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

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Please mail your photo to our office. If we use your photo on the cover you will receive an official OAWU shirt and hat.

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

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Oregon Association of Water Utilities

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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.

I'M OUT OF TIME!

Jason Green, Executive Director

Call them animals, brutes or shamers of us regular folk. Ever come across one of those rare, gifted people who are incredibly organized and able to complete their work in half the time expected. They juggle dozens of tasks with ease while we struggle with three and go about work like they're killing snakes with a stick. When we run into this type of person, we remember them - I wonder how their employees, co-workers, boss or spouse put up with them as they go about their work and life at break-neck speeds. There are also the coasters that appear to just be moseying along, but somehow are capable of similar feats without appearing to break a sweat! I know several having these abilities and am most always amazed at how quickly they accomplish things - drive, hard work, focus and efficiency, organizational skills, good work habits and choices are several key factors. I'm guessing, for most of us, there is a regular occurring challenge to manage time for the task load and/or people that we spend time with or on. How might I fit a twelve hour day into only eight or less hours?

I recall when multi-tasking was all the craze. Apart from chewing gum and walking, or similar mundane multi-tasking, its near impossible for me to multi-task. I'm guessing there are very few who can fully engage in two dissimilar demanding mental directions simultaneously. I think most of us would agree that talking on a cell and driving is distracting, let alone attempting to text and drive! Ever experience a telephone conversation with someone engaged in something else? They usually think they can pull it off and save time by... not giving the conversation their full attention. Lots of silence, uh, um, ya, uh-huh and what was that? And what about that all too often cell tone that signals the arrival of an email or text. How much seemingly innocent workplace time robbing occurs throughout each day? Cloning might help, but until that's a real option, I will attempt to protect valuable work time each day by minimizing interruptions and not attempt to multi-task.

Maybe our time management challenge is from another angle. Maybe we have a boss or board of directors that pile on the work and we have a limited workforce, maybe you are the only employee! It's possible we don't know how to say no or have never learned to protect our time for priority tasks and needs. Maybe I'm a workaholic struggling and slugging out the work, and with that, I am simply tired and in need of a mental break and vacation. What about those who are at work, but just busyness occupies their days - they do the easy "what I want to do" tasks and look like they're tearing up the road, but always seem behind on their work. Changing poor work habits, learning to better organize and schedule in a way that fits my thought process and personality or simply coming to realize that I need to improve in these areas to get my life back and become more efficient without losing quality can be a life changer! Regarding purposeful work and completion, my father used to say "A lack of goals and planning leads a person nowhere." I've also heard something similar to: Those not so gifted must work harder longer to accomplish the same things as those skilled and gifted in work efficiency and time management. And "work smarter, not harder." I prefer work hard-smart.

We each have the same amount of time in a day. What our mind-set or attitude is, our approach, habits and skills are key to making the most of our time. Improving our time management and organization skills requires dedication, educating ourselves, honest self-awarness and time to practice in order to learn what fits our needs and bents and make into habits those most beneficial to us. If you are like me and seem to run out of time, consider identifying and building those skills that affect time and efficiency, but do so while guarding against shortcuts leading to substandard work and/or leadership.

Best wishes!







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Tribute to Casey Kyle

by Hans Schroeder, Circuit Rider

It has been a year since our son took his own life and went HOME to be with our Lord and Savior. I am writing this tribute to a wonderful son, brother, "unkie," and man. First off, I would love to let you all get to know my son.

Casey was a special soul. He loved you unconditionally and always tried to make everyone around him feel better. He had a passion for sports, he competed in football, track, basketball, but his one true love was



Rayleigh and "Unkie" Casey.

baseball and his beloved Boston Red Sox!! If you needed to know a stat or player he had a phenomenal historical knowledge of any athlete. He was a lefty and was an awesome pitcher and center fielder for the Weston McEwen Tigerscots. He graduated from Weston McEwen in 2010.

Casey joined the East Umatilla Rural Fire District shortly after turning 18, at the end of his junior year in high school and his passion for firefighting grew every day. When the big oil boom in North Dakota hit he packed up at the age of 20 and moved to the New Town/Williston ND area working on the frac sites for over three years. He was a very dedicated and passionate worker. He finally decided, as things were starting to dry up in North Dakota, to move home in September 2015. When he moved home, Casey had to get a menial job to pay the bills. However, he had just started a new career that he loved and was being trained by the owner to become an integral part of the business.

Our son had an infectious smile and lit up any room as soon as he walked in. He often put the needs of others before his own. He loved with all his heart and would be there for his friends or family anytime they needed him. He had a full State of Oregon Firefighter Honor Guard service on Saturday June 25, 2016 at 2:00 pm, which was truly an honor to him.

I know everyone who has lost someone to suicide asks themselves *why? If only I had?* In our case our precious son suffered deeply from depression for years. Most people didn't know this because Casey felt like he was put here on this earth to make others happy and please them. His family did not ignore his depression, trust me on that! He went to very extensive counseling for 15 years, he took anti-depressants, and he knew he could call any of us day or night.

I do not believe everyone can be saved from suicide, but anyone reading this cannot ignore the signs of depression which can often be: sleeping a lot, substance abuse, whether it is drugs and/or alcohol, or always wanting to be alone. Keep a team around them for support and get them the help they deserve. The National Suicide Lifeline has an excellent website where you can chat with an expert online or get resources for yourself or a loved one visit suicidepreventionlifeline.org or you can call **1-800-273-TALK (8255).**

Our family would often use these resources! When he lived in ND for 3 years my wife's sister Tammy, her husband Ross and his cousins Makayla and Heath kept a close eye on him. We knew that if he was feeling low we could text one of them and they were always there for him and would let us know he was ok. The night of June 12th Tina got a text from Casey saying to remember one thing he will always love her. She contacted me and I called him, we had



a great conversation. She also got a hold of one of his best friends, being she was in Yoncalla tending to our granddaughter who had just had another major eye surgery, in a panic about how depressed Casey was and he thought he had Casey calmed down and safe.

