



Summer 2023

Onsite Informer

The official publication of the Western Canada Onsite Wastewater Management Association



CPC Pub. # 42887518

INSIDE:

- High Total Suspended Solids: Sources and Solutions
- Wastewater Tracers
- Accurate Water Table Characterization
- Digital Dirt World
- Changing of the Guard



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A Message from WCOWMA

Suddenly it is summer, or at least it feels like summer. The seasons change, work ramps up, the time flies by.

We are in a season of change at the Association office as well. The work doesn't change of course. Your Association is focussed on providing you with robust member services, such as advocacy with regulatory authorities, technical help for design and installation, basic training for those coming into the industry, and continuing education for those already experienced and wishing to learn more. This year we also launched a new website to inform you about activities in your industry and market your services to homeowners and other potential clients.

The most significant change in the Association office currently, is a change of the guard. Going forward there will be a new Executive Director. Charles Hallett is taking over this role as I transition into retirement. That transition is underway as you read this message.

Charles brings 30 years of strong industry experience to share with our members. With a background in environmental health and administration of regulations as well as experience in onsite wastewater installation and design, he will bring a well-rounded perspective to Association initiatives and membership services.

With Charles working with the provincial Boards of Directors and administration, the Association is sure to continue to grow, increasing the industry's influence and public profile and continuing to provide a strong voice for our members.

Lesley Desjardins

What's Happening in Western Canada

Winter is a busy time in the calendar for the Association! All the provincial chapters host either conventions and trade shows, or sponsored education days, Annual General Meetings and elections to the Boards of Directors

To add to that, the Association finalized its new website and as we go to publication, the site is being launched to the benefit of our members.

Let's take a look at what's been happening!

Website Launch

The Association websites have a new look and new features to benefit our members and market our services to the general public. The sites have been modernized and provide easier navigation for everyone looking for information about our industry, onsite systems in general, or finding a service provider.

The front end of the websites provides information on membership, training, and homeowner education, along with news and events pertinent to the industry.

Members can log into the secured area of the site where they will find materials to help them with system design and planning, historical documents to help in maintenance provision and inspection. Another new feature is our Knowledge Network. Here members will find webinars and videos on a variety of practical, technical, and research topics to help them learn new techniques, expand their skills, and gain continuing education opportunities.

The Locate-a-Pro section has been enhanced to provide more Scopes of Work for members to be listed in. The number of regions that members can be listed in has been increased from four to five and more detailed information will be sought for undercorporate members to enhance marketing of the company.

Suppliers who market their products or services province-wide can be listed in all regions of the province. This option is also open to those who are authorized to design complex systems, which are systems that due to their technicality require the services of an Engineer or Geoscientist in the design process.

British Columbia

WCOWMA-BC Convention and Trade Show

WCOWMA-BC held their 2023 Convention & Trade Show in Nanaimo from March 2 - 4, 2023. This year's theme was "Under Pressure" in recognition that for the past three years, the industry has faced extreme stress from a planning, installation, and maintenance perspective.

Approximately 215 people flowed through the trade show over the course of the event, touring the booths and displays sponsored by our vendors. The WCOWMA-BC would like to thank our vendors for sponsoring the event this year. Pictures from the event, and a word search featuring the vendors, can be found on page 18.

The 2023 Trade Show and Convention was one of our most well-attended shows. We offered several business courses, in addition to a series of great presentation by a host of speakers. There was also time to network with other industry professionals and try to solve common issues. Photos from the event can be found on our Facebook page. Recordings from the show are now available in the app. Those who did not attend the show but wish to view the recordings can contact the office to arrange a post-show ticket.

The Association would like to thank all of you who participated in making the 2023 Convention and Trade Show a success. From exhibitors to speakers to attendees, we couldn't do it without you!

We look forward to seeing you again next year! Stay tuned for more details!

WCOWMA-BC Annual General Meeting

The Annual General Meeting was held in the evening on Friday, March 3, 2023, just before our banquet dinner.

The 2022 Board remained in place for the next year, with the addition of new Indigenous Communities Liaison, Shane James.

WCOWMA-BC 2023 Board of Directors

Barry Rumsey: President

Mike Hyde: Vice-President

James Stikma: Secretary/Treasurer

Chris Bayley: Director

Bruce McColm: Director

Krista Podwin: Director

Craig Sapriken: Director

Shane James: Indigenous Communities Liaison

Alberta

AOWMA Convention and Trade Show

The 2023 AOWMA 25th Annual Convention and Trade Show was held in Red Deer, AB on February 1 – 3, 2023, our first in person Convention and Trade Show post pandemic.

Approximately 235 people flowed through the trade show over the course of the event, touring the booths and displays sponsored by our vendors. The AOWMA would like to thank our vendors for sponsoring the event this year. Pictures from the event, and a word search featuring the vendors, can be found on page 18.

The convention workshop program was well attended, as delegates had the opportunity to participate in various training sessions of a technical and practice nature. There was also time to network with other industry professionals and try to solve common issues.

AOWMA Annual General Meeting

Elections were held at the Annual General Meeting on Thursday, February 2, 2023, for the AOWMA's Board of Directors.

Shaunna Stevenett stepped down from her position of Director this year. We would like to thank her for her many contributions to the Board. Shaunna will be continuing to work with the AOWMA as she continues her work on a few of the committees.

Congratulations to Clayton Foster, President, Jim Wigmore, Director, and Arnold Groot, Director for running and being re-elected to their positions. It's exciting to have them back as their unique ideas and perspectives help move the AOWMA forward.

Congratulations also go out to Ryan Ramage who was elected as a new Director for a two year term. Ryan brings a passion for the industry and new ideas to the Board and we look forward to his input and the new energy he bring to the Board of Directors.

AOWMA 2023 Board of Directors

President: Clayton Foster

Vice President: Ed Lemke

Secretary Treasurer: Nicole Paggett

Director: Rick Baxter

Director: Arnold Groot

Director: Tim Ierullo

Director: Ryan Ramage

Director: Mike Schmalz

Director: Jim Wigmore



Saskatchewan

SOWMA Education Days

The Saskatchewan Onsite Wastewater Management Association hosted a series of in-person onsite wastewater education days throughout the province during the month of March. Over 70 people joined us throughout the province. The SOWMA would like to thank those who sponsored our events this year. Pictures from the events, and a word search featuring the sponsors, can be found on page 18.

Presentations covered the following topics:

- Pressure Distribution Refresher
- Detailed Site and Soil Evaluation
- Review Permitting Documentation
- CSA B66 Standard Update for Prefabricated Septic Tanks and Sewage Holding Tanks

The Association also represented the industry at the Aquifer Trade Shows on April 25 in Regina and April 27 in Saskatoon.

SOWMA Annual General Meeting

Elections were held at the Annual General Meeting on Thursday, April 27, 2023, for the SOWMA's Board of Directors.

The 2022 Board remained in place for the next year, with the addition of one new Board member. SOWMA welcomes Shawn Ripley to the Board.

SOWMA 2023 Board of Directors

President: Travis Wolfe

Vice-President: Dean Van Impe

Secretary/Treasurer: Kyle Markuska

Director: Jason Holtvogt

Director: Wesley Perehudoff

Director: Shawn Ripley

Manitoba

MOWMA Education Day and Annual General Meeting

The MOWMA Education Day took place in Winnipeg on March 24, 2023 in, Winnipeg, MB in conjunction with their AGM. The event was well received with 45 people in attendance at the Education Day & AGM. The MOWMA would like to thank those who sponsored our events this year. Pictures from the events, and a word search featuring the sponsors, can be found on page 18. During the day, attendees were able to participate in presentations about:

- Pressure Distribution Refresher
- Soils Review
- Update from the Ministry
- CSA B66 Standard Update for Prefabricated Septic Tanks and Sewage Holding Tanks

MOWMA Annual General Meeting

Elections were held at the Annual General Meeting on Friday, March 24, 2023, for the MOWMA's Board of Directors.

The 2022 Board remained in place for the next year, with the addition of one new Board member. MOWMA welcomes Patrick Gueret to the Board.

MOWMA 2022 Board of Directors

President: Randy Thomas
Vice President: Edwin Friesen
Secretary Treasurer: Onale Thomas
Director: Brett Gaudry
Director: Brent Good
Director: Denis Keating
Director: Patrick Gueret



Changing of the Guard

Meet the New Executive Director

By Charles Hallett, Executive Director

Hello, Western Canada Onsite Waste Management readers! I am writing to introduce myself as the next Executive Director of WCOWMA as Lesley Desjardins transitions into her retirement this year.

I say introduce myself, but many of you may already know me.

