changing the World – One Village at a Time" http://globalwater.org/index.htm. Don't you get a thrill out of seeing those children's smiling faces as fresh water is flowing out of a small pipe from a new well head across their open hands? I do.

That makes me think about my own family, including thirteen grand children, and today's world and theirs of the future, right here in America. What will their challenges be just in getting clean water to drink? We have such a sophisticated and regulated system that we hope there will continue to be an abundant supply of safe water.

Over one hundred years ago, my great grandparents left the city life of Chicago to homestead un-inhabited lands in the prairies of the Great Plains. They lived in a sod house near a creek, which I suppose at first was their main supply of water. Later, wooden structures were built, water wells drilled and wells equipped with windmills to provide water to livestock. Today the landscape on the prairie is quite different. There is a mound of dirt with sage brush and tufts of grass where

Supply, Global to Local

the "soddy" melted by the weather and a few rusty artifacts remain from those days of old. The horizon is different too; wind mills of a different kind, producing electricity, and towers for oil and gas production that don't just drill a single hole straight down, but now go down a mile then horizontally for a mile or more in all directions from the center. You are also aware of the hydraulic fracturing of these oil and gas wells to extract the resources and the controversial nature of the practice. This is another topic that will result in a whole lot of information when searched on the Internet. I'm not here to debate one side or the other, just to point out, from the perspective of maintaining our available and safe supply of water for future generations, we need to use common sense and be good stewards of all resources.

We can find that the production of energy, not just in drilling / frac'ing, but nuclear, and coal power plants (more globally than U.S) and the increased demand for water is projected to double by 2035. It just continues to remind us of the critical value of this natural resource we need for our very existence. We need to protect it. Nationally, water supplies have been affected recently by drought. Again, the internet is such a massive resource of information; one can acquire way more than can possibly be absorbed. As an example, here is a quick source and visual of how drought has affected the U. S. in 2012: http://droughtmonitor.unl.edu/.

Locally, have you investigated what can most readily affect your source of water supply? Do you know where your drinking water originates? Is it from wells, or from a watershed? Does it need to be treated for your consumption? Is the source area protected and the potential for contaminates mitigated? Dust off those State Source Water Assessments, review your source water delineations, evaluate the impact of the listed potential contaminate sources to your public water supply and develop a Source Water Protection Plan.

As always, if you need any assistance with a Source Water Protection Plan, call us at the OAWU office, 503-837-1212. We are here to serve your needs.

The Last Go-Around

by David Branham, Wastewater Technician

As we advance into the second decade of this century, much has been done in the wastewater industry. Although the biological treatment matrix hasn't changed, giant steps have been taken to improve nutrient removal, as well as, capture more of the suspended solids in the waste stream.

As more and more wastewater plants are being upgraded and in many cases being replaced with new systems, the "conventional activated sludge plant" seems to be slowly, but surely giving way to more efficient types of systems such as:

Sequencing Batch Reactors (SBRs) with their small foot prints and the capability to equalize flows and loads, as well as their ability to improve effluent qualities have become very popular on the western side of the mountains, where there is high rainfall.

The "Oxidation Ditch" with its ability to more readily use the Nitrification-Denitrification process has also become very popular.

Also, the crème de la crème of the industry, of course, is the Membrane Filter-type system. Long used in water treatment, this type of system is a relative newcomer to wastewater treatment. With its ability to get near "0" effluent readings in every category, nutrient, as well as, suspended solids; small wonder it is and will continue to be used more and more in the industry.

And last, but not least the Lagoon System. Well, what can I say? Probably the most misunderstood type of wastewater treatment, but is the most predominant treatment type in this state, and many others. In its simplicity one would almost think that no operator was needed at all, however it has been said, and I believe, that in actuality the lagoon biology is the most complicated of all.

All this brings me to the crux of this article: as treatment plants are upgraded and/or replaced, the plant often times will also be upgraded in operational status; in other words, going from a Level II to a Level III status. When this happens the owner of the system may be surprised to learn that the Level II operator that has operated the system all these years now needs to upgrade his/her certification level. This is where the conundrum begins. As many of you probably are aware, for whatever reason, our industry has not been successful in attracting younger workers and this has left a shortage of qualified operators. The "Baby Boomers" that are working in the industry are now retiring or getting close to retirement and, thus, have little or no interest in upgrading their certification levels. This leaves a big gap in the system as younger operators don't have enough time on the job to qualify for Level III status. In most cases it takes about eight years to go from Level I to Level III status.

One way to fill this gap is to hire what is called an "Operator of Record" to supervise the system until the operator achieves the proper level of certification or a new operator can be hired at the proper level. If, as an owner, you are contemplating using an Operator of Record, the following list is a good guide to have on hand so the Operator of Record can come into your system and more easily and efficiently take over operations.

WHAT DOCUMENTS SHOULD THE OPERATOR HAVE AT THE WASTEWATER TREATMENT FACILITY?

Operation & Maintenance Manual to include managerial responsibilities, effluent quality requirements, system description, organizational and staffing plan, sampling and process control, record keeping/reporting procedures, emergency response plan, manuals of practice,

technical references, and other items as listed below.

- NPDES or WPCF permit and other associated documents (e.g. permit addendum, permit action letter, Stipulation and Final Order).
- Permit referenced plans (biosolids management plan reclaimed water use plan, spill contingency plan).
- Permit referenced federal and state regulations (e.g. water quality standards, plan review, operator certification).
- DEQ approved Discharge Monitoring Report blank forms (or DEQ approved computer generated) and instructions.
- Discharge monitoring reports records, including laboratory and instrumentation data bench sheets, calibration and maintenance records, all original strip chart recordings, records of data used to complete the permit application (federal regulations require that all monitoring information be retained for a period of at least 3 years from the date of the sample, measurement, report, or application).
- Biosolids monitoring records (federal regulations require that all monitoring information be retained for a period of at least 5 years, or longer as required by 40 CFR Part 503, from the date of the sample, measurement, report, or application).
- Plans and specifications (record drawings ["as-built drawings"] for the collection and wastewater treatment system).
- Written laboratory procedures and guidance, and QA/QC guidelines.
- Reporting procedures for spill of raw or inadequately treated wastewater.
- Maintenance instructions and records.
- Daily operating log book.