The next morning when the firefighting chaplain and sheriff showed up to house we found out our son had taken his life a short distance from our house. We immediately felt the outpouring of love and support from Casey's friends, our friends and family. My OAWU family including system operators, my co-workers and the board of Directors. We can never thank all of you for what you did for us in our darkest time. You are truly part of my extended family.

Tina and I have been through many trials and tribulation in our life luckily we have God embracing us in his loving arms, friends, and family as well. Our family has forever been changed, we are learning to live without a family member it is a daily struggle to keep moving forward, but we do. Thank you, Jason, for still keeping us in your prayers. 80% of couples who lose a child end up in divorce—Tina and I are determined we will be in the 20% bracket!

Although we will deeply miss our son, his bright smile, his huge hugs, him saddling up the horses and saying *Come on mom, let's go for a ride*. We no longer have to worry about what day it will be he chooses to go home.





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Hydrant Maintenance and

by Scott Berry, Operations Manager

In the last issue, we discussed an overview of what a fire hydrant inspection and maintenance program should include. This issue includes a procedural guide as drafted by AWWA and agreed upon by several manufacturers. As always, go by the manufacturer's recommendations if they differ from the guide.

There may be some special tools required to complete repairs and routine maintenance, so a good place to start is to inventory all of the fire hydrants in your utility and put together maintenance procedures for each make and model in your distribution system. Be familiar with the terminology and know the names of the different parts of a hydrant so that you may order repair and replacement parts.

In freezing climates, AWWA fire hydrant standards committee recommends that hydrants be inspected in the fall, in the spring and after each use. Lack of experience with the brands being inspected and time between inspections increases the length of time necessary to inspect a fire hydrant. To control these factors, a system should specify the types of hydrants that may be installed and endeavor to inspect public hydrants on an annual schedule. Routine inspection of common fire hydrants by experienced operators should take approximately 20 minutes per hydrant.

PROCEDURE

- 1. Check the appearance of the hydrant.
 - A. Remove obstructions around it. Hydrants are required to have a minimum of 3 feet of clearance in all directions.
 - B. If paint is needed, either paint the hydrant or schedule it for painting.
 - C. Check to see whether the hydrant needs to be raised or lowered (pumper nozzle cap should be no less than 18" and no more than 24" from grade) because of a change in the ground-surface grade. If adjustments are needed, schedule work.
- 2. On traffic model hydrants, check the breakaway device for damage.
- 3. Remove one outlet nozzle cap and use a listening device to check main valve for leakage.
- 4. Check for the presence of water or ice in the hydrant barrel, by use of a plumb bob or other suitable means.
- 5. Attach a section of hose or other deflector to protect the street, traffic, and private property from water expelled at high velocity.
- 6. Open the hydrant SLOWLY approximately 3 to 5 turns allowing time for air to escape from the hydrant barrel. Then SLOWLY open the hydrant to the full open position to check operation and to flush any foreign material from the interior and the water main.
- 7. When the hydrant is flowing full, a flow test can be conducted. Some styles of deflectors offer an opening designed specifically to allow a Pitot Tube measurement to be taken.
- 8. After approximately 3 to 5 minutes check the water condition using a solid white cup.
- 9. Look for discoloration and debris.
- 10. Continue to flush the hydrant until the water is clear.
- 11. If needed, the flow may be reduced by closing down the hydrant SLOWLY.
- 12. Close the hydrant. Remove the deflector and check the operation of the drain valve by placing the palm of one hand over the outlet nozzle. Drainage should be sufficiently rapid to create noticeable suction. For non-draining hydrants, pump the water from the barrel.

Inspection

- 13. Be aware that some hydrants may not seem to slow down when you turn them. This usually means the hydrant may slam (it will have some slop in the stem and may make a thump sound when closing). This causes water hammer and could cause major damage to the water distribution system. This is why it is imperative that hydrants are closed VERY SLOWLY.
- 14. Using a listening device, check the main valve for leakage.
- 15. Replace the outlet nozzle cap. Leave it loose enough to allow air to escape.
- 16. Open the hydrant only a few turns. Allow air to vent from the outlet nozzle cap.
- 17. Tighten the outlet nozzle cap.
- 18. Open the hydrant fully. Check for ease of operation. Certain water conditions may cause hard water buildup on the stem threads of toggle and slide-gate hydrants and on the threads of wet-top hydrants. Opening and closing the hydrant repeatedly usually removes this buildup. If the hydrant has no threads in water, but operates with difficulty, check the lubrication before proceeding with the inspection. Other problems that may make operation difficult are stuck packing and bent stems.
- 19. With the hydrant fully open, check for leakage at flanges, around outlet nozzles, at packing or seals, and around the operating stem. Repair as needed.
- 20. Partially close the hydrant so the drains open and water flows through under pressure for about 10 seconds, flushing the drain outlets.
- 21. Close the hydrant completely. Back off the operating nut enough to take pressure of the thrust bearing and packing (about 1/4 turn).
- 22. Remove all outlet-nozzle caps, clean the threads, check the condition of the gaskets, and lubricate the threads with food grade grease. Check the ease of operation of the cap.
- 23. Check outlet-nozzle-cap chains or cables for free action on each cap. If the chains or cables bind, open the loop around the cap until they move freely. This will keep the chains or cables from kinking when the cap is removed during an emergency.
- 24. Replace the caps. Tighten them, and then back off slightly so they will not be excessively tight. Leave them tight enough to prevent their removal by hand.
- 25. Check the lubrication of operating-nut threads. Lubricate per the manufacturer's recommendations.
- 26. Locate and exercise the auxiliary valve. Leave it in the open position.



