



## 2018 O2WA Equipment Rodeo Congratulations to Jared Dunlap for 1st Place

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### INSIDE THIS ISSUE

Presidents Message

Save the Date 2019 Conference  
Q&A

Your Son or Daughter Also an  
Employee?

Rule Changes are in the Wind

Submitting a Quality Septic  
Plot Plan

Soils on the Horizon

Insurance Policy Option -  
Powderhorn's Septic Errors &  
Omissions Program

Taking a Smarter Approach to  
Bidding

4th Annual Fall Educational  
Conference

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## President's Message - Trent Clinkscales

Another Annual Conference is in the books. What a great time I had. I hope you all had fun too. Seaside is a great place for a conference and Mother Nature played nice. I noticed many of you brought your families with you and stayed an extra day. Our group seems to be family oriented and that's why our auction and raffle did so well this year!

We had some great items up for auction this year and you guys and gals bought them all up, sometimes at way more than what the face value was. Congratulations for being some of the most generous people I know. It makes me proud to be a part of this generous group of people. Thank you, Kim Aldrich and Lisette Hammer-Richardson for all your hard work!

Thank you goes out to the board for securing great speakers and for some of you speaking your selves! I have a hard time standing in front of a bunch of people, trying to make intelligent sentences, you guys are awesome! I know it is hard to make time in your busy schedules to volunteer on this board and I appreciate all you do. We are getting quotes for the Fall Mini Conference and next year's Annual Conference. We should have news for you in the next newsletter regarding dates and locations.

**25TH ANNUAL OREGON ONSITE WASTEWATER CONFERENCE & TRADESHOW**  
**APRIL 5 & 6, 2019**  
**RIVERHOUSE ON THE DESCHUTES**  
**BEND, OR**  
**12 CEUS PLUS A BIGGER TRADESHOW!**



## Q&A by Brian Rabe, CPSS, WWS

**Question:** I have a family member undergoing chemo-therapy. Is this likely to have an impact on my septic system?

**Answer:** Certainly, the primary focus is taking care of the person undergoing treatment and I wish them the best. I have heard anecdotal accounts of problems with septic systems in similar situations. However, I could not locate any specific research to document cause and effect. Part of the issue is there are so many different treatments and each prescription is likely to have a different impact on the system. The septic tank is the first line of defense and the retained biomass offers a buffer to periodic shocks from a variety of biologically unfriendly substances; not just chemo-therapy but also other medications, anti-bacterial soaps, and other household chemicals. I would suggest waiting to pump the tank until after the chemo-therapy treatments are done so that it is refilled with typical sewage.

## **Your Son or Daughter Also an Employee?** Provided by Oregon CCB

If you're a sole proprietor and are lucky enough to have a son or daughter working for you, they are EMPLOYEES and you must have workers' compensation coverage. Some types of businesses - corporations, for example - might be set up so that a family member is a corporate officer and the business has no employees. In this case, the corporation might not need workers' compensation coverage. As a sole proprietor, you are NOT a corporation. You do need workers' compensation insurance.

For more tools provided by the CCB go to Construction Contractors Board <OR-CCB@public.govdelivery.com>

## **Rule Changes are in the Wind** by Bob Sweeney, REHS

About every 5 years or so, DEQ tends to propose significant changes to the Oregon Administrative Rules (OAR) affecting the onsite wastewater treatment program. The last significant change was in 2014 with a few minor edits along the way. Well, five years will be upon us faster than we imagine.

DEQ has indeed indicated that they are considering reviewing OAR 340-071 again. Fortunately, rule changes are not taken lightly and there is a process to solicit recommendations and comments from affected parties. Typically, DEQ will establish a schedule and begin to gather suggestions. In general terms, announcements will be sent out, a committee convened to discuss issues and hearings around the state will be held. Those suggestions will be reviewed and a proposed rule package will be published. The recommended version with justification will be submitted to the Environmental Quality Commission (EQC) for approval.

How can you make a difference? The following is a process that can be used for any problem-solving situation, but is oriented on the task at hand:

**Problem / Opportunity Statement.** Describe your issue? Let your O2WA Board know what you think should be changed. If possible, frame it in a positive light as an opportunity to make the system work better for all parties. Naturally, any change will be harder for some than others. Some welcome change and others will consider change as a threat. Expect that.

**Facts.** List the things that are documentable as true. Think in terms of Who, What, When and Where are these impacts felt. If possible, cite references or give examples.

**Assumptions.** These are the things you think are true but may not be able to prove. What do you think will happen if no change occurs? Will affordable housing be impacted by current practices? Will the economy suffer? Are there better ways of doing the job better?