And so, shortly I will be wishing you a final farewell, as I am one of the "Baby Boomers" mentioned above, that will be soon retiring. Good luck and keep up the good work.

—Dave

CEUs: Are They Worth It?

by Mike Collier, Training Specialist/Operations

"Ahhh, I thought I was done with school, teachers, and staring at the front of a class room," might be something that has crossed your mind when you first began this profession and found yourself back in the classroom. You are not alone; many professionals must regularly complete continuing education units. Why are they important? What is the benefit of completing them? How do we get the most out of them?

Continuing education units (CEUs) are required for water and wastewater System Operations Specialists who have tested and wish to maintain their certification. Our field is not the only profession in which CEUs are required – most fields, where there are licensed professionals, continuing education is required in order to maintain the license. This includes teachers, medical professionals, architects, arborists, engineers, social workers, and many more.

Sometimes I like to correlate attending and receiving CEUs to a child eating vegetables. At first the child may not like the vegetables, but they are forced to eat them, because they are good for them. Over time the child often begins to realize that the vegetables are food for them and may actually start choosing to eat them. Then, as time passes, the child eventually realizes that they are starting to like vegetables and may even begin to recommend them to others.

In our profession CEUs must be completed and turned in to the state every few years (depending on your certification). One CEU is defined as ten hours of ESAC approved education. The CEU records can also be used by employers to determine the level of appropriate training for a particular job. Accruing CEUs can also be used to show a boss that we are doing our very best to increase our knowledge and, hopefully, improve job performance.

Even when we are confident with the operation of our particular system and could operate it in our sleep, it is necessary to stay on top of what is the newest and greatest information. The water and wastewater related fields are always coming up with new technology, new information, and new rules. These are the things that System Operations Specialists must stay abreast of. There are only a few ways that a governing authority can be confident that the System Operations Specialists are learning about these new trends and one of these ways is through CEUs.

Passing a certification test only shows that at the time of your testing you were versed in the most current information for that particular certification level. CEUs help to show that we are continuing to be competent in our field and have not become stagnant. Also, they are needed in order to advance our careers. To get the next certification level we need to put in the time and have the required number of CEUs.

Because some of us are supplying drinking water to the public and others are sending treated effluent into the environment, it is even more appropriate for us to stay informed of the latest and greatest information. We have the lives of many people in our hands and usually we are using the public's money to do the job. We want to do the best job to the best of our ability; in order to do this, it is important to know the most up-to-date information. This helps us to be good stewards of that which has been given to us. We have the health and needs of many people in the palm of our hands. In addition, receiving CEUs and keeping up-to-date will help us continue personal development, not for the consumer, or for the boss, but for ourselves. This should give us a personal boost in the pride we can show in our work.

To make the most of the time we spend in the classroom, it is important to make a point to attend classes that interest us or one that directly relates to our system. Doing this should help us pay attention and learn something from the class. The more interested we are, the more likely it is that we will pay attention. Try to take away one to three main points from each class. We will not remember everything, but if we can add a few things from each class to our toolbox, the attendance would have been well worth it. The new items in our toolbox may help us immediately, we may find them useful in the future, or we may find someone else who needs the information that we now have.

As we attend more classes and have more time on the job, the classes may begin to feel repetitive. We may begin to think that we know this information and have seen it before. If this is the case, then I challenge you to put your own class together and give teaching a chance. Use what you have been through and learned along the way to develop class material and find an opportunity to teach others these things. This will not only strengthen your knowledge of the material and help someone else begin to understand the information, but will also begin training you in a new skill set. If you have a class ready, but need a venue – give OAWU a call and we can try to fit it in to our training schedule.

One way to get CEUs is to attend an OAWU conference, short school, free class, or fee based class. Check out our training calendar to see the available classes; you can find it on our website or in our magazine.

Standard Operating Proced

Article from Florida Rural Water by Robert McVay

GENERAL DISCUSSION

Hurricanes, tropical storms and intense thunderstorms support a conclusion that more severe flooding conditions than previously experienced or predicted from years past may occur. These flooding problems may be exacerbated in communities where development has altered the natural buffering affects such as wetlands or woodland area that previously had higher levels of water retention and infiltration. Additionally, conditions that support build up antecedent wet conditions intensify floods and may produce floods of significantly high reoccurrence frequencies that have not been anticipated. Since hurricane flood surge strength is generally not predictable to a specific location and flash floods give no warning of their intensity, new Standard Operating Procedures (SOPs) that have not been used in the past are suggested to protect utility facilities.

To be effective, flood preparation must include developing written procedures that include standard checklists. Reviewing these checklists prior to a threatening event can reduce utility damages and ensure higher levels of operating reliability.

STANDARD OPERATING PROCEDURES (SOPS)

Flood planning requires the utility to prioritize areas with the greatest likelihood to cause critical problems is left unattended. These three progressive priorities are listed below.

1. MAINTAINING WATER TREATMENT AND DISTRIBUTION PRESSURE

Positive water pressure provides the major source of protection from microbial and chemical contamination of the water system and from the intrusion of rocks, stones and silt that may be difficult if not impossible to remove. Water pressure also provides the primary means of fighting fire for many municipal systems. Thus maintaining water pressure before, during and after a flood should be the top priority and protection and response efforts should be planned accordingly.

2. PROTECTING WASTEWATER LIFT STATIONS, COLLECTION LINES AND TREATMENT FACILITIES

Wastewater Plants are often at the lowest points in a drainage basin and plant processes are often inundated in severe flooding situations. The loss of a wastewater plant in the buildup of hydraulic pressure upstream that can result in the popping of manhole covers that then allow for inflow of surface water. Wastewater plants also provide a central area for collection and disposal of wastewater and loss of treatment moves spills to areas that may not have equivalent capacity of dilution and movement of partially treated wastewater downstream.

3. PROTECTING WATER AND CHEMICAL STORAGE FACILITIES

Water tanks of any sort should be topped with water before a server storm to prevent floating. Likewise chemical storage tanks that are empty should be filled with water and their contents pumped to other tanks.

PRE-FLOOD PLANNING

Pre-flood activities include actions that identify flood prone areas where utility infrastructure is located and include relatively low cost improvements that provide higher level of protection than would normally be considered.