I have a formal education in Environmental Health and have been around the onsite wastewater industry for almost 30 years in various roles such as an educator, regulator, supplier, and a designer/installer working primarily in Alberta, but also stretching into much of Western Canada. I enjoy developing strong relationships with key stakeholders at all levels, including Association members, government officials, regulators and members of the general public. Throughout my involvement in



the onsite industry, I have had the privilege to meet and get to know so many of the incredible people who make up the WCOWMA community.

WCOWMA is at a pivotal moment. We have an incredible membership base, a dedicated administration team, and enthusiastic volunteers. As with all changes in life, we will prepare to evaluate our core priorities, adjust as needed and continue to work towards positive changes in the industry as we imagine the possible impact of this organization, together. I'm sure we'll have our fair share of road bumps, but as somebody recently said to me.... If you don't hit a few road bumps along the way, you're not moving.

I see WCOWMA as a place where the onsite community can gather, where we can share ideas for improving our industry and where we celebrate, learn from our challenges and connect. WCOWMA can be a place where the members of the onsite industry can come together to feel a part of something. To belong.

Lesley Desjardins has been pivotal in playing a key role in WCOWMA through the birth and growth of the Association successfully dealing with many challenges along the way. I'm grateful for her commitment over the years as we continue to focus on sustainable growth for the future of the organization. A huge thank you goes out to Lesley as she transitions into retirement for all her great work. We wouldn't be here today if it wasn't for Lesley. Thank you, Lesley!

I look forward to hearing from you, your challenges, your ideas for improving the onsite industry throughout Western Canada and ultimately seeing those improvements at the local level. We've come along way, we also have a long way to go, but we can get there ... together one step at a time.

If you'd like reach out to me, please call or email me.

Charles Hallett

Executive Director

Call: 877-489-7471

wcowma.com/contact

charles@wcowma.com

Minding the Mindset

How Well-Being and Mindset Work Together

By Pamela Morgan, Key Instincts CEO

Before you even start to read this article, I want you to take a big deep breath in through your nose, and then slowly release out your mouth. Now drop your shoulders.

Mindset can shift when we notice what our bodies are doing. If you're breathing fast, if you have tight shoulders or a racing heartbeat...it's more challenging to seep into a calm & relaxed mindset.

These days, we are hearing the word mindset a lot! So, let's break it down, get an understanding for it, and examine why it's such an incredible tool for your mental health toolbox.

The dictionary defines mindset as:

the established set of attitudes held by someone.

or a fixed state of mind.

The top answer on google says: *Your mindset is a set of beliefs that shape how you make sense of the world and yourself. It influences how you think, feel, and behave in any given situation. It means that what you believe about yourself impacts your success or failure.*

My favourite quote that embodies mindset is *"Be fluid. Be fluid like water. Flow around the obstacles."* Master Choa Kok Sui.

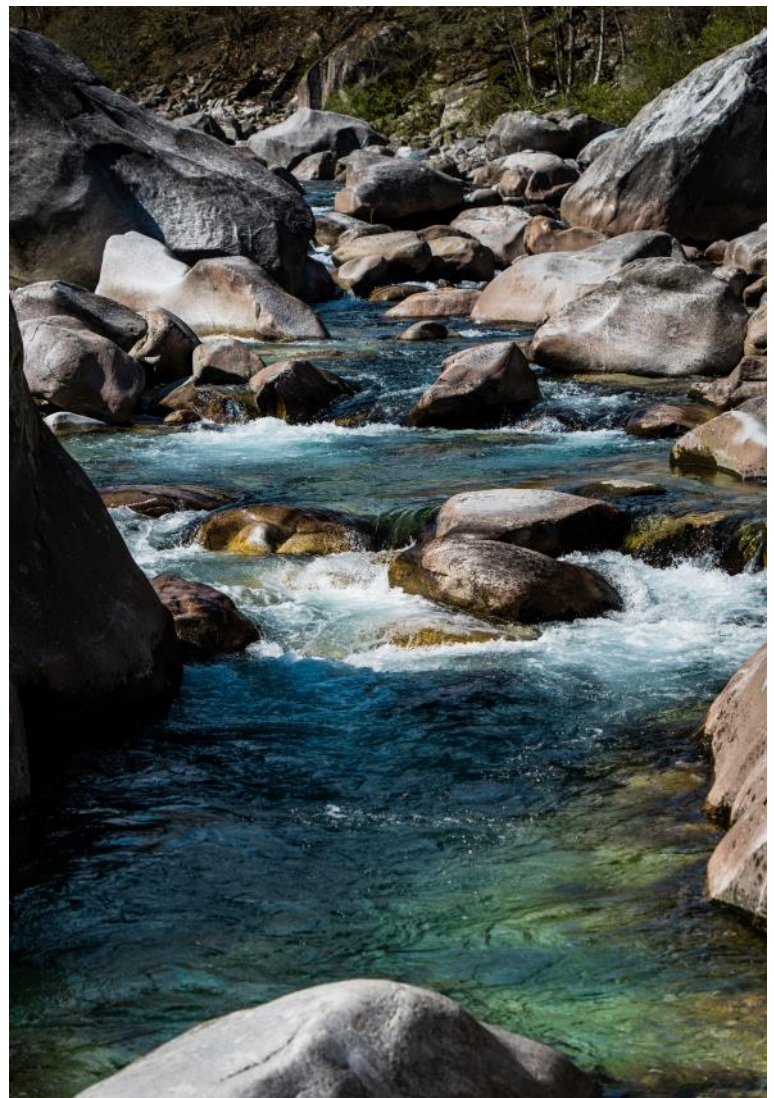
Mindset is ultimately like water. Water cuts through rocks because of its patience and persistence. It creates a new path over time to get where it needs to go – softly. But at the end of the day, water is one of nature's most powerful sources.

When we hold a *fixed* mindset, we assume that our character, intelligence, and abilities are static and can't be changed. This could manifest in us believing that we cannot, for instance, influence our future well-being. A *fluid* (also known as *growth*) mindset is one in which we see we have the capacity and ability to change. That our well-being can be achieved through increased effort and skill development. Research has shown that a fluid mindset allows people to navigate stress and challenges better and can lead to higher levels of well-being overall.

Have you ever consciously thought about your mindset and how it affects your everyday life?

Whether positive or negative, there are a few **key** things to take in:

- Everywhere you look, you can find positivity or negativity. Energy flows where attention goes, meaning where you put your focus will provide those same results.
- We are constantly put in "survival mode" and trying not to get "banished" from groups or social circles.
- Are you affected and bothered by certain things? People may count on that because they want to see your flaws.



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- Make the decision. What is your baseline: Freedom or Fear?
- Life lessons. Are you prepared for the next steps?

These are all things that happen in everyday life and **your mindset is what determines the outcomes of these situations.** Are you ready to level up your experience as a human? Is what you're doing, saying, and THINKING in alignment with who you want to be?

At the same time, we need to forgive ourselves for not being the perfect version we may envision. It's unrealistic to think we can be "on" all the time, that we can reach every single goal set. We need to be fluid with circumstance to see that often the path to "said goal" may be the lesson more than achieving it. Taking a pause is just as important as hitting the gas. Your mindset and ability to tap into that about yourself will allow you to know when one or the other is needed. You must allow yourself to choose what is right for you in each moment.

Our values can act like an internal compass, pointing us in the right direction. Research shows that when we set goals and take action **aligned** with what is most important to us, we experience higher levels of well-being, personal fulfilment and happiness.

So, you say...Pam, how we do this? How do we work on mindset?

First, it starts with your desire. That will be the fuel to put you into motion.

Next, here are some areas where you can focus:

Positive Emotion: engaging in hobbies, interests, and activities that provoke laughter, smiling, fun, **play**, and positive feelings.

Engagement: identifying personal strengths and passions, and activating these through

purposeful activity in your work, education, and personal life.

Relationships: building healthy relationships and connections with others based on shared interests, values, and mutual respect for each other's needs.

Meaning: identifying and connecting to the factors that provide meaning and purpose in your life and finding ways to express these through action.

Accomplishment: setting achievable and meaningful goals, linked to what is personally important, and celebrating both the process and outcome of these tasks.

Healthy Behaviour: physical activity, improving sleep quality, focusing on nutrition, and cultivating positive stress management techniques.

Our coaching programs at Key Instincts are created with this framework. If you feel like you could use some extra support in this area, we are here to help. Remember, at the end of the day you are never alone on your journey to the best you.

I want to leave you with a couple of reflection questions:

What does well-being mean to you?

What does a fluid mindset look like to you?

With the right team around you and the right relationships surrounding you, your mindset is one of the most powerful tools you have! Use it to your fullest advantage and you will truly be unstoppable!