Typical hydrant parts names for dry barrel hydrants.

- 27. Repair any property damage from running water.
- 28. If the hydrant is inoperable, tag it with a clearly visible marker and notify the local fire district. This may save fire fighters valuable time in an emergency. Schedule the hydrant for repair.

The following publications should be used when installing, testing or inspecting fire hydrants. These publications were also used in preparing this document.

Installation, Field Testing, and Maintenance of Fire Hydrants (AWWA M17)

Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems (NFPA 25) $\,$

Standard for the Installation of Sprinkler Systems (NFPA 13)

Recommended Practice for Fire Flow Testing and Marking of Hydrants (NFPA 291) AWWA Standard for Dry-Barrel Hydrants (C502-94)

AWWA Standard for Disinfecting of Water Mains (C651-99)

AWWA Standards for Installation of Pipe (C600 thru C606)





Industrial User Survey Component of Newly Issued NPDES & WPCF Permits

by Jeff Crowther, Wastewater Technician

Those of you that have been issued a new NPDES or WPCF permit since 2017 began, know that DEQ is including a requirement that all permit holders perform an Industrial User Survey no matter what size of community. The key component here is that it is included with the permit and there is a compliance requirement to complete it. All permit holders should be prepared for this and may want to be proactive in completing the user survey (the guidance document can be reviewed at www.deq.state.or.us/wq/pretreatment/docs/guidance/IUSurveyGuidance.pdf).

The objective of the survey is to identify nondomestic wastewater discharge to the POTW that may trigger Categorical Pretreatment Standards and to identify those businesses that may be considered Significant Industrial Users. Both of these categories may cause pass-through, create issues with the wastewater collection and treatment processes, or be a safety concern for workers in the treatment system.

The survey can be as simple as going to each of the businesses on the system and completing an onsite survey checklist that identifies any discharge that is not domestic sewage. Larger systems may have a business license program that can be used for a mass mailing. If this is the route, make sure to go through the information the business provides and determine if further review is needed. There should be a database of all businesses that have been surveyed and follow up documentation. The business license provides a good current list and determining how often the license is renewed may be a good time to update the industrial survey response. The survey database and files should be maintained and may be reviewed during compliance inspections for accuracy and completeness. You may need to submit results of the first survey to DEQ depending on the newly issued permit requirement.

Before starting the survey, the POTW should review their legal authority available to them to direct businesses in their jurisdiction, and contributing jurisdictions, to complete and submit the survey. This authority is usually obtained through the agency's sewer use ordinance (SUO). The presence of a Categorical Industrial User (CIU) or a Significant Industrial User (SIU) discharging process wastewater to the POTW may trigger the requirement to develop a local pretreatment program and issue control mechanisms. Upon discovering a CIU or SIU the POTW should contact DEQ's Pretreatment Program for guidance. For assistance please call OAWU.

TRAINING & EVENTS SCHEDULE

Date	Class Title	Location	CEU Information	ESAC#,	Fee/Free
June 20	Math for Operators	Salem	0.4 Water/Wastewater	2885	Fee
June 20	Sourcewater Protection Planning	Salem	0.3 Water	3152	Fee
July 12	Developing Your Operations & Maintenance Manual	Salem	0.4 Water/Wastewater	3395	Fee
July 13	Pumps and Pumping	Tillamook	0.4 Water/Wastewater	2862	Fee
July 13	Math for Operators	Tillamook	0.3 Water/Wastewater	3153	Fee
August 1-2	Water Treatment Water Distribution Certification Review	Bend	1.4 Water/0.7 Wastewater	2787	Fee
August 21	Effective Utility Management	Seaside	0.6 Water/Wastewater	TBA	FREE
August 21-24	23rd Annual Summer Classic Conference	Seaside	2.0 Water/Wastewater	TBA	Fee
August 29-30	Wastewater Treatment/Collections Certification Review	Salem	1.4 Wastewater/0.6 Water	2882	Fee
September 27	Control Valves	Bend	0.7 Water	2863	FREE
September 28	Hazardous Communication Standard	Eugene	0.3 Water/Wastewater	TBA	Fee
November 6	Effective Utility Management	Florence	0.6 Water/Wastewater	ТВА	FREE
November 6-9	2017 Fall Operators Conference	Florence	2.0 Water or Wastewater	TBA	Fee
November 14	Water Management Conservation Program	Portland Area	0.3 Water	TBA	Fee
November 15	Water & Wastewater Filed Operations & Safety	Springfield	0.6 Water/Wastewater	2944	Fee
December 4	Effective Utility Management	Hood River	0.6 Water/Wastewater	ТВА	FREE
December 4-7	19th Annual End of Year Operators Conference	Hood River	2.0 Water/Wastewater	TBA	Fee
December 12	Water & Wastewater Field Operations & Safety	Newport	0.6 Water/Wastewater	2944	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 Center for Health Protection Drinking Water Services https://yourwater.oregon.gov http://public.health.oregon.gov/PHD/Directory/Pages/Program.aspx?pid=4 http://public.health.oregon.gov/PHD/Directory/Pages/Program.aspx?pid=58

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.

UPCOMING CONFERENCES · MARK YOUR CALENDAR



End of Year Operators Conference Hood River, December 4–7, 2017



Oregon Association of Water Utilities







Ascertaining Astigmatism

by Tim Tice, Projects Manager

Ascertaining is the process to find something out for certain; to make sure of.