These activities include: 1.) Flood Risk Management and Critical Facility Identification, 2.) Targeted Pre-flood Mitigation Actions, 3.) Flood Monitoring and Prediction and, 4.) Flood Condition Assessment and Response.

1. FLOOD RISK MANAGEMENT AND CRITICAL FACILITY IDENTIFICATION:

Flood Management identification targets critical facilities that are located adjacent

dures for Flood Preparation & Response

Submitted by Scott Berry, Circuit Rider/ Programs Manager

to rivers and water impoundments used for flood management. Methods to identify these facilities can be made facilitated by the review of basic FEMA flood maps and use of SLOSH Models to determine the likelihood of flooding. Facilities are then identified and targeted in these areas and are then ranked by their importance in continuous utility operation. Major facilities such as production wells, water and wastewater treatment plants and major lift stations are targeted as primary candidates for flood mitigation actions even though they may be protected for a 100 yr. event. Where high water marks on fences or buildings have been observed at particularly higher levels from rainfall events over the past 5 to10 years than previously recorded, these should be used as references for events that are likely to be exceeded in the near future.

2. TARGETED PRE-FLOOD MITIGATION ACTIONS

Unlike most conventional program for flood mitigation where structures are protected by on historical rainfall and flood events, flood mitigation does not include a risk assessment as the primary driver. This is because the probability of the event can not be reasonably determined from past history. The analysis is performed on two factors. The importance of the facility in providing continued operation of water or wastewater service and the facility's proximity to water bodies that may reach water levels that are beyond those predicted are the primary criteria used in the initial screening.

Determining the mitigation approached are then developed by asking the following questions in three different categories, Major Construction Activities, Minor Construction Activities and Pre-flood Construction Activities:

Major Construction Activities

- Are the dikes or berms that are in-place contiguous and can they function at higher elevations by relatively minor filling or build up of surrounding ground?
- Are the existing dikes, berms or other structures adequate to withstand erosion that may be caused by changes in velocity and higher water levels and can they be strengthened by the addition of rip-rap or other erosion control measures?
- Where construction of physical barriers and raising of protective separations are not feasible can a smaller area be protected with a cofferdam built around the facility?
- Can provisions be made to use existing block buildings as protection by sealing off doors, window vents or louvers?

Minor Construction Activities

- Can on-site transformers and motor controls be raised to elevations at least 3 feet higher than the predicted 100 yr flood?
- Can motor control panels and SCADA panels be raised to at least 3 feet higher than predicted by a 100 yr flood?
- Can a pump be permanently mounted in a dry area to allow for pumping floodwaters away that might enter the building under extreme conditions?
- Can floor drains be plugged and water under pressure be evacuated from the building by makeshift piping?
- Can any of the construction activities listed in the major construction activities above, be accomplished by the use of sandbags or permanent concrete slabs?

Pre-Flood Response Activities
(these actions should be taken when the actions above were not implemented or are unlikely to prevent flooding)

- Disconnecting and Raising Electric Motors to above flood stage and providing quick disconnects (accessible electrical connections to motor pigtails to facilitate movement)
- Disconnecting and removing SCADA equipment especially UPS type units that will damage submerged equipment
- Sandbags are often used to protect structures and equipment from floodwaters and their proper placement can be invaluable in a flood event. Sandbags are used for protection of buildings and other structures near creeks or lakes and in similar situations where water is rising with little or no current. They may also be placed to divert flowing water away from structures.

3. FLOOD MONITORING AND PREDICTION

Floods are generally divided into three categories based on the utility's ability to prepare and respond. These categories are Storm Surges which occur in coastal ocean areas, Flash Floods caused by local or regional unusually high rainfall intensities and River Flooding caused by significant periods of moisture coupled with moderate to intense rainfalls over long durations. These categories my overlap but can generally be used for setting targets to initiate the response.

Flood and Hurricane Warnings are given by the National Weather Service and NOAA Weather Radio. Flood alerts are given according to the following descriptions:

Storm Surges

Storm surges are a phenomenon of hurricanes that are a danger to coastal utilities. These type of events often have several days of warning allowing the utility to prepare. The predicted impact of the expected storm surge is provided by the National Weather Service.

The extent of the surge is related to the position of the high tide at the time of hurricane landfall. In this type of flooding the water surge is accompanied by very strong winds, and the combination of

wind and saltwater that inundates utility facilities will like destroy them completely. Physical protection of electrical components is the best form of protection.

Generally for any hope of recovery after saltwater inundation, motors must be kept wet to keep salt from drying out and special procedures must be used to remove saltwater that must be incorporated immediately after the flooding. Recovery techniques for saltwater damaged motors can be obtained from FRWA. Generally, electrical panels or motors inundated with saltwater will not be salvageable and replacement will be necessary.

Flash Floods

The National Weather uses Doppler radar to predict flash floods. Doppler radar is accurate to the street level. This ability allows the Weather Service to provide more accurate flash flood warnings.

Flash floods will typically occur within a couple of hours and thus adequate response time will not be available to a utility. Like any flood threat the best approach is physical protective measures.

Motors and controls submerged in fresh water can sometimes be restored if response is timely. Procedures for restoring control panels and motors are found in the following section.

River Flooding

In general, river flooding is predicted by establishing the likely peak elevation (flood crest) reached by a river by the National Weather Service. Under normal conditions river flooding can be predicted several days in advance. Where antecedent moisture conditions are high and localize rainfall is predicted to heavy and continuous, river flooding may quickly change to a flash flood.

River flooding generally will allow protective sand bags to be placed around structures to provide dry areas for the continued operation of transformers, motor controls and motors.

Where buildings are protected with sand bags provisions must be provided to remove water that will accumulate when the outside water level exceeds the building slab elevation. This will include water which will backflow through floor drains, and electrical conduits or flow through fan louvers or under doorways. An assessment of flood protective measures to prevent seepage, inflow and leaks must be undertaken. A method of pumping water out of structures must be included in any flood protection plan.

4. FLOOD CONDITION ASSESSMENTS AND RESPONSE

Flood Assessments

Flood water damage is progressive and starting immediately after flooding occurs. Thus the faster mitigation is initiated the less damage to buildings and equipment will occur.