Pamela Morgan

CEO, Key Instincts

pamela@keyinstincts.com

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High Total Suspended Solids: Sources and Solutions

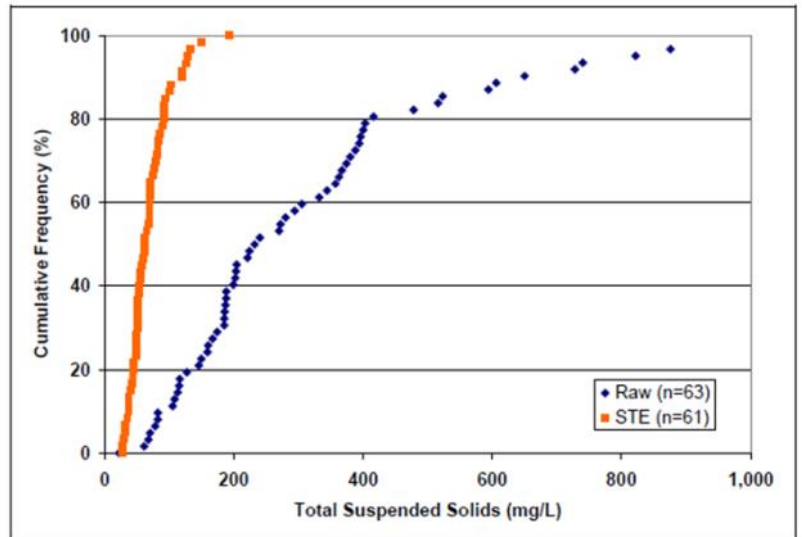
By Dr. Sara Heger, University of Minnesota

Total suspended solids (TSS) are the most common measure of the amount of solids, both organic and inorganic in wastewater effluent. TSS is the measure of all suspended solids in a liquid. It is measured by filtering a well-mixed sample through a standard glass fiber filter and drying the residue retained on the filter at 217 to 221 degrees F. The increase in the weight of the filter represents the amount of total suspended solids. Typically, when we take a sample for TSS it is after settling in a septic tank, processing tank or clarifier and therefore the larger settleable solids have been removed so we are measuring the solids that are staying in suspension. The TSS test measures both organic and inorganic material but does not qualify dissolved solids such as minerals. TSS can also be estimated by a turbidity test. Turbidity is the physical clarity of the water and is an indicator of the presence of suspended matter in wastewater.

The sources of TSS are broad with much of it coming from people in both the food we digest and undigested food from sinks and garbage disposals. It also comes from toilet paper, lint from the washing machine and skin, hair and soil from bathing and laundry. It also could come from other solids which are disposed of through drains and toilets that are not appropriate for wastewater treatment such as plastics, sanitizing wipes, etc.

Raw wastewater has a TSS typically ranging from 155 – 330 milligrams per liter (mg/L) with 250 mg/L being a typical concentration. After going through primary treatment in a septic tank TSS values are expected to be less than 60 mg/L. After secondary treatment in an advanced treatment system the TSS will normally be below < 25 mg/L. The lower the TSS level applied to the soil the longer the soil treatment system will last as eventually inorganic solids will contribute to the clogging of the soil pores.

In 2009 a study was published documenting the range of wastewater characteristics from single family homes by the Colorado School of Mines. As can be seen in the chart not all samples met 60 mg/L out of the septic tank but there is significant removal from raw wastewater to septic tank effluent (STE) (Lowe et al, 2009).



The septic tank is a gravitational settling device that provides a space for sedimentation and flotation to take place. Some of these differences could be explained by varying tank characteristics including the depths and compartments but more if it is based on the system design along with practices in the structure such as:

- The system being under designed for the average or peak flow as the removal of solids is related to the detention time.
- Large surge flows which disrupt settling in tanks.
- Use of low flow fixtures which conserve water but do not reduce the constituent mass loading and result in higher concentrations.
- Grinder or ejector pumps being used to convey wastewater to the treatment unit which create small solids which do not settle out as well.
- Use of a garbage disposal which adds more solids and creates smaller solids which do not settle out as well.
- Kitchen practices—e.g., kitchen clean-up, food preparation, or cuisine that add additional food particles to the system.
- Above average use of toilet paper or placing other paper products into the system increases TSS loading.



Microfibers are non-organic microplastics smaller than 5 millimeter in length and in wastewater primarily come from the laundering of clothing in washing machines. Since 1950, the production of microfibers has been increasing particularly in synthetic apparel products including fleece, moisture wicking fabrics and swimming clothing. When these fabrics are laundered, 100,000+ microfibers can come off a single fleece jacket per wash cycle. Due to all the synthetic fibers we are wearing more microfibers are being discharged to septic systems and potentially reducing the life of septic systems due to soil clogging and adding microplastics to lakes and rivers from wastewater treatment plants.

and storage.

- Clothing fibers, clay, or soils present on the clothes increase the TSS load and relate to the habits, hobbies, and occupation of the residents and the type of clothing they wear.

Solutions

Below are a range of options to reduce and manage the TSS in a system which will help to promote system longevity:

1. Reduce the amount of TSS from the source – this could include reducing or eliminating the use of a garbage disposal and overall reducing the amount of solids in the system.
 2. Conserve water by replacing old toilets and washing machines, fix leaks and make sure all “clean” water does not go into the system to increase retention times.
- Toxic, emulsifying, and antibacterial materials when added at high amounts can negatively impact stratification and microbial breakdown.
 - Lack of tank maintenance will impact solids settling

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3. Use a non-agitating washing machine and install a lint filter on the discharge line.
4. Limit antibacterial products entering the system which can reduce the anaerobic decomposing of solids.
5. Limit products which may cause emulsification of the septic tank such as degreasers and liquid fabric softeners.
6. Spread out usage so septic tank velocity is as slow as possible.
7. Install larger compartmented septic tanks that are not low profile to increase the amount of time for settling.
8. Install an effluent screen to hold back solids.
9. Assure that septic tanks are pumped when more than 25% of capacity is storing sludge and scum.
10. Install a secondary treatment unit such as an aerobic treatment unit or media filter.
11. Use pressure distribution in the soil treatment to spread out the organic loading.
12. Install a soil treatment system with the ability to rest a portion of the soil treatment system.

TSS is an important characteristic to monitor in systems. Use within the home or business is the most probable cause for elevated levels so operation is critical.



Share your worst work story and you could win a Marks gift card!

We will select the top ten submissions and put them to our members to be voted on. Submissions should be a maximum of 500 words and may include one JPEG image.

Entries submitted may be published in our newsletter or in other WCOWMA publications.

Send your stories to kelly@wcowma.com and be sure to use the subject line "Worst Story 2023". Failure to use the subject may result in your entry not being considered. Please submit your entries by August 31st.

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Wastewater Tracers:

Identifying Areas With High Occurrence of Malfunctioning Septic Systems

By Dr. Clare Robinson, Civil and Environmental Engineering, Western University

When septic systems function properly and are regularly maintained, they are highly effective at removing wastewater pollutants and limiting groundwater and surface water pollution. However, it is estimated that up to one-fifth of septic systems in Canada may be malfunctioning due to improper design, installation or maintenance. This can result in the release of partially treated wastewater, and in some cases untreated wastewater, into the environment. Although only a small percentage of septic systems are malfunctioning, the release of wastewater pollutants into the environment, including nutrients, fecal bacteria and pharmaceuticals, is a concern for surface and groundwater quality and can impact aquatic ecosystems and public health. Across Canada, various initiatives are underway to mitigate against malfunctioning septic systems, including re-inspection programs and landowner incentives to support septic system repair or replacement. To inform these programs and prioritize resources in areas where there is a high occurrence of malfunctioning septic systems, there is a need for cost effective field approaches that can be used to rapidly identify these areas without requiring individual septic system inspections to be completed.

At Western University, we are working with researchers at Environment Climate Change Canada to explore how different human wastewater tracers can be used to detect and quantify the amount of septic system wastewater effluent that is reaching streams that run through communities that use septic systems. The main tracers we are measuring in streams to detect septic system wastewater effluent are artificial sweeteners (acesulfame, saccharin, cyclamate, sucralose) and microbial DNA source tracking markers (HF183; which is specific to the human microbiome). Artificial sweeteners are added to foods, beverages, medicine, personal care products (e.g. toothpaste) and are often found at high concentrations in septic system wastewater. They are useful chemical tracers for detecting human wastewater in the environment

because they are widely used by households, do not readily degrade in the environment and through wastewater treatment, and are often present in streams at detectable concentrations. We are exploring how this combination of chemical and microbial tracers can be used to determine how much septic wastewater is reaching streams and how is it reaching the streams - whether there is a direct release of wastewater effluent to the stream via an illegal "straight pipe", whether septic wastewater effluent is breaking out to the ground surface in a drainage field and then flowing overland to a stream, or whether the septic wastewater effluent is moving slowly with groundwater through an aquifer and discharging to a stream. We are working to determine the best and most cost-effective way to use these wastewater tracers so they can be applied more broadly by others to detect areas with high occurrence of malfunctioning septic systems that may be causing environmental contamination. This will be useful for informing and prioritizing septic system reinspection programs, and repair and replacement initiatives.