**Options:** Only after you have through the above steps should you develop the solutions. Otherwise, you're probably jumping to conclusions. That tends to lead to competing camps that feel the need to defend their position, rather focusing understanding and being understood.

First. No Change. What are the Pros and Cons of continuing to do things the same way?

Option 2. The Grand Solution. What is your big idea for revolutionizing the world (or at least the onsite wastewater part of it)? Go for the gusto and line-out how all the Pros and how few Cons there are. Believe me, others will be happy to develop a list of why your grand scheme won't work.

Option 3. Realistic improvements. This is often the most successful way to make incremental changes steering the system in a direction you want, and which is more acceptable to other affected parties.

Certainly, DEQ staff and Contract Agents will have a great deal of impact on what is kept or changed. How about you? Can you affect change? Yes. However, doing it alone is hard. There are too many factors and interests involved. This is much easier to do with O2WA as your support group.

Over the coming months, the O2WA Board plans to share these ideas, survey the membership, refine the ideas and assemble recommendations. We need your suggestions. Getting it right is important.

I will admit that one of my greatest pet peeves is septic site plans that lack even the most basic information needed to issue a septic permit. Coming from the state of Washington where there is a licensed septic designer program and most counties require that septic submittals are stamped by these designers, my expectations coming to work for Oregon were pretty high. However because there is no designer program in Oregon, most of the septic permit submittals come directly from the installer. The quality of these submittals can vary from CAD drawings to something that looks like a three year old child drew it up in five minutes. Here are some guidelines for submitting a quality plot plan.

The most important piece of a septic design submittal is the plot plan.  
At a minimum the plot plan should provide the following:

- Applicant's name and address.
- Legal description of the property (Township, Range, Section and Tax Lot).
- Location of approved test pits.
- Direction of North (preferably pointing to the top of the page).
- Scale bar using multiples of ten (ie 1" = 50')
- Driveway location and location of adjacent streets.
- Proposed and existing structures.
- Location of any existing or proposed wells within 200' of the septic system.
- Location of the existing and/or proposed septic tank, drainfield, and drainfield replacement area.
- Approximate ground slope and direction of the slope.
- Proposed setbacks from all property lines.
- Position of all creeks, streams, ponds, springs, or other drainage ways.
- Relative elevations for septic tank top, invert of septic tank outlet, septic components, and elevation of each drain line.

There are a lot of items to cover here, but again remember that the regulator who reviews your submittal may not be the person who originally evaluated the site. Providing a complete and accurate plot plan not only helps the regulator in reviewing the septic application, but it also provides an accurate representation of the pre-construction site in the permanent record. These plot plans are often used 20 or 30 years later to provide for the replacement area approval.

Turning in a quality drawing (hand drawn or computer aided) doesn't necessarily take a long time to produce. One of the main excuses I am given for incomplete and poorly drawn plot plans is that the contractor simply does not have time. However these incomplete submittals often lead to delays in issuing the permit and may also result in required corrections to the installations. Either of these delays cost much more time than what it takes to produce a quality plot plan. Taking that extra 30 minutes to produce a quality plot plan may save you from days of delays and hours of labor if you have to make changes to an installed system. My experience over the years is if a quality plan is submitted, there are rarely surprises at the time of inspection that require corrections.

If your design includes a pump, there are several pump curve calculators that are available for free. It takes just a few minutes to input the data and print out a complete calculations and pump curve sheet. This should be included with every septic permit that requires a pump so that you can verify that the pump you intend to use is adequate for the job. Float settings should also be included to determine if they meet the DEQ regulations or not. It has been my experience that the float settings provided by the tank manufacturers do not always meet DEQ requirements (even when they are listed on the DEQ website). When in doubt, contact the regulator to discuss the float settings. Other products such as septic tanks, dosing tanks, drainfield media, panels, sand filters, and ATT's have available cut sheets either from the DEQ website or the manufacturer's website. Including legible copies of these cut sheets with the plot plan provides a permanent record of what was installed. Some products may be discontinued or no longer approved in the future and the cut sheets submitted with the plot plan may be the only information available to show what was installed. Having those cut sheets as part of the permanent record may help for future repairs and maintenance.

Taking a little extra time to provide a quality plot plan for a septic permit application will save you time and money in the long run. Less delays in getting your permit issued means starting the job sooner and being able to move on to the next job. In my experience it also means fewer required corrections out in the field. This not only saves you time, but also may save you the expense making alterations to a system that you didn't budget into the project.