Moisture in an electrical circuit will carry stray current and result in direct shorts damage to electrical equipment. High humidity will cause the moisture to collect on electrical components when the temperature cools, such as in the evening hours. The first priority in a salvage operation is to remove all sources of moisture from the building itself.

Silt and trapped moisture inside closed electrical components will combine to reduce resistance and carry higher loads of stray current. Thus the moisture and silt must be removed. Silt is also hydroscopic, so leaving it in place will result in moisture being attracted with resultant electrical equipment failure.

Procedures drying buildings and for restoring flooded electrical equipment can be obtained from FRWA.

Flood condition assessment identifies the current damages, current threats and future threats from the flood event. Depending on the severity of the event, these are categorized as: forecasting, detection, assessment, warning and response. In the preliminary flood damage assessment phase, recovery and mitigation are both addressed and reconstruction, flood defense and recovery are all included in the assessment for future actions.

Forms for identifying flood damage potential can be obtained from FRWA.

POST-FLOOD RESPONSE

The safety of employees must always be the first priority in a post flood response. The following precautions apply:

Return to the area only after it has been declared safe by local emergency management officials. Partially or totally submerged transformers that may be live are dangerous and can cause electrocution.

Identify potential electrical hazards and solicit advice and assistance from the power company to minimize the dangers. Always report and stay clear of downed or damaged power lines.

Turn off all utilities associated with utility facilities to prevent further damage and minimize electrical and explosive hazards.

Never attempt to start a motor or control panels that has been submerged by water. This will result in irreversible damage to systems that may be salvageable.

It is important to begin salvage operations for flooded electrical equipment as soon as possible (ASAP) after flood waters recede below them if they are to be salvaged in-place.

Damages from flooding can be significantly reduced by adherence to these SOPS. More information on specific flood mitigation techniques can be obtained from Florida Rural Water Association.

Engineering America

Announcing Our Expansion into the Northwest with the Acquisition of Aquastore® NW, Inc. of Donald, Oregon

On September 28, 2012, Engineering America announced that it has recently acquired the assets of Aquastore NW, Inc. of Donald, Oregon. Max Marcott, President and Principal owner of Aquastore NW, Inc., will continue to manage the construction field operations and Kendall Smith, National Sales Manager of Engineering America, will manage all sales activities for this newly acquired division of Engineering America.

Tony Belden and Max Marcott

Max Marcott commented, "This transaction with Engineering America allows continued successful long term service to our valued customers in Oregon, Washington, Idaho and Alaska, and meets both my personal and business visions for the future."

Engineering America is a 100% employee owned business, originally incorporated in 1980. The corporation is headquartered in Oakdale, Minnesota, and has regional offices in Colorado, Kansas, Arizona and now Oregon.

Together, Engineering America and Aquastore NW, Inc. look forward to providing excellence in service and products, while leveraging our combined strengths, talents and resources to better serve our clients.

"This merger of Engineering America and Aquastore NW, Inc. is an exciting opportunity for both companies. Several months of negotiations have resulted in a mutually acceptable agreement that allows strengthened overall sales, delivery, construction and service of CST brand tank and dome products to the customers of the Pacific Northwest region of the United States."

Tony Belden
President of Engineering America

In 1980 we made an innovative promise that our tanks would never need to be painted. No Aquastore® tank has been painted since – we are the authentic glass-fused-to-steel!

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In The End

By Roger Prowell
Manager, Chenowith Water PUD

With my tenure on this earthly plane coming to somewhat a quick terminus, I would like to share some final thoughts on the elixir of life, our beloved eternal water.

We, as professional purveyors, hold the essence of our communities in our hands and in our hearts. If you do not have water in your heart, the water quality in your system will suffer from lack of emotional attachment/connection/pride/love. Water is entwined with all of life, with our civilization, with our vision and dreams of the future. We are the water, without our skills and thoughts … homes become drought plagued.

As water centered humans, our deep immersed mission is to irrigate the flowering of the human mind, to spring and flow toward complexity and understanding of our place among the galaxies, to refresh our basic organic molecules that drive our poetry and creativity and reflect mountains and the moon on quiet lakes.

As purveyors, we are closer to the beauty and magic of water and can appreciate fluid mechanics while holding water's secrets and inspirations close to our inner beings. Water has dissolved our personal differences into a greater good, a purpose driven life.

A purpose driven life filled with desire to purvey life giving water to future generations more efficiently, of higher quality, of increased flows to our hydrants and stronger and more balanced hydraulics. Our desire to do this good task never ends; we purveyors have eternal duty and honor, a lifetime filled with a vision and hope and direction.

Is not this a perfect life?

When You Least Expect It

Hans Schroeder, Circuit Rider

As a Circuit Rider, it amazes me what I witness while traveling the State of Oregon. I think I can speak for my fellow Circuit Riders as well, that we could probably write volumes about our travels. I need to share a story that happened to me while traveling this past December.

I was driving quite cautiously over a very icy Highway 58 from Oakridge to La Pine. Apparently, the 80,000 pound Freightliner ahead of me thought the conditions were even worse than I did. He was traveling at a speed that never exceeded 18 miles per hour. As I finally arrived in La Pine, I came upon an accident on the north end of town. As I slowly approached I noticed a State Police Officer just starting to divert traffic. I pulled over and asked if any assistance was needed. He stated that more help was on the way and since there wasn't any bodily damage the scene was under control.

The accident was caused by a small car on a side street crossing the north bound traffic lane to head south on Hwy 97. The car directly hit the side of a fifth wheel travel trailer that was approximately 36 foot long, being pulled by a one ton Dodge pickup. Not sure how he could miss such a vehicle entering town at 20 mph.

An old broke down cowboy was getting out of the Dodge to assess the damages to his fifth wheel camper. One pant leg still tucked in his boot as if he were in a hurry to get on the road that morning. Flakes of hay fell off his coat as he exited his pickup. Grey cowboy hat tipped back on his head as if in disgust about the whole situation.