Water sampling in a stream downstream of a community on septic systems.



Potential illegal "straight pipe" in an old residential area that is suspected of releasing wastewater from a malfunctioning septic system to a nearby stream.

Sun Protection

By WCOWMA staff

The sun can be damaging all year, but UV intensity tends to be higher in the summer. With warmer weather ahead, it's time to reevaluate your sun protection.

A keyway to protect yourself is to cover up: wear light layers to keep your skin covered without overheating; put on a hat to protect your head; apply that sunscreen.

Sunscreen should be applied to any exposed skin, such as hands, face, back of the neck. You can also apply it under your clothes for extra protection. This is more important with light-colored, wet, or loosely woven fabrics.

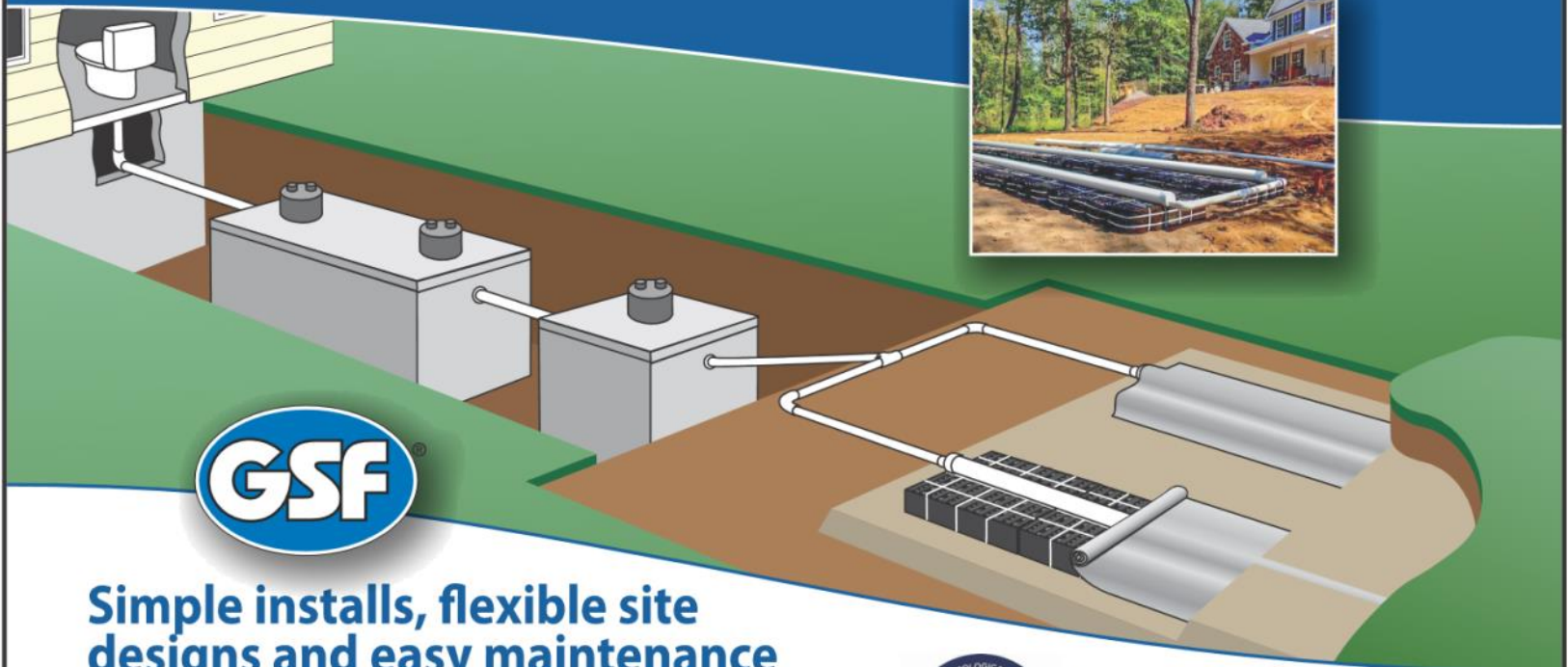
Sunscreen comes in a variety of SPF's. SPF is a measure of how much solar energy (UV radiation) is required to

produce sunburn on protected skin. The higher the SPF, the better protected you are. In theory, the number indicates how long the sun's UV radiation would take to redden your skin, but that number is based on if you apply the product exactly as directed, and most people use less sunscreen than the instructions suggest.

A sunscreen with an SPF 30 protects you from about 97% of UVB rays to hit your skin, while an SPF of 50 protects you from about 98% of those rays. It's important to reapply the sunscreen throughout the day. Every two hours is best.

As the days get sunnier, remember to seek shade, stay hydrated, and slather on that sunscreen.

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Updated CSA Standard for Prefabricated Septic and Sewage Holding Tanks Aims to Increase Safety

By Charles Hallett, AOWMA Executive Director

For some time now there have been discussions and debates focused on the safety surrounding the access openings on septic and holding tanks. Over the years, fatalities have been recorded throughout Canada, and the rest of the world, for a variety of reasons involving tank access opening covers/lids, improper septic tank service procedures and improperly abandoned tanks.

The CSA Group updates the standard for design, materials and manufacturing requirements for prefabricated septic tanks and sewage holding tanks, commonly known as CSA-B66, on a 5-year cycle. The newest edition of CSA-B66-21 was published late in 2021 after going through their typical update, review, public review, and committee consultation process.

One of the major changes to the CSA-B66-21 standard is the mandatory requirement for a secondary safety device in all septic and holding tanks with access openings over 8 inches/200mm in diameter that are brought to the surface.

The CSA-B66-21 Standard – now published and available for purchase through the CSA Group, added a paragraph to clause 4.2.6.3 stating:

All access openings (which are meant to be removed) over chambers with an opening greater than 200 mm in diameter, where there is a risk of accidental entry, shall have a secondary safety device that can withstand 91 kg of dead load.

This is a big change in the standard as it will have an impact on all aspects of producing/supplying, installing, and servicing tanks

fitted with these safety devices. However, one can argue.... it's a small price to pay to help prevent somebody from accidentally falling into a tank.

Reaching out to a representative sample of tank manufacturers/suppliers across western Canada, we confirmed most were aware of the new CSA-B66-21 Standard and have a secondary safety device solution in place, be it a third-party supplier, as illustrated below, or manufactured in-house.

Please check with your local supplier regarding what safety device they offer and for information on the manufacturer's instructions.

Going forward we will see secondary safety devices as standard equipment in septic tank and holding tank installations – that's a fact, but there are still many questions that remain.... When will they become a regulatory requirement in your jurisdiction? Who's responsible for installing the safety device? Will there be a requirement to "retro-fit" existing installations with the new safety devices? How will they be regulated? Will the safety device be a requirement for cisterns too? What happens if someone falls into a tank without a safety device, who's liable? If I might be liable, how do I limit my liability? These are all great questions, and we'll find the answers over time. However, this could be a great example of a best practice to ensure safety for all – especially for young children and pets.

WCOWMA would like to thank Don Krauss, Infiltrator Water Technologies, for his assistance in the creation of this article.



Infiltrator Water Technologies



Orenco Systems Inc.



Polylok, Inc.



Tuf-Tite, Inc.

Upcoming Events

August 3—4, 2023

International Conference on Water and Environmental Sciences

Where: Vancouver, BC

Organization: World Academy of Science, Engineering and Technology

About: International Conference on Water and Environmental Sciences aims to bring together leading academic scientists, researchers and research scholars to exchange and share their experiences and research results on all aspects of Water and Environmental Sciences.

Website: <https://waset.org/water-and-environmental-sciences-conference-in-august-2023-in-vancouver>

September 18—22, 2023

Septic Awareness Week

Where: Online

Organization: Western Canada Onsite Wastewater Management

About: The Western Canada Onsite Wastewater Management Association and its affiliates will be promoting septic awareness during the week of September 18 to 22. The purpose of this initiative is to promote proper operation and maintenance of onsite wastewater systems.