Astigmatism is a common and generally treatable imperfection in the curvature of your eye that causes blurred distance and near vision.

Too many discussions pertaining to water and wastewater rates end with the conclusion, "It is, what it is!" The most common result in the rates conversation is actually no conclusion at all. The reasons to not change utility rates (let them remain the same) are far too numerous to mention, but so are motives to make a change. Let's be perfectly clear, in the arena of utility expenses, one fact is certain, costs will continue to increase, unless the next cycle of technology magically creates water out of thin air.

Years ago, an acquaintance was telling a story of an older man who sold everything and moved his family of four to a distant state. The only person, his spouse, aware of the reason for the immense change kept to herself. Several years had passed before the purpose of the family's move was divulged. This significant point was shared at the man's death. This acquaintance was sharing how the man's oldest child was running with the wrong crowd and the move was a protection against the downward spiral and a potential life of crime. The father explained how only good could come from such a decision. What was later realized is the following:

- The father resigned from a white-collar position to work in the field.
- The father guarded his child with care and purpose to refocus his child.
- The father re-engaged a set of goals, surrendering his wishes for that of the family.

The acquaintance shared with me that he was the child. He explained that he had a sixth sense about the move and he immediately chose to join his father for the positive change. They worked together until his father's passing and he credits his father for the person he is today.

Often it is not clear as to why a decision is made, not made, or left for the future. To make certain the reason to increase rates is for the betterment or sustainability of the community. This point has to be shared routinely.

Let's look at some of the significant points to be shared with the customers and explain:

• There is a monetary cost to deliver a gallon of water to the spigot.

Most of us, at one time or another, have given little thought about water and, for the same reason, the disappearance of sewage. The industry has done a terrific job in meeting the goal of providing these two services. Therefore, people simply become complacent. It has been heard in a public meeting and this is paraphrased, "It rains all the time in Oregon, you get the water for free."

• If the cost is known, it can be relevant to share it with the customer.

Knowing the cost per unit (1,000 gallons or 100 cubic feet) can be the most enlightening fact an operator may possess. This clear-cut detail becomes the main core which can lead to other discoveries, those facts that can provide additional clarity for the customer.

• Share probable near term expenses that are the reason for any increase.

The above point is the cataract on the eye of understanding. To remove the cataracts, determine the next 3-4 year timeline of additional expenses over fixed operating costs. We use this timeline as a reference to streamline the decision. By keeping the time frame close, it allows the decision makers and customers the opportunity to see how the dollars are being spent.

Operators and managers should be allowed to present the facts, and as a group, ascertain the essential near term requirements. Blend a little common sense into the mix and the transparency becomes evident. Apply purposeful intentions for any decision



and the outcome should benefit the majority, even if a few people will not see the immediate value.

Like an eye surgeon precisely altering the curvature of the cornea, each of our conversations prove the need to communicate transparently. Focus on explaining the "why;" why rates are being adjusted (being increased). This is probably the most important question to answer.

This process shared with you today is a routine practice when assisting utilities in understanding rates and justifying any increases. We, at the association, spend time with decision makers helping them to know the story behind increasing water rates. There is a sense of accomplishment when the entire group of decision makers applies the new rates with the discernment of clear vision necessary to sustain the water-wastewater utility in the future.

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Tracer Studies

by Heath Cokeley, Programs Manager/Circuit Rider

Ok, let's try not to overcomplicate the straightforward subject of conducting tracer studies. I know it can seem daunting at first if your system has been told that a tracer study is something the Oregon Health Authority (OHA) is requiring to prove contact time, but it is a very achievable thing.

First, there are many free resources available to assist in this endeavor including contacting the OHA Circuit Rider or contacting an Oregon Association of Water Utilities (OAWU) Circuit Rider like myself, at 503-837-1212. It is important to note that though both of these positions are called Circuit Rider they operate differently. In the case of Tracer Studies the OAWU Circuit Rider will assist where needed, teach how the study is done, leave the operator knowing how to do the tracer study for themselves, and still be available if needed the next time.

If we are going to talk about tracer studies let's start by breaking them down to very simple and straight forward language in what a tracer study is. Flow water at the peak hourly flow for the system, increase the tracer chemical and start taking samples at the first user until there is 10% of the chemical increase that was made. Ok, it is a little more complicated than that, but not too much. We will hit the important data you will need here:

Peak hourly flow: This is the most water the system will use during a one hour time period. For some systems, this data can be obtained by taking meter readings every hour during your highest usage time of day and during the highest usage time of year. If you don't know when that is, a good place to start is between 7:30am to 8:30am or 5:00pm to 6:00pm and during the months of July and August. Obviously, every system is different and some of you may be able to pull this information off your SCADA system, others will need to evaluate their specific system for this data. To me this is probably the most important data point you will need to complete a tracer study and so, time and care should be taken to make sure this information is accurate.

Size of tank before first user: This is often referred to as clear well size. You will need to know its volume when full and its lowest operating level. The lowest operating level is very important as the tracer study will need to start when this tank is at its lowest operating level. Please note that if the clear well is unbaffled, frequently we will only see 10% of the clear well's volume end up as actual contact time. The more baffled the tank is, typically, the larger amount of contact time we see.

Pipe size and length between chemical injection and first user: With this information, we can figure out how many gallons are in the pipeline and typically shows 100% baffling factor, meaning a lot more contact time.

Decide what the tracer chemical will be: Chlorine is a very common tracer chemical. You will be turning your chlorine up and then taking samples at

your first user until you see a 10% increase at the first user. For instance, if you turn the chlorine up by 2 mg/l you are looking for a residual increase of 0.2 mg/l at the first user.