As I witnessed these actions and emotions from a side street, I couldn't stand it anymore; I had to go visit with this fella. I needed to make sure the driver and passenger were ok. My emergency response training had kicked in, so I made sure the scene and people involved were safe. As the officer was taking a report from the other driver, I approached this cowboy. Much to my amazement, and his too, it was my Uncle Dave, whom I hadn't seen in over 2 years! A grin out of the side of his bearded face and his bright eyes were what greeted me. Slowly shaking his head and rubbing his forehead Uncle Dave says, "Hansel, what the heck are you doing over here?" I stated, I had heard a family member had been in an accident, so I came as fast as I could from the Springfield area. He just chuckled.

I asked him what he was doing dragging that trailer around in the middle of winter. He said he and Aunty Peg were just heading down to Arizona for Christmas. He had made it a whole 50 miles before getting into this slight delay, called an accident. The damage was minimal. All Uncle Dave had to do was screw the door closed that stored the propane tank. Superficial scratches and paint marks were, fortunately, all that occurred.

Then I followed Uncle Dave and Aunty Peg to the other drivers' insurance company, which happened to be located right there in La Pine. While Uncle Dave got things settled at the insurance office, it was a great time for Aunty Peg and me to get caught up on our families, children, grandkids and activities.

As I started to head down Hwy 97 North, I began to reflect back on this accident and I came to this conclusion: Once a servant always a servant. All of us that work in the public are trained to make sure all are safe in any sort of situation. The training that we receive, such as: First Responder, CPR training, Emergency Response, Flagger training, or even NIMS, can all come in handy when we least expect it.

OREGON ASSOCIATION OF WATER UTILITIES
2013 TRAINING & EVENTS SCHEDULE

Date	Class Title	Location	CEU Information	ESAC#	Fee/Free
April 4	Vulnerability Assessments & Emergency Response Planning	Cornelius	0.6 Water/Wastewater	2523	FREE
April 9	Mixed Media Filter O&M for WTP Operators	Roseburg	0.4 Water	2058	Fee
April 10	Control Valves	Salem	0.7 Water / 0.7 Wastewater	2286	FREE
April 16	Excavation Safety & Confined Space Entry	The Dalles	0.6 Water/Wastewater/Onsite	2356	Fee
April 18	MIOX Treatment	Salem	0.2 Water/Wastewater	2524	FREE
April 18	Math for Operators	Salem	0.3 Water/Wastewater	2376	Fee
April 18	SDWA Update	The Dalles	0.4 Water	2287	FREE
April 23	Water Meters	Roseburg	0.6 Water	2069	FREE
April 9-11	Water (WT/WD) Certification Review	Bend	1.8 Water/0.7 WW	2112	Fee
April 25	Water Meters	Coos Bay	0.6 Water	2069	FREE
May 1	Making Sense of the GW and Other Rules	Boardman	0.4 Water	2530	FREE
May 7-9	Water (WT/WD) Certification Review	Salem	1.8 Water/0.7 WW	2112	Fee
May 9	Developing Your O&M Manual	Florence	0.6 Water/Wastewater	2113	Fee
May 14	Legal Perspective of Water Rights	Salem	0.4 Water	2532	Fee
May 22	Lagoon Wastewater Plant O&M	John Day	0.7 Wastewater	2355	Fee
May 29-30	Utility Management Certification	Independence	1.4 Water/Wastewater	TBA	Fee
June 5	Developing Your O&M Manual	La Grande	0.6 Water/Wastewater	2113	Fee
June 6	Math for Operators	Baker City	0.4 Water/Wastewater	2377	Fee
June 6	SDWA Update	La Grande	0.4 Water	2287	FREE
June 13	Water Operations Review	Roseburg	0.6 Water	TBA	Fee
July 9	Legal Perspective of Water Rights	Tillamook	0.4 Water	2532	Fee
July 11	Vulnerability Assessments & Emergency Response Planning	Newport	0.6 Water/Wastewater	2523	FREE
July 17	SDWA Update	Klamath Falls	0.4 Water	2287	FREE
August 7	Well Performance Issues	Bend	0.4 Water	2059	FREE
August 7	Taking care of Your Wtr Rights: Permits, Extensions, & Certs	Bend	0.2 Water	2522	FREE
August 13	Making Sense of the GW and Other Rules	Island City	0.4 Water	2530	FREE
August 14	Excavation Safety & Confined Space Entry	Bend	0.6 Water/Wastewater/Onsite	2356	Fee
August 19-22	Summer Classic XIX Conference	Seaside	1.7 Water/Wastewater	TBA	Fee
September 12	Control Valves	Newport	0.7 Water / 0.7 Wastewater	2286	FREE
September 17-19	Water (WT/WD) Certification Review	Grants Pass	1.8 Water/0.7 WW	2112	Fee
September 25-26	Utility Management Certification	Bend	1.4 Water/Wastewater	TBA	Fee
September 26	Activated Sludge Process	Springfield	0.6 Wastewater	TBA	Fee
October 8-10	Water (WT/WD) Certification Review	Salem	1.8 Water/0.7 WW	2112	Fee
October 15	Excavation Safety & Confined Space Entry	Independence	0.6 Water/Wastewater	2356	Fee
October 23-24	Wastewater (WWT/WWC) Certification Review	Salem	1.4 Wastewater/0.6 Water	2295	Fee
November 4-7	Small System Operator's Conference	Florence	2.0 Water/Wastewater	2259	Fee
November 20	Water Operations Review	Grants Pass	0.6 Water	TBA	Fee
December 2-5	15th Annual End of Year Operator's Conference	Hood River	2.0 Water/Wastewater	TBA	Fee
December 17	Developing Your O&M Manual	Fairview	0.6 Water/Wastewater	2113	Fee
December 18	Excavation Safety & Confined Space Entry	Fairview	0.6 Water/Wastewater	2356	Fee

2013 State Water exam dates	Application Deadline
May 16, 2013	March 15, 2013
October 17, 2013	August 15, 2013

*For additional **water exam information**, please visit http://oregon.gov/DHS/ph/dwp/certif.shtml*

2013 State Wastewater exam dates	Application Deadline
March 29, 2013 (statewide)	February 1, 2013
April 4, 2013 (Pendleton)	
Year round, open schedule	

*For further **wastewater exam information**, please visit http://www.deq.state.or.us/wq/opcert/opcert.htm*

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

Oregon ESAC/CEU accreditation
Phone/Fax: 503-698-8494
info@oesac.org www.oesac.com

For more information on any class by OAWU, please contact the office at 503-837-1212, office@oawu.net or visit www.oawu.net.