October 22—25, 2023

NOWRA Mega-Conference

Where: Hampton, VA

Organization: NOWRA

About: Hosted by NOWRA, VOWRA, SORA & NAWT, this mega conference features multiple concurrent

sessions on technology, research, policy and management.

Website: <https://www.nowra.org/>

November 19, 2023

World Toilet Day

Where: Online

Organization: UN Water

About: World Toilet Day intends to raise awareness of sanitation issues – including hygiene promotion, the provision of basic sanitation services, and sewerage and wastewater treatment and reuse in the context of integrated water management – and make a case for sanitation for all.

Website: <https://www.worldtoiletday.info/>

December 5, 2023

World Soil Day

Where: Online

Organization: Food and Agricultural Organization of the United Nations

About: World Soil Day (WSD) is held annually on December 5th as a means to focus attention on the importance of healthy soil and to advocate for the sustainable management of soil resources.

Website: <http://www.fao.org/world-soil-day/en/>

January 24—27, 2024

WWETT Show

Where: Indianapolis, IN

Organization: Water & Wastewater Equipment, Treatment & Transport

About: The WWETT Show is the world's largest annual

trade show for wastewater and environmental service professionals. The event offers an unmatched educational program, a full slate of live demos, an array of networking opportunities, and an extensive expo floor where buyers and sellers come together to see and experience the latest product innovations and technology.

Website: <https://www.wwetshow.com/>

February 2—3, 2024

Septic Con

Where: Tacoma, WA

Organization: WOSSA

About: SEPTIC-CON is the Western United States largest tradeshow and conference for the On-Site Septic Construction, Installation, Operations & Maintenance, Pumper and Design industries and consumes the entire Greater Tacoma Convention Center for two full days.

Website: <https://septiccon.org/>

Septic Awareness Week 2023

By WCOWMA staff

It's almost that time again! Septic Awareness Week takes place from September 18—22, 2023.

One of our priorities as an organization is to bring awareness to homeowners about the importance of maintaining a healthy septic system.

Septic Awareness Week, run in conjunction with the United States Environmental Protection Agencies Septic Smart Week, is the perfect opportunity to educate homeowners about the importance of proper operation and maintenance of onsite wastewater systems. We advocate for the use of certified contractors for all aspects of design, installation, maintenance, and inspection.

Each year the provincial associations host a series of free webinars discussing proper maintenance and management of septic systems. We also offer these workshops throughout the year for regionals districts and municipalities who are interested in hosting them.

The Western Canada Onsite Wastewater Management Association also distributes a digital homeowner newsletter to interested participants, which includes more information on how to care for your system throughout the year.

Anyone looking to arrange a Septic Sense webinar is encouraged to contact their provincial association for more information.

The provincial associations will be marketing Septic Awareness week through social media as the date draws closer. Please join us in raising septic awareness by inviting your customers to attend the free workshops, sharing the information on social media, and encouraging your municipal and regional leaders to take part.



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The Digital Dirt World

By Luke Eggebraaten, Phaser Marketing

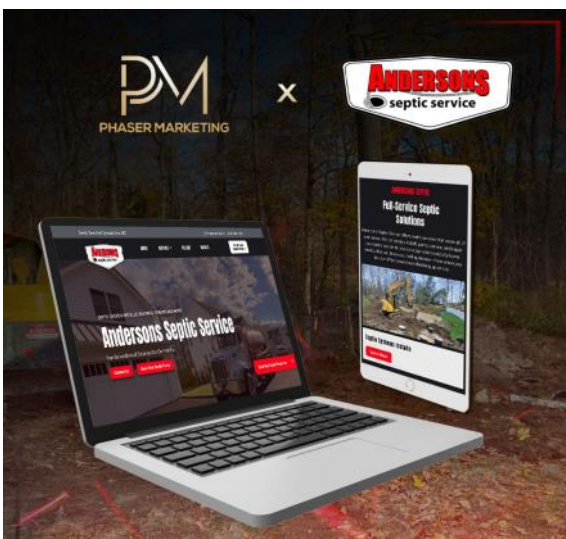
In today's digital age, having a strong online presence is essential for businesses to connect with their customers, community, word-of-mouth referrals, and potential employees. As a septic contractor, creating a website, optimizing it for search engines, and managing a Google Business Profile can help you build a solid online reputation and connect with your audience.

But why is any of this important?

Connecting with Referrals

Referrals are a significant source of business for septic contractors and many other businesses in construction. That is typically how it has always been and I want to make sure I stress this: **Referrals and word of mouth is, and always will be, the best form of marketing.** Having an online presence, a clean and easy-to-navigate website and a social media presence that adds value will only supplement (not replace) your word-of-mouth marketing. By showcasing your previous work, testimonials, and contact information on your website, you can make it easy for referrals to find your business and learn more about what you actually offer and how you help people.

Additionally, a well-optimized Google Business Profile can help your business appear at the top of search engine results when potential customers are searching for septic services in their area. By providing accurate and up-to-date information on your profile, including your business hours, services, and contact information, you can make it easy for referrals to contact you directly from your Google listing.



Connecting with Customers

Connecting with your customers online is crucial for building a loyal customer base and generating repeat business. A website can serve as an online hub for your business, where customers can learn more about your services, schedule appointments, read about your history, see pictures of your team, and leave reviews.

By optimizing your website for search engines, you can ensure that your business appears at the top of search results when customers are searching for septic services in their area. This can help you attract new customers and build trust with your existing customer base.

In addition to a website, a Google Business Profile is an essential tool for connecting with your customers online. By encouraging your satisfied customers to leave reviews on your profile, you can build a strong online reputation and attract new customers who are searching for septic services in your area. This helps build trust and also allows your customer to reflect back on the continuous service you provide them. This can help make them life-long customers.

Connecting with Future Employees

As a septic contractor, finding and retaining skilled employees can be a challenge. However, having a strong online presence and a well-established brand can help you attract top talent to your business. We always talk about “attracting the next generation into construction.” Well... Meet them where they're at: on their phones.

As far as tools go, a website can serve as a valuable recruitment piece, where you can showcase your business culture, values, and available positions. By creating an engaging and informative careers page on your website, you can attract candidates who are passionate about the septic industry and want to work for a reputable and respected business.

Additionally, showing the work you do on your social media accounts can help attract future employees. Do not keep it surface-level. Dive in on each of your posts and nerd out about what you are doing on the project, why you are doing it, what equipment you're using, and what snags you ran into, and keep it as transparent as possible. Applicants are

attracted to companies that invest in their business, their online presence, their equipment, and of course their people.

Optimizing Your Online Presence

To make the most of your online presence, it is essential to optimize your website, Google Business Profile, and other online platforms for search engines. Search engine optimization (SEO) is the process of optimizing your website and online content to improve its visibility and ranking in search engine results pages.

By conducting keyword research and optimizing your website and online content with relevant keywords, you can improve your chances of appearing at the top of search engine results when potential customers are searching for septic services in your area. Additionally, by optimizing your Google Business Profile with accurate and up-to-date information, including your business name, address, and phone number, and the services you provide with descriptions, you can ensure that your business appears at the top of local search results.

Wrapping Up

When you think about your business short-term vs. long-term, it changes the way you make decisions. Most of the septic contractors we work with are working towards a stronger online

presence so that they can build a legacy that their grandkids and great-grandkids will one day take over. A business with systems in place that are growing and innovating with the world. This type of transformation doesn't happen overnight, but many great things take time. It can be small changes at first but focus on building good marketing habits. If you want to learn more and do a deep dive into digital marketing for septic contractors, feel free to grab a copy of my book, *The Digital Dirt World*, on Amazon. You can also reach out to me with any questions below. Let's go!

Luke Eggebraaten

Founder of Phaser Marketing

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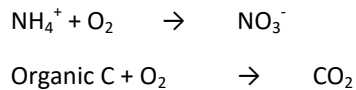
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Accurate Water Table Characterization

By Ken Hugo, P Geo, GRIT Ltd.