Write a tracer study plan outlining all these things and how you plan to do the tracer study and get it approved by the state. The state needs to see and approve the methodology on how you want to complete the tracer study before allowing you to do it or they may not accept the results. There is no fee, at this point, for this review and approval.

Conduct the tracer study: Get the clear well to its lowest operating level, get the peak hourly flow running in the system. Some systems will drop the level in a distribution reservoir so the water has somewhere to go while others will just dump the water through a fire hydrant. Turn your chemical feed setting up to the desired set point and start taking samples at least every two minutes at the first user until you see a 10% increase. I also always recommend going 15-20 minutes after that point just so you can graph the data and see how it continues to rise.

There are other tricks and tools that can be used including reading the EPA's LT1ESWTR Disinfection Profiling and Benchmarking Technical Guidance Manual. If you are looking for a template to write either your pre-tracer study approval plan or one for the completed tracer study, feel free to e-mail or call the office at office@oawu.net or 503-837-1212 and I will be happy to share ones I have built for this purpose. I hope this information is helpful and if you have any question feel free to call or shoot me an e-mail and as always, I'll see you down the road. ◆







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Quick Temper

by Mike Collier, Deputy Director/Sourcewater Specialist

I have a four year old son who often reacts first. If he doesn't like something that his siblings are doing he starts hitting, mind you, he does get into trouble for this type of reaction. His first response is to hit, rather than to think for a second and use a different method to get what he wants. He knows that he should ask for the ball back, or go to mom or dad and ask for help. However, these responses don't occur to him until after he has already started hitting. I have heard and seen some of this same type of reaction in adults as well. Maybe not hitting, but degrading, yelling, and not being in control. If they were being calm and thoughtful they would have handled the situation differently. It is hard for coworkers to be around this type of behavior, especially if it is a common occurrence, as they will not want to do something that can set off a ticking time bomb.

I can tend to understand why a three or four year old would react in such a manner and hopefully through some time, consequences, and coaching they will outgrow it. What I have a hard time understanding is why some adults react in much the same manner. It is important to learn coping skills as we get through our adolescent years, if this is not accomplished it is difficult to change our ways as an adult.

I may be climbing out on a limb here, but I would say that no one wants a coworker that has the tendency to blow up. Even if they are not blowing up at me in particular, it makes the entire work environment uncomfortable. My immediate thought is that they need to chill out, not be such a baby, grow-up, relax, and probably many other things that are similar thoughts.

What is your first reaction? Do you just blow off the handle? Can you take a minute to calm yourself and think through the situation before reacting?

So what can someone do to overcome the tendency to overreact, or blow up at a situation or person? Is there some way to help a coworker, friend, or relative to keep cool and process a situation before just reacting to it? One way to process the situation before just reacting is the simple thing that we tell many children to do – count to ten and take some deep breaths before responding. Another way to get through the immediate reaction phase is to walk away, when someone feels a reactive response coming up, take a moment to walk away until a cooler head prevails. We can try to focus on the opposite of this type of attitude, such as patience, or being slow to anger and quick to forgive. If these few things don't work we can always seek professional help. Getting help now may save years of strife in the future.

As with many things, people have to be willing to change. We can't force someone to not give into their temper. Physical, mental, and emotional



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stresses that are already in our life can put us on edge to where the smallest thing can send us over. So, at the beginning of the day, it is important to see how we are doing in each of these areas and if there is any way to alleviate something that is bothering us before we go on with our day. If a person is rubbing us the wrong way it would be better to confront the situation early before we later erupt, especially if we know that we are the type of person who has a tendency to do so.

When we just react we often act foolishly, without self-control, discipline or wisdom. This can open up bitterness from others toward us; we can be hurt and can hurt others. It is best to give time to process the situation and act accordingly, to act with wisdom, be open to reason, maintain self-control and not be quick-tempered.



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Oregon Association of Water Utilities

Be Prepared to Take Action in an Emergency

By Nushat Thomas

Water utilities face many threats and emergencies are bound to happen. Your utility is in a better position to respond to the emergencies that come along if you have prepared beforehand and are aware of the resources available to assist you. The United States Environmental Protection Agency (U.S. EPA) has developed several resources to help you prepare for emergencies and mitigate the potential for future damages. Three new tools can help you with your preparedness and mitigation efforts including: Hazard Mitigation for Natural Disasters: A Starter Guide for Water and Wastewater Utilities, Water Utility Response On-The-Go and the Route to Resilience Tool. Let me show you how each of these tools can help your utility become more resilient.

The Hazard Mitigation Guide for Natural Disasters: A Starter Guide for Water and Wastewater Utilities is designed to help small and mediumsized utilities identify and complete hazard mitigation projects using your local community's hazard mitigation process. Mitigating against the impacts of disasters is always less expensive than rebuilding from scratch after the event occurs. Mitigation projects could include elevating electrical panels to prevent flood damage, replacing pipe with flexible joints in case of an earthquake or reinforcing water towers. Integrating your mitigation planning into the local community plan will make your projects eligible for additional funding, such as federal grants or loans. Download the guide at www.epa.gov/waterutilityresponse/ hazard-mitigation-natural-disasters-



starter-guide-water-and-wastewater and get started today identifying your future projects.

When your utility is facing an oncoming emergency you can use the U.S. EPA's Water Utility Response On-The-Go Tool to track weather, contact response partners, identify actions to take and inform incident command and document damages. You can do all of these things from your mobile phone or tablet. Check out the tool today and see how you can respond easily from the field with preloaded checklists for drought, earthquakes, extreme cold and winter storms, extreme heat, floods, hurricanes, tornados, tsunamis, volcanic activity and wildfire. Check out the tool here: watersgeo.epa.gov/ responseotg.