## Soils on the Horizon by Brian Rabe, CPSS, WWS

In previous columns, I have discussed many of the characteristics of soil (e.g., texture, structure, chemistry, physics, biology, etc.). Each of these soil properties is important by themselves. However, together, the full package can be more powerful than the sum of the parts. Bottomline, soils are an incredibly powerful treatment medium. Done right, soil-based treatment systems offer a better, more sustainable means of protecting public and environmental health than traditional sewage treatment plants that simply discharge to surface waters.

Those who attended the conference in Seaside in early March would have seen the presentation by George Heufelder about the results of a study he conducted in Massachusetts regarding the removal efficiency of various contaminants of emerging concern (CECs) such as pharmaceuticals and personal care products in subsurface soil absorption systems. These studies were conducted with septic tank effluent introduced into the drainfield with a form of pressurized distribution in sand, sand with 5% fines, and sand with 10% fines (silts and clays). The results were pretty impressive with increased removal efficiencies with increasing fines. Removal efficiencies in conventional sewage treatment plants is not so impressive and several studies have shown abnormalities are common in aquatic species near the discharge points in receiving water bodies. Similar studies in loamy and clayey soils would likely produce similar to even better results.

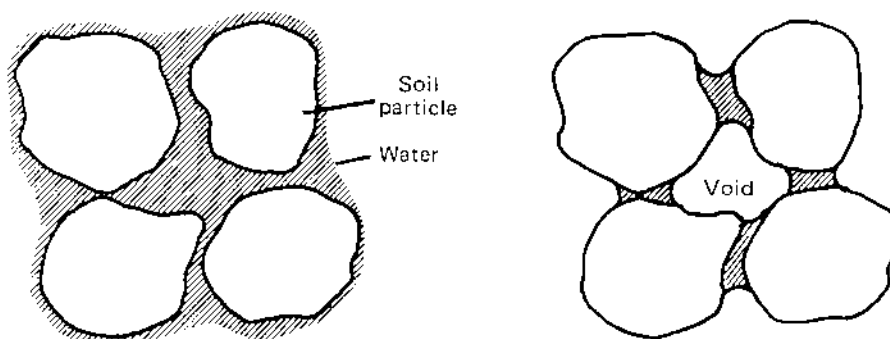
The key to achieving these high levels of treatment is what George Tchobanoglous referred to in a similar talk several years ago as "thin-film" flow. When effluent is encouraged to flow across the surface of soil particles and aggregates in thin films, the treatment conditions are optimized: there is maximum opportunities for contact with active surfaces (cation exchange); pathogens get trapped where the soil particles touch each other; and the larger pores remain filled with air to provide oxygen to the beneficial microbes that metabolize or convert key constituents into carbon dioxide, water, nitrate, trace minerals, and destroy trapped pathogens.

In sandy soils, achieving thin-film flow requires some form of pressure distribution. Soils considered rapidly draining in Oregon require low pressure distribution. The use of a pump provides pulses of effluent with periods of rest between pump cycles that allow the capillary forces in the soil to further disperse the effluent. In loamy or clayey soils, a drainfield receiving septic tank effluent will develop a biomat within the soil along the bottom and sides of the trench that slows the rate at which the effluent enters the surrounding soil serving a similar function to equalize distribution. When highly treated effluent is distributed into these soils, pressure-assisted distribution (via a hydrosplitter) serves a similar function with dosing and resting.

The various aerobic processes described above occur within the first several inches of soil below or surrounding the trench. If conditions below that zone are ideal (e.g., low oxygen content and high carbon content), then denitrification (the process whereby the nitrates are converted to nitrogen gas) can provide additional protection to the underlying aquifer.

Bottom line: soils are a powerful treatment medium. When properly designed, constructed, operated and maintained, soil-based treatment systems offer a sustainable approach to managing waste while protecting public health and the environment.

That is it for now. Remember, Soil Rocks!



Illustrating the effect of two different water contents on the degree of filling of soil pores. On the left, a saturated condition wherein all pores are filled; and at the right, an unsaturated condition wherein water is retained principally in the narrower necks of pores and as very thin films over particle surfaces.