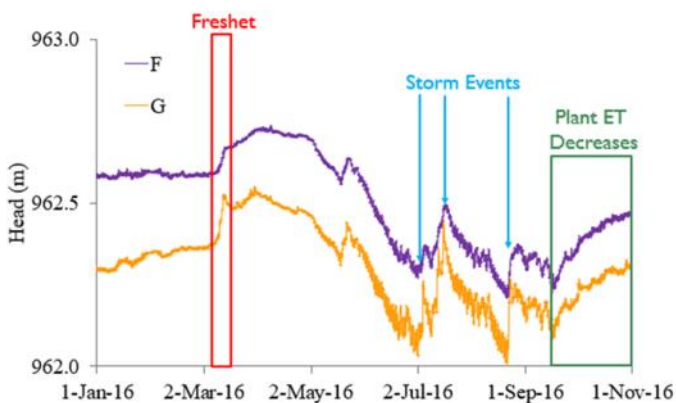
In a septic field, a suitable soil biological and chemical treatment of the effluent is required. One aspect of this treatment is exposure to oxygen, as chemical reactions change ammonia and organic carbon to nitrate and carbon dioxide by the following simplified equations:



Oxygen is plentiful in air (20.9%) but much less common in water (about 5 mg/L or 0.0005%). As a result, treatment of effluent below the water table is not effective so it is important to ensure that a sufficiently thick layer of unsaturated soil above the water table is available.

The water table is sometimes obvious in a coarse-grained soil, but within a silt or clay loam soil the water table is less obvious. Let us look at some ways to discern the water table and some factors that affect where the water table is found.

One factor to consider is that the water table can change seasonally. During snow melt or a rainy season, the water table may rise and drown out a septic field. The following is a typical graph showing changes in the water table over the year:

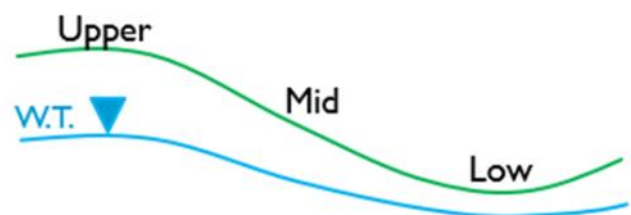


A rise in the water table is typically seen in spring due to the melting of snow and spring rains. As the air temperature rises and plant activity increases in summer, the water table drops due to plant uptake of water and evaporation. Large summer precipitation events can cause sharp, short-term increases in the water table. In fall, as plant activity decreases, the water table begins to steadily rise. Wet and dry years would change the position of the water table, but a typical change in water table position would be on the order of 0.3 – 0.5 m throughout the year.

If a site has a measured water table in late summer that makes the unsaturated soil thickness marginally acceptable perhaps there may be issues with the soil in the spring or during a wet year.

So how does one determine the water table without a long-term monitoring well and continuous readings at the site? It may not be obvious, but there are clues that one can use.

One indicator of the water table depth is land slope position. The water table is not flat (despite being called a “table”) but has been called a subdued reflection of the topography, and will be deeper in upland areas and shallower in lowland areas as illustrated as follows:

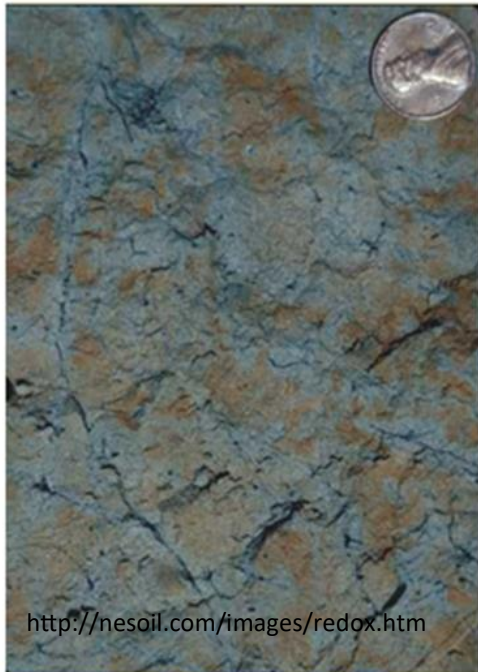


Septic fields in lowland areas, which may be advantageous in terms of pipe flow from the house, may not have sufficient thickness of saturated soils compared to septic fields placed in mid-slope or upper slope land positions.

Plant type is another indicator. Certain plants such as black spruce, willows, cattails, or sedges are indicative of shallow water table and areas with these plants should be avoided when installing a septic field.

Careful examination of soils in test pits or boreholes also can provide an indication of the water table. In a typical western Canada soil profile, the presence of grey soils usually indicates saturated soil. High moisture content, soil plasticity, or visible

water in the pores is also an indication of saturation. A feature of saturated soils, sometimes seasonal saturation, is the presence of mottling of soil as illustrated below:



Usually, mottling is much more subtle than shown above and careful examination of a brown soil for even slight grey discolouring is required to identify saturation of the soil near the water table.

Standpipes installed as part of a septic field or geotechnical investigation, or existing water supply wells on a site may be used to determine the water table, but care should be taken that the water levels measured in a well or standpipe represents the water table and not the water level (or head) at some deeper depth. A real world example of water levels in deep and shallow standpipes shows varying water levels:

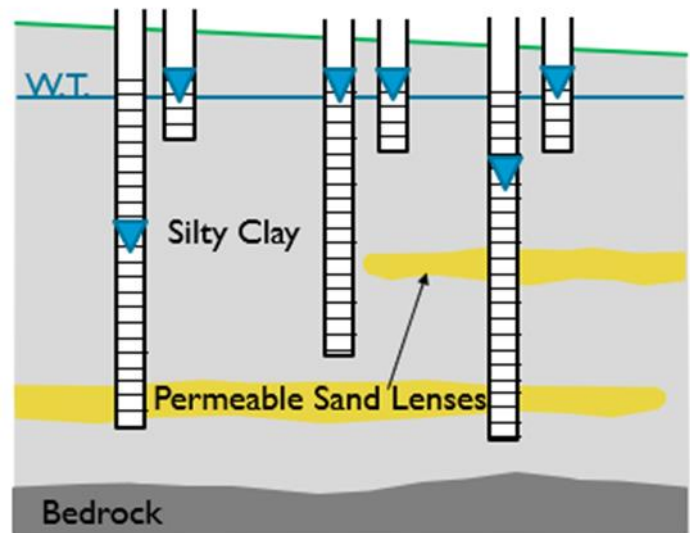
2020 Water Level Measurements

Location	Deep Geotech Well		Shallow Groundwater Well	
	Well Depth (m)	Depth to Water (m)	Well Depth (m)	Depth to Water (m)
A	8.8	4.15	2	0.81
B	8.7	0.55	1.5	0.40
C	7.6	0.53	2	0.53
D	8.8	2.38	2.2	0.77

The water level in the deep wells varies from 0.55 m to 4.15 m indicating suitable areas for septic field development, yet the adjacent shallow wells show consistent water levels of less than 1 metre below ground.

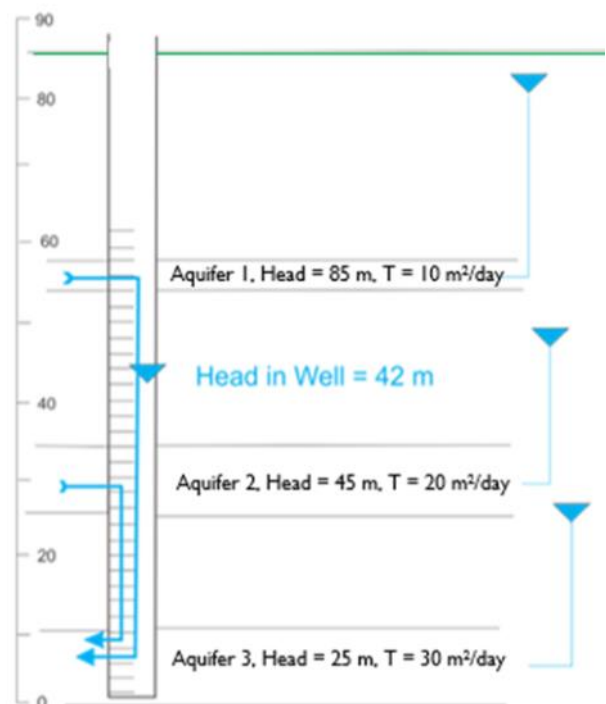
A cross section showing the type or soil and placement of the wells at this site illustrates that the area is generally underlain by a silty clay, but some permeable sand lenses

are present that may be intersected by the deeper standpipes:



The deeper standpipes sometimes show deeper water levels than the shallower standpipes. This is because in this silty clay soil with the occasional sand lens, the water levels in the deeper standpipes the water level measurement reflects the water level in the higher permeability sand lenses and not the water table that resides within the shallow silty clay.