ADDITIONAL OAWU BENEFITS & SERVICES

Sewer I&I Testing • Smoke Blower • Rate Studies • Additional Equipment: Line Locator, Leak Detector, Etc.
Operator of Record Services • Well Testing • CCR Templates & Report Preparation
System Performance, Evaluation & Options • Water Conservation Management Planning • Lagoon Profiling
Plan Review • Job Referrals, Announcement & Services

FOR AVAILABILITY & PRICING CALL OAWU: (503) 837-1212

Starting Your Own Horse

Throwing My Loop
by Michael Johnson

Dr. Harry Anderson has a television show on the RFD-TV network. The show is called "The Advice Barn," and it consists of a wholesome few minutes (and don't we need that on TV these days) driven by viewer call-ins. Dr. Harry handles questions about nutrition, and on occasion, I discuss topics viewers present regarding colts, horsemanship, and questions relating to "problems" a horse (could type "owners" here) might be displaying. Dr. Harry is a good man, and certainly kind to let me appear with him, so naturally the last thing I would ever want to do is cause a controversy…but recently, I did.

Here was the question. Dr. Harry says, "Michael, we have a question from someone who has been roping for a time – a year or so - and she writes, 'I have been roping – and learning – on someone else's horse, and I have five-year old mare that is very calm with many good qualities, and I really would like to rope on her. Do you think I could start training my own mare – help her learn how?'"

Then Dr. H says, "What do you think, Michael? Can we – or should we – start our own horse?"

I said, "Absolutely."

Apparently, some people disagreed with that.

I received at least a half-dozen calls that evening with comments ranging from, "I disagree strongly with that," to "Worst advice I ever heard." One friend – sorry, ex-friend – said, "I have been roping twenty years, and I would never start my own horse!" Hmmmm. (I couldn't help but wonder if that's why this fellow has had a dozen horses in the last ten years.) By his own admission, he says, "I don't know what's the matter with horses these days. When they come here, they're fine. In a couple of months, they go south on me."

Hmmm. Wonder what on earth could be causing that?

What I meant when I said we should start our own horse was that then we will understand in a new way what Ray Hunt meant when he said, "If you would choose to work on your horse, you will learn you must work on your self." I did not intend for people to think I meant we should take our horse to some remote location and run fast cows all day – on our green horse – all alone. Not what I had in mind at all.

What I meant was this…

I took our Australian Shepherd, Rowdy, to a herding dog clinic once taught by the master, Orin Barnes. "I've never sent Rowdy to a trainer," I said. "I know I should have."

Mr. Barnes replied, "If you didn't go with Rowdy to the trainer, two weeks after he came home, Rowdy would be just like he was before he left."

Orin Barnes was teaching me to take responsibility for my dog.

I remember something my friend and good horseman, Oklahoman Kenneth Colson, said to a student once. The fellow was complaining about all the things his horse was doing wrong – and how unlucky he was to have such a stupid horse. Kenneth said, "The day you start taking responsibility for your horse's behavior – all his behavior – your horsemanship will improve overnight."

So my intentions were good. (Isn't that always the case? Our intentions are always good.) I was trying to convey the idea that we should not send our horse to someone else like we send our four-wheeler to a mechanic. We must invest our time and our selves if we want our horse to reach his potential.

On the other hand…

While I will never put this in a column or even tell another human being (you can bet on that, buddy) the thought has crossed my mind that my detractors might just have a point. There are some people that even I agree should never start their own horse. One is my neighbor… Mad Dog. Everybody has someone in their family like Mad Dog.

Mad's favorite activity is to sit in the coffee shop every morning with the old guys and tell anyone who will listen what a great horse trainer he is. His conversation goes something like this…

"I know their mine, but the horses I've trained are as good as any National Finals Roping horse you're gonna' find. I've trained every one of them myself, and while they ain't all neon lights and silver saddles, they'll do anything – and more – than them "candy-fancy" ones will do. Yessir, I've trained them right."

That sounds really good until you actually see Mad Dog's horses rope. It is an ordeal to get any of them to go in the arena, and when it comes his turn to rope, everybody takes a break – 'cause we

know it's going to be a while before Mad Dog gets his horse in the box. Once finally in, the horse shakes and trembles, and his head is usually the exact same height as the Eiffel Tower. If the horse moves, Mad nearly jerks his head off and spurs him as hard as he can – and then he yells really loud. When he leaves the box, the horse always rears 'cause Mad's pulling on him so hard, the horse can't breath. Then because Mad has made the horse late, he hits him with the rope. Once Mad throws his loop, his left hand jerks violently and the horse – trying to help – goes left. Mad then hits him for going left too early. After all that - with his horse right on the verge of a nervous breakdown - Mad says, "Yep, I can train'em as good as anybody goin' down the road."

I've always wanted to hit Mad, but you know, I can't. He's my neighbor and I like his wife and kids. (I feel sorry for them 'cause they cry all the time – his dog does too.) And besides – if I ever did hit him, I couldn't stop…'cause Mad's the kind of guy you couldn't hit just once.

So after all that, I still think you should start your own horse. After all, who do you think is "starting" him every time you swing your leg over him? How effective would it be if we dropped our kid off at the school and said, "Here…you make a good person out of him." If we take responsibility for our marriage, our children, and our horse's behavior… well, all that makes for a stronger world.

But I must admit – I have to agree with my detractors on one point…

There are some people who shouldn't start their own horse.

Need to Review Water or Sewer Rates? OAWU Can Help!

Take advantage of your Association's services – We Do Rates!

OAWU has built a solid reputation for providing water and wastewater systems with factual, user-friendly, and defendable Rate Studies. Our rate studies, once implemented, have allowed many systems to obtain Capitol Improvement funding from various private and government lending agencies. An OAWU rate study can also provide a plan for systems to gain the capitol to "pay as you go" by outlining a strategy to maximize and streamline revenue and thereby allow water/wastewater system administrators to forecast projects that may be funded in-house. OAWU will provide you a professionally compiled rate study and supporting documentation that will allow you and your council or board to adopt new rates necessary to meet your system needs.

For bids or estimates, call OAWU at 503-837-1212.