**BROOKFIELD, CT – The Powderhorn Agency, Inc., a program solutions provider specializing in the septic industry has announced that its Errors and Omissions program for septic system designers and inspectors has been chosen by the National Onsite Wastewater Recycling Association (NOWRA) as the preferred errors and omissions insurance program for its 5,000+ members nationwide.**

**Powderhorn's errors and omissions program is underwritten by an A.M. Best rated "A (Excellent)" insurance provider. NOWRA board members have endorsed the product based on its outstanding coverages and limit options, as well as the insurance company's longstanding strength in its A.M. Best financial rating. Designed for septic designers and inspectors, the errors and omissions product provides a solution in the industry by offering affordable coverage with multiple limit options.**

**"The Powderhorn Agency, Inc. has a strong commitment to the septic industry and we designed our errors and omissions product in conjunction with the insurance carrier to fill a void in the marketplace," said Powderhorn's President Gary Missigman. "The previously underserved septic designers and inspectors now have an affordable coverage option for their errors and omissions exposures. We are confident that NOWRA members will be pleased with the comprehensive coverage and accessibility of our product, and we look forward to continuing our leadership role in servicing the insurance needs of the wastewater industry."**

**"We are pleased to recommend Powderhorn's Errors and Omissions product to our members," said NOWRA Executive Director Eric Casey. "Our Board believes NOWRA members will benefit from the tailored coverage and flexible options provided by Powderhorn." Powderhorn's errors and omissions product offers septic system designers and inspectors:**

- Limits of \$250,000, \$500,000 and \$1,000,000 available**
- Defense Costs outside of the limits**
- Disciplinary Actions Coverage sublimit of \$5,000**
- Financially sound carrier**
- Highly experienced Underwriting and Claims staff**
- Septic industry experienced broker services**
- Simplified application and quoting process**
- Competitive minimum premiums starting as low as \$750**

**For more information about Powderhorn's errors and omission product, please visit [www.powderhornagency.com](http://www.powderhornagency.com), or contact The Powderhorn Agency, Inc. at 888-354-0677.**

For contractors looking to expand. It may be tempting to significantly ramp up bidding outputs by firing off as many quotes as possible on various types of projects.

But an overly zealous approach to taking on new business can easily backfire. It's important to evaluate your business and have a clear direction where you want to take your business. Taking on too much in a short period of time can put a lot of stress on a business and can lead to serious problems.

Those problems could include not having sufficient labor to handle the work, taking on projects outside of your comfort zone, taking projects with questionable clients, and impeding cash flow.

#### **The Bidding process:**

It's relatively easy to get on a lot of bidders list and in short order have more projects to quote than you can get to. Trying to estimate jobs too quickly, however, can undermine diligent practice and result in costly mistakes. It's important to allow ample time to review vendor's quotes to ensure they are accurate and pricing is optimal. On projects where multiple manufacturers are noted as acceptable, estimators are well-advised to have at least two of them provide figures, especially on moderate and large jobs where a lot of the same items are called for.

Following up on your bids is nearly as important as submitting them. Contractors quite often forget to follow up with their customers to see if they have any questions about the estimate. This will help keep your business fresh in their minds and make you look like a responsible Contractor.



**SAVE THE DATE - November 3, 2018**  
**4th Annual Fall Educational Conference**  
**Mill Casino - 3201 Tremont Avenue, North Bend, OR 97459**  
**(Near Coos Bay on the Southern Oregon Coast)**

This conference is for industry professionals including public health officials, O&M service providers, engineers, consultants, installation contractors, septic pumpers, and others interested in onsite wastewater management. You will learn about the latest in onsite wastewater industry issues and approaches to onsite wastewater management.

Conference includes Friday welcome reception, classes, breakfast, lunch and time with exhibitors. Each individual will receive a certificate of proof of attendance at the conclusion of this conference. Maximum number of CEUs available are 0.6.

#### **CONFERENCE SCHEDULE**

##### **FRIDAY**

6:00 p.m. – 7:00 p.m. Welcome Reception

##### **SATURDAY**

7:30 a.m. Registration Open & Attendees Sign In

7:30 a.m. – 8:15 a.m. Breakfast with Exhibitors

8:15 a.m. – 8:30 a.m. Welcome and Orientation

12:00 p.m. – 1:00 p.m. Lunch – Exhibitor Introductions

8:30 am - 4:30 pm Classes

Register will be open soon online at [www.o2wa.org](http://www.o2wa.org).

#### **GUEST ROOM RESERVATIONS**

Make your reservations by October 21<sup>st</sup> to receive the discounted rate.

Please contact the hotel for guest room reservations at 800-953-4800.

#### **DIRECTIONS**

Coming to The Mill Casino Hotel & RV Park is an easy and scenic drive. Located on the Southern Oregon Coast (Highway 101 between North Bend and Coos Bay) at 3201 Tremont Avenue, North Bend, OR 97459.

# *Thank you to our Conference Sponsors*



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## *O2WA Scholarship Fund Thank you to our Auction Sponsors*

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**O2WA Scholarship Fund**

**Scholarship Applications Available  
Online at [www.o2wa.org](http://www.o2wa.org)**

**Deadline May 31st**