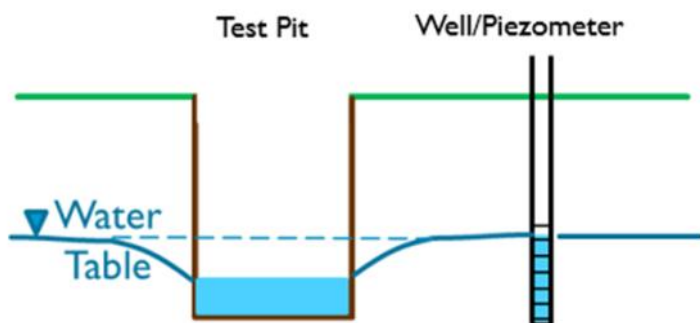
Equations have been derived that show how the water level in a well is related to the water levels in the more permeable units, but do not reflect a water level in any one stratum:



The water level in the well, at a relative elevation of 42 m, does not represent the water level in any of the higher

permeable aquifer units but is a weighted combination based on the permeability and water level of each of the three individual aquifer units the well is screened over.

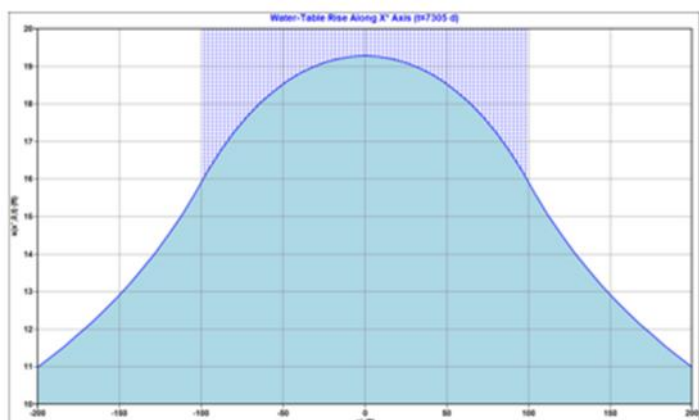
A shallow standpipe or test pit would be best for characterizing the water table. Care should be taken to allow for stabilization of water levels in a well or pit, especially in a silt or clay loam soil. Different water levels may be observed in wells and pits due to a time lag in filling in a large diameter pit versus a shallow diameter monitoring well:



The author has experience in measuring water levels at a former gas station where monitoring wells were present in the native soil and a monitoring well was installed in a pit formerly occupied by fuel storage tanks that were removed with the pit filled in with clean soil. Water levels in the monitoring well in the pit had not equilibrated with water levels in the nearby monitoring wells in the native soil two years after well installation, showing that water levels in relatively low permeability soil can take a significant time to equilibrate with the water table in the native soil.

The author sometimes hand augers a hole the base of a pit to install a 1-inch diameter standpipe to about 0.5 m below the pit base to allow for quicker filling in of this 1-inch diameter hole compared to a typical 1 m x 3 m x 3 m test pit.

Lastly, with the addition of septic field effluent, the water table would rise both directly below the septic field and



Connect with WCOWMA

www.wcowma.com is your access point to the Association and all its activities. The website gives visitors instant access to training information, upcoming news and events, WCOWMA membership benefits, and other industry resources.

In addition, the website provides easy access to professional installers in each of the four Western provinces. This ensures that when homeowners are looking for qualified companies to do their work, they'll find everything they need to know on the website. The "Locate A Pro" feature allows homeowners to choose their province, and then further narrow down their choices to sub-categories such as installers, designers, maintenance providers, pumpers, and inspectors. From there, homeowners can choose their specific location and then they are taken to a page listing of all the WCOWMA members offering the services required.

Becoming a WCOWMA member ensures that your name and contact information is at the fingertips of those homeowners who need your services. Join the 1250+ onsite wastewater professionals in this handy online go-to guide.

For more reasons to join, please contact WCOWMA directly or visit www.wcowma.com

adjacent to the septic field. This is allowable and expected, but too much of a water table rise will reduce the unsaturated zone and cause the septic system to fail.

Mathematical models are available that calculate this water table rise based on the soil permeability and amount of effluent applied. An example of the water table mound in a typical silt loam soil under typical septic field sizes and discharge rates is shown as follows:

A rise (after 20 years) of several feet is observed. This graph also shows that the mound rise is not restricted to just the area below the septic field but extends some 50 feet beyond the footprint of the septic field, which shows why a septic field should not be placed close to a building or why the effluent can break out in a sloped area unless the design includes adequate adjustments for a sloped situation.

Even with knowledge of these changes in water level with time, and how apparently dry soils may in fact be saturated, failure of a septic field could be due to an elevated water table even if at the time of investigation, one was of the opinion that a deep water table was present.

Representing Your Interests on a Larger Scale

Representatives from your association participate in a variety of working groups, committees and Boards. Below are some of the initiatives we are currently engaged in:

CAN/BNQ 3680-600 Standard for Onsite Wastewater Treatment Technologies – This committee has been reviewing the processes and protocols for testing Type II (secondary) treatment systems. The draft document was sent out for public consultation and is now being reviewed with consideration for the comments and observations received.

CAN/BNQ 3680-900 Onsite Residential Wastewater Treatment Technologies – Certification Protocol - This committee will review the certification protocols for the above Standard and develop updates as identified. Certification protocols are reviewed every five years.

Alberta Private Sewage Sub-Council - Representatives from the AOWMA and other onsite wastewater industry stakeholders review regulatory and other issues brought forward to them from Alberta Municipal Affairs, the Safety Codes Council, and industry for consideration and potential action.

International Standards Association - ISO 24525 Activities relating to drinking water and wastewater services — Guidelines for the management of basic onsite domestic wastewater services — Operations and maintenance

activities – The standard has been accepted and will be reviewed and updated every five years.

WastewaterEducation.org – Participation on the Board of this organization devoted to improving access to training on onsite wastewater treatment system design, installation and maintenance. WastewaterEducation.org provides virtual training in jurisdictions throughout North America. The Board has representation from Britain, Australia, the United States and Canada. In addition to virtual education, the organization provides in-person presentations each year at the WWETT Show in Indianapolis.

National Association of Wastewater Technicians (NAWT) – As members of NAWT, we are able to participate at the Board of Directors level as well as having access to NAWT's training programs for those working in the onsite industry such as Vac Truck Technician, Inspection for Real Estate, and Operation and Maintenance.

National Onsite Wastewater Recyclers Association (NOWRA) – Association representatives communicate and collaborate with NOWRA on training and educational initiatives.

Ontario Onsite Sewage Association (OOWA) – The Association is staying engaged with our fellow organization with regards to training and industry concerns.

The WCOWMA Store

Did you know you can purchase a variety of supplies from your provincial association, including soils kits?

We have homeowner manuals, Munsell charts, Alberta Standard of Practice Manuals, BC Standard of Practice Manual V3, and soils kits.

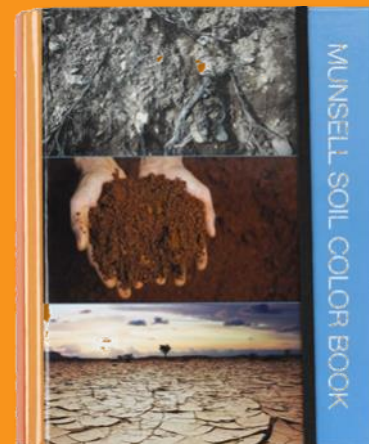
Contact your association office or purchase them online.

AOWMA Store: <https://store.aowma.com/#supplies>

WCOWMA-BC Store: <https://store.wcowma-bc.com/#supplies>

MOWMA Store: <https://www.mowma.org/resources/supplies/>

SOWMA Store: <https://www.sowma.ca/resources/supplies/>



The Safety Corner

Series: Safety Includes Mental Wellness

By Ernest Cremers NCSO

It has become apparent in the construction industry that mental stress is affecting the workforce. This series will look at some of the following main principals.

- 1) Overview of the situation in the construction industry.
- 2) the affect on the organisation(s), the worker(s), and the bottom line.
- 3) How to minimize the impact on the worker(s) and the organisation.
- 4) How to improve our organizational mental wellness culture.

This instalment focuses on the Overview:

When the construction industry was designated an essential service, we faced an unprecedented challenge as we continued to operate during COVID-19. Workers were put under tremendous stress as they were exposed to the epidemic and remained in close proximity with family while limiting interactions with others outside their home. The organization (s) incurred unbudgeted costs, and this affected the industry's bottom line as a whole.

Now, three years later, there are and have been different stresses to all concerned. Cost of goods increases, logistical challenges, rising interest rates, and the lack of available competent workers are contributing factors, while due to the inflationary cycle work opportunities are decreasing.

There is also a shift in the age of the available workforce in Canada. In North America 10,000 "Baby Boomers" are reaching retirement age. The Gen X age group will outnumber this age group in the workforce by 2028. The work experience in the "Boomer" group has been hard earned, and it is imperative that organizations retain this information through mentoring to ensure the transition is as smooth as possible.