QUIZ CORNER

1. What percentage of serious car accidents are related to driver fatigue?
   A. 10% C. 40 %
   B. 20% D. 60%

2. How many "awake" hours are equivalent to the same hazardous effects as being drunk?
   A. 14 C. 18
   B. 20 D. 16

3. What agent is responsible for reporting lab results to the regulatory agency?
   A. Water system owner
   B. Board of Health chairperson
   C. Lab technician
   D. Sample collector

4. What is the only county in Oregon that does NOT have a stop light?
   A. Harney
   B. Umatilla
   C. Morrow
   D. Malheur

5. If a given well is open to more than one aquifer, for example it is perforated in both an unconfined and a confined aquifer:
   A. The term commingling applies.
   B. Oregon law prohibits such wells.
   C. If the more vulnerable unconfined well becomes contaminated, the contaminates could potentially spread to the lower confined aquifer.
   D. All of the above.

6. When a groundwater well is located in the vicinity of a surface body of water and it is determined that the well is deriving part of its water from the surface water source; that is called…
   A. Hydraulic connection
   B. Surface water drawdown
   C. Continuous pumping cone
   D. All of the above

7. How many chemicals make up the regulated TTHMs and HAA5s?
   A. 9 C. 5
   B. 12 D. None

8. What was the most likely disinfectant used if Bromate is formed after the disinfection?
   A. Chlorine
   B. Bromine
   C. Ozone
   D. Green Sand

9. Which piece of equipment and/or materials is typically required when cleaning a UV system?
   A. special scrub brushes
   B. special abrasive pads
   C. dilute acid solution
   D. strongly alkaline solution

10. A pump curve plots the relationship between the system head and the _____.
    A. fluid temperature
    B. flow
    C. impeller type
    D. casing type

11. Who won the best tasting drinking water contest in Oregon in 2013 and will be representing Oregon in the National best tasting Drinking water contest in 2014.
    A. Deschutes Valley Water District
    B. Franks Corner Market and Deli
    C. Sled Springs Water District
    D. High Cascade Water District

12. HDPE Pipe will expand and contract with temperature changes and there for you should always install extra and let it sit over night to allow it to adapt to the ground temperature.
    A. True B. False

ANSWERS

1-B, 2-D, 3-A, 4-C, 5-D, 6-A, 7-A, 8-C, 9-C, 10-B, 11-A, 12-A

System O&M Manuals Required

Have you completed your state-required Operations & Maintenance Manual?

Oregon Association of Water Utilities has prepared a full day class to assist operators in outlining an operations and maintenance manual per the Oregon Administrative Rule 333-061-0065 which requires each water system to develop an operations and maintenance manual.

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

Class cost is $155, or if you are unable to attend a class you may purchase a thumb drive with e-files for $155.

To sign up for the class, or to have a thumb drive mailed to you, contact your Association for further information.

UPCOMING OAWU CONFERENCES

Summer Classic XIX

August 19-22, 2013 • Seaside, Oregon

H2O-XPO in Louisville, KY • October 1–3, 2013

Small System Operator's Conference

November 4-7, 2013 • Florence, Oregon

15th Annual End of Year Operator's Conference

December 2-5, 2013 • Hood River, OR

MARK YOUR CALENDAR

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.

MEMBERSHIP APPLICATION

Name:_____

Address:_____

City/State: _____

County: _____ ZIP: _____

System Email: _____

Phone: _____ Fax: _____

Operator: _____

Contact Person: _____

Number of Hook-ups: _____

Were you referred? By whom _____

Type of System:

❑ Water ❑ Wastewater ❑ Both

Membership Category	Amount of Dues
❑ Regular Member	$_____ See schedule below
❑ Associate Member	$400.00
❑ Individual Member	$75.00

Regular Member Dues Schedule

1 to 100	$75 + 28 cents per hookup
101 to 500	$80 + 28 cents per hookup
501 to 1,000	$90 + 28 cents per hookup
1,000 and up	$100 + 28 cents per hookup
Maximum dues is	$910.00

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

or Submit:

❑ VISA ❑ MasterCard ❑ AMEX

Card #: _____

Expiration Date: _____

Card Security Code: _____

Name on Card:_____

Signature_____

MB13

Membership Types

Regular Member

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

Annual Dues - See Dues Schedule

Associate Member

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

Annual Dues $400.00 per year

Individual Member

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

Annual Dues $75.00 per year

Benefits of Membership

- On-site technical assistance
- 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