The U.S. EPA's newest tool, *Route to Resilience*, helps drinking water and wastewater utilities understand the

path to building resilience. The tool walks users through five major areas: Assess, Plan, Train, Respond and Recover. In each of these areas, the tool has videos to provide an overview of what it means to achieve basic and advanced levels of resilience and provides the user with products that are most useful for their organization based on their responses to a brief questionnaire. Download the tool to start building resilience today at: www.epa.gov/waterresilience/ route-resilience-drinking-water-andwastewater-utilities. •

Nushat Thomas joined the United States Environmental Protection Agency within the Office of Water's Water Security (WSD) in 2009. She is the Team Leader for the Active and Effective team responsible for increasing awareness of water sector interdependencies and outreach.



Oregon Association of Water Utilities

When Testing & Compliance Collide

Access to safe drinking water is essential to human health. Each person on earth requires at least 20 to 50 liters of clean, safe water a day for drinking, cooking, and simply keeping themselves clean.¹

Those of you who are reading this are more than likely in the business of providing that safe drinking water to your customers, ratepayers, associations, members, or whatever they are to you. Bottom line, we are here to provide safe drinking water. That is our job!

It is also the job of Oregon Drinking Water Services (DWS) to monitor and work with us to help keep that water safe to drink. As part of that monitoring, we as operators are required to comply with strict quality standards established by the Federal Government and the Environmental Protection Agency (EPA). The Oregon Health Authority, through the DWS program, administers and enforces those drinking water quality standards for public water systems in the state of Oregon.

However, as with most government agencies, DWS has limited resources. Consequently, DWS focuses those

resources on areas with the highest public health benefit and promotes "voluntary compliance" with state and federal drinking water standards. In other words, we as water systems are kind of on our own and we are required to submit samples on a regular testing schedule to ensure our water remains in compliance.

What happens when we fail to get a sample tested, sample results are not submitted to DWS on time, or, God forbid, a sample test result falls outside the MCL? The answer is, we receive a violation or notice of noncompliance from DWS. When we receive notice of a violation, not only are we required to rectify the issue, we are required to list violations on our annual Consumer Confidence Report and the violation becomes part of the system's permanent DWS record. If there are numerous violations by a system, DWS has the authority to levy substantial fines, proceed with investigations regarding intent or negligence, or DWS could even completely takeover the system. There are serious consequences for violations.

According to DWS, whether we contract the sampling out or obtain the samples on our own, we as system operators are solely responsible to ensure tests are submitted, conducted, and



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



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By Steve Graeper

reported on time. It is the responsibility of the water system to ensure those samples are submitted to an accredited laboratory for testing, and the results are reported to DWS within the allotted time period. If they are not, regardless of reason, DWS places the responsibility solely on the water system.

Now, let's take a moment to discuss the accredited laboratories to whom those test samples are given.

When a system obtains water samples for testing, those samples must be submitted to an accredited lab for testing. The list of required testing run the alphabetical gamut from VOC, SOC, TOC, LCR, IOC, DBP, HAA5, TTHM, RAD and the list goes on. What if one of those tests exceeds the MCL? In 2005, the Oregon Legislature amended ORS 448.150 to require certified/accredited drinking water laboratories to report directly to Drinking Water Services any analytical result that exceeds a Maximum Contaminant Level (MCL) resulting in a violation.

When we turn over those samples we assume that they will be tested and the results reported to DWS in a timely



manner. Once the samples are turned over, they are out of our control. They become the responsibility of the accredited lab. However, if for some unfortunate reason the lab fails to report the results, or the lab fails to conduct the required test, according to DWS, the violation still falls on the shoulders of the water system and a violation is registered against the water system.

The accredited labs have a great deal of responsibility to conduct the tests as needed and report the findings. However, what happens if there is an equipment or system failure and a test is not completed? What happens if there is a clerical error and results are not reported as required? Those failures are entirely out of the control of the water system! The samples were turned over in good faith and the lab failed to perform. However, according to DWS, the failure of a lab to perform is still considered a failure on the part of the water system and a violation is registered against the system. While there are some recourses available to the water system, reporting the offending lab to ORELAP² will still not remove the violation from the DWS permanent record.





Oregon Association of Water Utilities

When Testing & Compliance Collide Continued

How fair is that? Shouldn't there be some kind of formal appeal process provided by DWS where water systems can appeal violations, especially when the violation is clearly not the fault of the water system? Certainly, a violation should be assessed if a sample is not correctly obtained, submitted late, or completely overlooked by the system operator and should not be appealable. However, as it stands now, there is no formal appeal process for a violation that occurs as a direct result of a failure by the accredited lab. Even when the circumstances are fully explained, DWS rarely removes a violation, even when the violation is not the fault of the system or operator.

While a violation against a water system is a serious issue, violations and reporting deficiencies have become even more consequential if a system is, or is attempting, to become an Outstanding Performer.

So, what is the DWS Outstanding Performer program and why is a violation so consequential?

Oregon Drinking Water Services has identified criteria for determining whether a community public water system should be considered to be an Outstanding Performer. The criteria for Outstanding Performers are:

- 1. No Maximum Contaminant Level (MCL), Action Level, or Treatment Technique violations in the last 5 years;
- 2. No more than one Monitoring and Reporting violation in the last 3 years. The one violation must be resolved (results submitted);
- 3. No significant deficiencies or rule violations identified during the current water system survey; and
- 4. Has not had a waterborne disease outbreak attributable to the water system in the past 5 years.