As this transition takes place, there are fewer competent workers to share the load causing further stress in those workers who must shoulder the load.

The construction industry is still a male dominated industry, though this article intends no slight to other genders, and some of these stress factors are more likely to affect males.

Here are some of the stress conditions:

- 1) Toughness and strength are valued, so mental health conditions, or seeking help, may be seen as a personal weakness.
- 2) Stigma and fear of consequences associated with mental health issues and seeking help.
- 3) Shame and fear of judgement.
- 4) Chronic pain.
- 5) Seasonal and cyclical work contributing to family and financial strain.
- 6) High stress due to deadline driven work.
- 7) Limited job control.
- 8) Long work hours including potential for large volume of overtime leading to fatigue.
- 9) Separation of family when working away from home.

There is hope. It is critical to give our workers the needed support to minimize impacts to them as well as the organization(s). We will be discussing those specifics in the coming series in detail. Immediately moving forward, the organization(s) leadership must lead and create an environment where workers have the opportunity to safely discuss their mental health needs in an open and nonjudgmental manner.

Have a terrific summer and be safe.

Ernest Cremers NCSO, is a safety consultant and the owner of Cremers Safety Ltd.

www.cremerssafety.com

No Business is too Small



OneDrive For Backup, Reporting, and Collaboration

By Frank Byl, PowerConcepts Computer Training

In the last two weeks I heard of two people that lost their laptop, one had it stolen and the other lost it in a fire. It just happens when you least expect it. What are you doing to back up your data? Well, perhaps you run a backup program routinely on your computer or maybe you use external memory drives, but what about having your data backed up continuously, almost instantly, and automatically? What about if your data could live in a place not on your computer? You can have that and have it for free (5 Gigabytes) or for a nominal fee get as much as you will need.

Introducing OneDrive -While SharePoint is Microsoft's cloud-based storage space for organizations, OneDrive is Microsoft's cloud storage for individual users. You can get a free Outlook.com account at, you guessed it, www.outlook.com or you can get more space with any Office 365 subscription. Once you have an account, you will easily be able to navigate to OneDrive using the "App Launcher" in the top left of your portal.

Getting Setup - Once you are in OneDrive you can easily start getting organized by creating a few key folders that you will use regularly. Now having your data on the cloud is cool and

safe and all, but it seems rather inconvenient to have to open a browser and go to the site just to open a file. Having files on your computer desktop or in "My Documents" is just so much more convenient, besides what about if you are on the road and don't even have access to the internet, or you're working in your truck?

Syncing - Once you are in OneDrive you will see the option to "sync folders." When you do this, OneDrive puts a OneDrive folder on your computer that you can easily access through Windows Explorer. You can even automatically add your desktop and your My Documents to OneDrive. When you do this every file in the folders you have created, and the ones on your Desktop and My Documents (if you choose to do this), will automatically get backed up to the cloud, not just on demand and constantly and instantly if you have an internet connection.

Work Off-Line - If you work off-line regularly, you can select an option to "Always Keep on this Device." This means that the files will live on your computer AND in the cloud. When you do not have an internet connection, you will be able to work on your files and the next time you are connected to the web, everything will automatically synchronize.

Collaboration - Another benefit of working with OneDrive is you can share documents with your team, and everyone can work simultaneously in the same file. Say you have a time tracking sheet, or you have an Excel file where you want to have everyone record parts and supplies that are being used or ordered for a project, then say "No more" sending files and then copying the data from multiple people and compiling a single order. Instead, everyone simply enters data into the one and only file.



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Pre-Cast Steps



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Apps for Phone and Tablet - Not everyone has a computer? Not an issue. If the files live in OneDrive, you can download free apps like Word and Excel for your phone or tablet. You wouldn't want to work all day in the apps, but it is great to quickly make a few entries while you are onsite or review those part numbers. OneDrive makes all of this possible.



If you want to learn more about this, scan the QR code to access a six-minute video from PowerConcepts on how to set up OneDrive and begin automatically backing up, collaborating, and working with OneDrive.



Learn more:

Email: info@powerconcepts.ca

Website: <https://www.powerconcepts.ca/services/courses/>

Toll Free: 1-877-954-8433

Whose Job is it Anyway?

The association office often receives concerns from members about sites where the crew installing the system is not certified or does not hold a ROWP Stamp and the authorized person (certified contractor or ROWP) is not present.

Remember, your responsibility as an authorized person is to supervise the work being done under your authority.

Ultimately, if an error is made on an installation and the authorized person is not supervising the work appropriately, insurance may not cover the error.

Check with your regulatory authority to find out what your responsibilities are as the person whose name is on the paperwork.

WCOWMA

Training

Industry training is offered through each provincial chapter throughout the year. Training for design, installation, maintenance, and inspection are available both virtually and in the classroom.

The training in each province provides knowledge of the concepts needed to design and install onsite wastewater systems in any jurisdiction, although each province focuses on their own regulatory framework. It is important to note that if you take training in a province that you do not typically work in and then transfer that training certification to another province, you must learn the regulatory framework for the province in which you are working and apply your knowledge and experience to that regulatory framework.

Certification received through one of WCOWMA's provincial chapters is well-received and respected across Canada through different trade agreements. Certification in onsite wastewater design and installation is recognized in British Columbia, Alberta, Saskatchewan and Manitoba through the New West Partnership (formerly the TILMA). This same certification is recognized in the rest of Canada through the Agreement on Internal Trade.

Our organizations offer the following training:

Classroom:

Onsite Wastewater Practitioner
(Design/Plan and Install)
Operations and Maintenance
(Maintenance Provider)
Inspection for Real Estate

Practical Training in the Field:

Site and Soil Evaluation
Onsite Wastewater System Installation
(Mound, At-Grade, or Field)
Maintenance Assessment

Workshops:

Pumps and Controls (Timed Dosing)
Pressure Distribution
System Design (Mounds, LFH At-Grades, Fields, etc.)

Training development is ongoing.

If you would like more information on training offerings, contact your provincial association:

WCOWMA-BC

604-424-4462 or 855-872-2645 tf

AOWMA

780-489-7471 or 877-489-7471 tf

SOWMA

306-988-2102 or 855-872-2650 tf

MOWMA

204-771-0455 or 855-872-2659 tf



Site & Soils Workshop. Aldergrove, BC - April 2023

Useful Tools for Your Toolbox

When the Association hosts site and soil evaluation field days, we recommend that participants download an APP to their phone that can enhance their photos by imprinting the date, time, GPS location and other information directly onto the photo. These APPs allow you to record your activities for inclusion in the system design and maintenance documentation. They protect contractors by providing proof of what work was done on that specific site, should anything come under question.

Iphone users often use an APP called Theodolite for this purpose, while Android users might choose Dioptra or Solocator. There are many others out there as well, so a bit of research will help to identify the one most useful for your purpose. The photo included here was taken on site using Dioptra.



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Alf Durnie Education and Research Scholarship Fund Award

We are pleased to announce the 2023 Alf Durnie Education and Research Scholarship was awarded to Geoff Low of Calgary, AB. Geoff was presented with his scholarship by



Clayton Forster, AOWMA's President, as part of our 25th Annual Convention and Trade Show. Congratulations, Geoff!

Geoff, obtained his Restricted Water and Sewer ticket in 2014, and from there his passion and dream to become a plumber was born with a focus in a rural setting. Geoff recently completed his formal education as a plumber and his Onsite Wastewater Practitioner Training. His dedication and passion for what he does, initiated and developed from his 10 years of service in the Armed Forces.

The Alf Durnie Education and Research Scholarship Fund was developed in memory of Alf Durnie, Alberta Technical Administrator, Private Sewage Systems (Chief Inspector) and is awarded annually to a student who is enrolled and accepted in a post-secondary program with a preference given to applicants who are enrolled in programs that will benefit the onsite wastewater industry.



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WANT TO BE IN THE NEXT
ONSITE INFORMER MAGAZINE?

Send us a picture of you and your crew in safety gear.

Don't forget those smiles!



Share a picture of you and your crew in safety gear for your chance to appear in the Onsite Informer.

Feel free to tell us a little bit about you and your company. What's something people might not know? Why did you start the business? How long has the business been in your family? What makes you stand out? Why do you love your job? Share something interesting with us and you could be featured in an upcoming issue of the Onsite Informer! Entries submitted may also be published in our newsletter or in other WCOWMA publications.

Submit your picture to kelly@wcowma.com and be sure to use the subject line "Safety Photo Contest". Failure to use the subject may result in your entry not being considered. Please submit your entries by August 31st.

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