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Adrian, City of
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Albany Rifle & Pistol Club
Alpine Crest Improvement Dist.
Alpine Water Company
Amigo Villa Water Service, Inc.
Amity, City of
Ananda Center at Laurelwood, Inc.
Arch Cape Service 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, City of
Banks, City of
Barlow Water Improvement District
Barlow, City of
Bay City, City of
Bay Hills Water Association
Beaver Water District
Bella Casa Mobile Home Park
Bend Research Inc.
Bend, City of
Benton County Service District
Bentwood Estates Water District
Berndt Creek Water Corp.
Big Spruce Mobil Home Park, LLC
Black Butte Ranch
BLM Eugene
Blue River Water District
Blue Spruce Mobile Estates
Bly Water & Sanitary Dist.
Boardman, City of
Bonanza, Town of
Boring Water District #24
Brandy Bar Landing, Inc.
Breitenbush Hot Springs
Bridge Water District
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
Camp Yamhill
Canby Utility
Cannon Beach, City of
Canyon City, Town of
Canyonville, City of
Carlton, City of
Cascade Head Ranch Dist. Improv. Co.
Cascade Locks, City of
Cave Junction, City of
Cedarhurst Improvement Club, Inc.
Century Meadows Sanitary System, Inc
Century Meadows Water System, Inc.
Chaparral Mobile Ranch
Charles Tracts Water Company
Chehalem Mt. Sun Ridge Association
Chenowith Water PUD
Chiloquin, City of
Christmas Valley Domestic Water
Cimmarron City Water Co., Inc.
Circle C Improvement District
Clarks Branch Water Associatioin
Clatskanie, City of
Clayton Creek Water Association
Cline Butte Utility Company
Cloverdale Sanitary District
Cloverdale Water District
Coburg, City of
Colton Water District
Columbia City, City of
Columbia Hills Homeowners Association
Columbia River PUD
Conagra Foods
Condon, City of
Coquille, City of
Corbett Water District
Cornelius, 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 Court MHP/IPM
Creswell, City of
Crooked River Ranch Water Co-Op
Crystal Springs Water District
Culver, City of
Dallas, City of
Dane Clark Water District
Dayton, City of
Dayville, City of
Deception Creek Mobile Park
Deer Creek Estates Water Assn.
Deerhorn Community Water Association
Depoe Bay, City of
Deschutes Valley Water District
Desert Mobile Home Estates
Detroit, City of
Dexter Oaks Mobile Home Park
Dexter Sanitary Service
Diamond Hill RV Park
Diamond Peaks Tract 1355
Diamond Summit Association
Dietz Airpark Water System
Donald, City of
Drain, City of
Drifters Mobile Home Park
Driftwood Mobile Estates
Dufur, City of
Dumbeck Lane Water Association
Dundee, City of
Eagle Point, City of
East Yamhill Rural Water Company
Eastmont Water Company
Eastshore Water Improvement District
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Elkton, City of
Enterprise, City of
Estacada, City of
Eugene Mobile Village
Fairview Water District
Fairview, City of
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Falcon Heights Water & Sewer District
Fall Creek Water District
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Gates, City of
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Glenridge Improvement District
Glide Water Association
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Grants Pass, City of
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Hall's Trailer Court
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Hebo Joint Water/Sanitary Authority
Heceta Water District
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High Lostine Owners Association
Highland Water District
Hiland Water Corporation
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Hood River, City of
Hopewell Water Company
Horizon View Hills Water, Inc.
Hubbard, City of
Hunnell Hills Water System
Huntington, City of
HWY 58 Trailer Park
Ice Fountain Water District
Idanha, City of
Idleway Improvement District, Inc.
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Independence, City of
Indian Meadow Water Company
Interlachen Water PUD
Ione, City of
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Jackson County Parks
Jacksonville, City of
Jewell School District
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Johnson Creek Water Services Company
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Juniper Mobile Home Park
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Kelso Water Association
Keno Water Company, Inc.
K-GB-LB Water District
Kingswood Heights Water Association
Klamath Falls, City of
Klippel Water, Inc.
Knappa Water Association
Knoll Terrace MHC
L.A. Water Cooperative
La Casa Mia
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La Pine Water District
Lady Creek Water System
Lafayette, City of
Laidlaw Water District
Lake Grove Water District
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Lakeside, City of
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Lane County Parks
Langlois Water District
Lark Meadows Water Association
Laurelwood Water User's Co-op
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Lexington, Town of
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Madrone Hill MHP
Malin, City of
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McNulty Water PUD
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Monument, City of
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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.
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North Corvallis Mobile Home Park
North Hill Water Corporation
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North Powder, City of
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Oakridge, City of
Oaks Mobile Home Park
Oceanside Water District
Ochoco West Water & Sanitary Authority
Odell Sanitary District
Odell Water Company
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Orchard Point Mobile Homes
Oregon Shores Beach Club, Inc.
Oregon Water Wonderland II Sanitary District
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Otter Rock Water District
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Paradise/ Rogue Meadow WS
Parkdale Water Company, Inc.
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Phoenix, City of
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Pioneer Village Water Company, Inc.
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Pleasant View Water Company
Polehn Heights Water Association, Inc.
Ponderosa Pines Water Company
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Quincy Water Association
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Redmond, City of
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Reeder Ranch, Inc.
Reedsport, City of
Rhododendron Water Association
Richland, City of
Rickreall Community Water Association
Riddle, City of
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River Point Farms, LLC
Riverbend-Riverbank Water District
Rivergrove Water District
Riverside Water District
Riverview Trailer Park
Riviera Mobile Park
Road's End Water District
Roats Water System, Inc.
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Rogue Community College
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Scenic Fruit Company
Scio, City of
Scoffield Mobile Home Court
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Seal Rock Water District
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Siletz, City of
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Southwood Park Water District
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St. Paul, City of
Staffordshire Water System, Inc.
Stanfield, City of
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Steeves Mobile City
Storlie Water Company Inc.
Sublimity, City of
Suburban East Salem Water District
Sumpter, City of
Sunridge Estates
Sunriver Water LLC
Sunset Water Systems, Inc.
Sutherlin,City of
Sweet Home, City of
Talent, City of
Terrace Mobile Plaza
Terrebonne Domestic Water District
The Dalles, City of
Three Rivers School District
Tierra Del Mar Water Company
Tigard, City of
Tillamook Bay, Port of
Tillamook County Creamary Association
Tillamook, City of
Timber Water Association
Timberline Rim Water Company
Tingley Lake Estates
Toledo, City of
Trappist Abbey
Tri City Water & Sanitary Authority
Troutdale, City of
Tualatin Valley Water District
Tumalo Rim Water Impr. Dist.
Turner, City of
Twin Rocks Sanitary District
Tygh Valley Water District
Ukiah, City of
Umatilla, City of
Umpqua Basin Water Assn.
Union, City of
Valley View Water District
Veneta, City of
Vernonia, City of
VMWID
Waldport, City of
Wallowa Lake Co. Service District
Wallowa, City of
Warm Springs, Conf. Tribes Reservation of OR
Warren Water Association
Warrenton, City of
Wasco, City of
Water Wonderland Improvement District
Watseco-Barview Water District
Wedderburn Sanitary District
Welches Water Company
Weldon Mobile Home Park
West Hills Water Company
West Linn, City
Westport Water Association
Wheeler, City of
Wickiup Water District
Willamette Water Company
Willamina, City of
Wilson River Water District
Wilsonville, City of
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Woodburn, City of
Yachats, City of
Yamhill, City of
Young's River Lewis & Clark W.D.
Youth With A Mission
Zig Zag Water Cooperative, Inc.

WELCOME, NEW MEMBERS!

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Brook Brenden
Robert Grabner
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Michael Donaldson
Randall Jones
Pavil Snegirev
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Engineering America
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Drifters Mobile Home Park
Rogue Community College

Wallowa, City of
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OXARC Inc.
Pine Grove Water Dist.
CIMCO Sales and Marketing
Titus Industrial Group, Inc

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