This designation is given at the completion of a water system survey (formerly referred to as a sanitary survey). A water system survey is an on-site review of a water system's sources, treatment, storage facilities, distribution system, operation and maintenance procedures, monitoring, and management, for the purpose of evaluating the system's capability of providing safe water to the public.

Systems that are designated Outstanding Performers will have their water system survey frequency reduced from every 3 years to every 5 years. An Outstanding Performer designation

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has become even more desirable now that OHA and DWS have increased system survey fees by an average of 230%, in some cases 300% (from \$900.00 to \$2700.00).

With such a substantial fee increase, it has become even more prudent for a system to gain an Outstanding Performer designation, not only for the goodwill this designation could garner for the system, but economically as well. It only takes two (2) monitoring or reporting violations to disqualify a system for the Outstanding Performer designation. If one or both of those violations are a result of a lab deficiency and no fault of the system operator, it could potentially cost the system thousands of dollars in fees paid to DWS by not qualifying for an Outstanding Performer designation. It is so important to one system Board President that a substantial bonus has been promised to the system operator to achieve Outstanding Performer. To have that bonus denied due to no fault of the system operator would be a real shame.

So, when testing and compliance collide, and that collision results in the disqualification for Outstanding Performer designation, it is even more critical now that DWS offer some kind of appeal process for violation removal when the violation is directly attributable to the accredited lab. Additionally, consideration should be given to circle back around to the lab and DWS in order to verify tests were completed, results were within compliance, reported properly, and posted.

¹ public.health.oregon.gov/HealthyEnvironments/DrinkingWater/ Pages/index.aspx

² ORELAP, The Oregon Environmental Laboratory Accreditation Program accredits qualified laboratories for testing under the Safe Drinking Water Act (SDWA). A list of accredited laboratories and more information about ORELAP can be found at: public.health.oregon.gov/LaboratoryServices/ EnvironmentalLaboratoryAccreditation/Documents/ AllLabsDWMatrix.pdf. The list includes only accredited drinking water laboratories that perform public testing. Drinking water laboratories are a subset of all ORELAP-accredited environmental testing laboratories.

See the public.health.oregon.gov/HealthyEnvironments/ DrinkingWater/Monitoring/Pages/labreporting.aspx page for more details and frequently asked questions on direct laboratory reporting.

Steve Graeper is the President of Rhododendron Water Association and moderator for the Hoodland Area Water Coalition.



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What Makes Us Rise? Throwing My Loop... by Michael Johnson

True helpers. That's what. That's what makes us rise. I have breakfast with one most every morning now. We have coffee and we laugh, we tell stories, and we always say a little prayer for his daddy. I look at him across the table with his still red hair and blue eyes, and that smile. Always that smile. And I think how lucky I am to have a friend like him at this point in my life...and how lucky I am to have had him as a friend most all of my life. He was the key, you see. He was the answer to the mystery. I looked for it so long and in so many places, but of course, it was always right under my nose—right in front of me—just as it is now. It wasn't in a book, or a library. It wasn't in some theory or latest fad. It was plain and pure and simple. It was always in him.

But I'm getting ahead of the story...

I was born into a lower middle-income farm family who did everything in the world for me. Unfortunately, I did very little for them—which is my great regret 'til this day. Not an evil child; not in trouble with the law (much). Rather silly, unfocused, and immature—like a good many youth I suppose. Made terrible grades...but that wasn't my fault. Just out of high school by the skin of my teeth (by one point) a graduate student gave me an I. Q. test and he said I was "slightly below average." I was never more relieved because once that



information came to light, there was no way any of this could be my fault. I was just slow. So I worked hard in other areas to compensate and at eighteen years of age, I had attained the rank of "Rodeo Bum"...and not a very good one at that. I attended college regularly though, but didn't fare too well. I made 13 F's in a row. 13 consecutive F's—a record that I assume still stands somewhere. Then something happened...

My father died suddenly at a relatively young age. My mother couldn't handle the grief. She had what was called in those days a "nervous breakdown." (Which sounds really bad until we live long enough to learn we all have one or two, now don't we?) I was left alone. On Friday afternoon, I found myself sitting in the waiting room of the Financial Aids Office at East Texas State University. The receptionist said, "I'm afraid everyone has gone for the day—and for the weekend, for that matter. You will have to come back on Monday." I didn't tell her that meant sleeping in my truck another two nights. As I was about to leave, a man came from behind his office door. Dressed in a suit and tie, and shiny shoes, he was much the opposite of the somewhat dirty young person who stood before him. "I'm Jerry Lytle," he said. "I'll visit with you. Come on in."

We went into his office and even though quite odd for an introverted "slow" young fellow, I found myself pouring out my



Oregon Association of Water Utilities

story to this stranger. I told him about how I hadn't been much of a son, how I squandered what meager ability I had, and how I was filled with regret—and no matter how silly, I had made a solemn vow to make my father proud of me even at this too late date. He listened. Never said a word. Then, he rose and walked to the door saying to the receptionist, "I'm leaving now. See you Monday." I knew I had made a fool of myself.

"Thank you for visiting with me, Mr. Lytle," I said.

He looked at me for a moment and said, "No. You're coming with me."

Riding in his truck, we drove some ten miles out into the surrounding countryside.

He came on an old farmhouse and pulled in the lane. Hay peered from every window.

"My daddy and I own this house. We use it as a hay barn, but it has running water and it's heated. We can remove the hay. There's my farm gas tank over there. Don't steal me blind and you can use it to get to class every day. You can hunt and fish out here. We do wish you would help us work cows on the weekends, and you will find it more fun than work. We have a good time. I'll start working on your financial aid Monday."

I sat there in that truck in frozen silence. Over and over the thought coursed through my mind. *"What did he just say? Why would anyone do that? Could I somehow gather an answer to*

that question? If I had been a math whiz, a violin prodigy, or ran a 100 in ten flat, I could see it. But why would you help someone who only—only—had 13 F's?"

And so it began. A different world. Weekends filled with cattle, men working, men laughing, becoming a part of something, and during the week, always the work, the studying, the lessons. He came by the farmhouse most every day asking if I was all right or if I needed anything. I shared my grades with him and we rejoiced about a new life. A life of hope.

Graduation came and he was there. We said our good-byes and we promised to stay in touch—and did a surprisingly good job of that through the years. I entered the world of work and lived there for two decades, and eventually there came a time—as in most people's lives—where things took a down turn. Somewhere along the way as Yeats said, *"Things fall apart. The center will not hold."* Kids grew up and went off to college, divorce came, the word "downsizing" came into my life. While that didn't happen, rumors were just as stressful, and I felt like a Twilight Zone character who wakes up one morning and no one is in town. I took a sabbatical from my job and moved to the mountains. An old paint horse and I spent a year together in those mountains. We rode and we talked, and somewhere along the way, I had the strangest thought…

I'm not much of a religious nut—after all, (ahem) I'm just a Methodist—but I would describe the thought as spiritual. I'm



Oregon Association of Water Utilities

What Makes Us Rise? Continued

uncomfortable for some reason saying that, but the thought wasn't mine. Plato said, "I don't know where ideas come from, but I know they don't come from here." It was like that. Wasn't my idea—the thought came from somewhere else. Somewhere outside. And the thought was..."Why did you change when you did?" At the time, I thought that was silly. Here I was worried about my entire life and I find myself thinking about something that happened twenty years ago? And the thought burned stronger. "Why did you change when you did?" Paint and I rode through the hills. We swam the river and the streams and we talked and we wondered...and the thought burned stronger.

At first, I offered the usual answers to myself. You matured, you straightened up, you put away childish things. No. When we hear truth, we know it. None of those answers sufficed. Of course I'm not telling you I won the Nobel Prize here. I'm saying I managed to get off the road to prison. I changed from F's to A's. Because I became smarter? Hardly. I still have that below average I. Q. (I'm using it to write this piece.) No, that wasn't the answer. The answer was somewhere else. That was the moment I experienced fear. It hit me with suddenness that I knew I couldn't go back to work. I knew I would spend the rest of my days looking for the answer to the mystery of "What makes us rise?" And that came to pass. That's what I've done with all my days since that day.

When I was in college I knew what I wanted. I wanted the professors to teach me how to help people. After all, they had all those books, lecture halls, and theories, and they were from such famous places like Ohio State, California at Berkeley, Stanford, Rennselaer, Tulane, and Rice. I listened to their lectures, took their tests, wrote a dissertation, passed a state board exam, received a terminal degree, and...I didn't get it. I don't say that to be mean. I didn't get it. The night they put the cowl around my neck, I looked up...still foggy. No stars. Didn't get it. But...I didn't stop looking. I kept looking. Like Siddhartha, who studied with the wisest teachers of his day until he learned they didn't know how to relieve suffering either... Siddhartha continued the journey on his own." That's what I did. Thirty years now. And during all that time, I've found some answers. I found some people who knew how. Jerry Lytle was the first one.

I've met many of them now-these people, I mean. I can recognize them now. They come in all shapes and sizes, and in all occupations. Some are principals, some superintendents, some are horse trainers or herding dog trainers, and some are actors and singers and some are coaches. Regardless of the discipline they are helping in, whether it be acting, music, track, baseball, singing, etc., these special ones have a common trait. A common gift I should say. These are the people who can move you down the *path*. These are the people who can make you better.

[To be continued in next issue]



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Oregon Association of Water Utilities





QUIZ CORNER

- 1. The major source of error when obtaining water quality information is improper
 - A. Sampling
 - B. Preservation
 - C. Tests of samples
 - D. Reporting of data
- 2. A composite sample should never be used when sampling for which contaminant?

A. Benzene

- B. Nitrate
- C. Barium
- D. Bacteria
- 3. When should water quality samples for chlorine residual be analyzed?
 - A. ImmediatelyB. Within 1 hour
 - C. Within 8 hours
 - D. Within 24 hours
- 4. How many coliform samples are required per month for a water system serving a population between 25 and 100?
 - A. 1
 - B. 2
 - C. 3
 - D. 4

- 5. Water laboratory test calculations and results use which system?
 - A. English
 - B. Metric
 - C. SWAG
 - D. British
- What is the chemical formula for sulfuric acid?
 A. SA2
 - B. H2SO4
 - C. NaOH
 - D. H2O
- 7. Which of the following are two types of samples?
 - A. Dessicator and gooch
 - B. Wet and dry
 - C. Buret and flask
 - D. Grab and composite
- 8. What two types of devices are used to collect samples?
 - A. Left and right
 - B. Upper and lower
 - C. Automatic and manual
 - D. Gas and diesel

- 9. What is the most common method used in labs to test for total coliform and E. coli?
 - A. DMA
 - B. Green
 - C. Colilert
 - D. Lamp
- 10. What test method best determines chemical feed/dosage rates?
 - A. Jar
 - B. Turbidity
 - C. Hammer
 - D. Hardness
- 11. Two columns of water are filled completely at sea level to a height of 88 feet. Column A is 0.5 inches in diameter. Column B is 5 inches in diameter. What will two pressure gauges, one attached to the bottom of each column. read?

	,
COLUMN A	COLUMN B
A. 3.8 psi	38.0 psi
B. 8.8 psi	8.0 psi
C. 20.3 psi	20.3 psi
D. 38.0 psi	38.0 psi

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