

Onsite

ONTARIO ONSITE WASTEWATER ASSOCIATION NEWSLETTER

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FALL/WINTER 2014

INSIDE

Conference Message	1
President's Message	2
Member Profile	5
Conservation Authorities Foster Septic System Management Across Ontario	6
Rob's World	8
MMAH Changes Delivery Model for Ontario Building Code Qualification Exams	9
Conference Call for Papers and Conference Registration Form	10
Decentralized Sewage Systems for Small Communities	11
How the Heck Does a Siphon Dose a Drainfield?	12
Equipment Corner	13
Call for Nominations for the OOWA Board of Directors	14



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16th Annual OOWA CONFERENCE & EXHIBITION MARCH 23 & 24, 2015

Sheraton on the Falls, Niagara Falls, Ontario

CONFERENCE MESSAGE

From Sandy Bos & Ray Foster, 2015 Conference Chairs

The 2015 Ontario Onsite Wastewater Association Conference will return to the Sheraton on the Falls in Niagara Falls following an overwhelming positive response to the 2014 Conference. The 16th Annual Ontario Onsite Wastewater Association Conference will be held March 23, 24, 2015.

The Conference again will provide new ideas, new technologies, and answers to those troubling onsite wastewater dilemmas. The Onsite industry is no longer about dig and dump, getting ahead means staying on top of the changing technologies, being innovative, and staying informed.

Designers, Engineers and Regulators will have the opportunity to attend numerous technical and policy sessions and presentations on case studies, projects, or technological solutions.

Concurrent sessions oriented to the Contractor, will provide opportunities to participate in panel discussions of industry experts, regulators and designers. 4 Regulators or inspectors

prepared to answer questions for an hour on any subject. Follow the design, approval and installation of innovative case studies. Learn about the new technologies entering the industry, meet your current technology vendor or get introduced to new technologies. Be prepared widen your options and expand your business.

All Industry professionals no matter your specialty will benefit by attending this conference, not only from attending the various sessions but more importantly talking to colleagues, getting that one on one opportunity to ask those nagging questions to the industry experts.

The Ontario Rural Wastewater Centre will also be offering a one day course on Wednesday, March 25 called "Wastewater Basics". This new workshop will introduce designers, installers, inspectors and other on-site practitioners to basic wastewater treatment terminology, processes, and technologies in order that they might better understand how different systems work as well as how to apply that knowledge to system selection.

(continued on page 3)



PRESIDENT’S MESSAGE

The association has experienced an exciting period of transformation, growth and restructuring since our Conference and AGM in March. Our Board of Directors is providing momentum and leadership, while volunteer committees are putting in great effort to improve the services we are able to offer our members. Our new and very capable staff team are quickly restructuring our operations to provide more efficiency. There have been some notable changes, including the new Onsite publication layout and distribution model, to ensure we can cost effectively get more information and value to our members and stakeholders. As most of you are aware, we have launched a new website with improved mobile functionality. These changes, like most changes, have resulted in both positive feedback as well as requests for improvements. Our staff and committees value your input, so please continue to forward your comments and questions to our Operations Coordinator Rachel Robichaud.

Additionally OOWA has hired an Outreach Coordinator, Mike Gibbs, to support and facilitate communication and service with our membership, affiliated associations and institutions. Rachel and Mike are collaborating from a new office location in Peterborough, generously donated by Cambium Environmental during OOWA’S transition and growth. I would also like to extend thanks to both WSP and RJ Burnside for providing meeting space and hospitality for our board meetings this year.

Our Board of Directors completed our Strategic Planning program over the summer, and we are moving forward with the implementation of this carefully crafted vision. To initiate more outreach locally to our members, the Events Committee has been busy, coordinating successful events in Perth, London, Innisfil and Peterborough while planning OOWA’S 2015 Annual Trade Show & Education Conference in Niagara Falls (March 22-24).

Across the province, OOWA has been working hard to strengthen our linkage with other organizations and associations that share common issues and values. OOWA is proud to have renewed a partnership with the Ontario Association of Sewage Industry Services (OASIS). Their members provide critical services for managing the residuals and organic materials in our communities, and together we can support the province with good policy development. The importance of environmental stewardship and collaboration between Associations, businesses and all levels of government has become critical as we all grapple with the real impacts of both climate change and changing business environments. The knowledge, services, outreach and products that businesses, institutions, and stakeholders in our associations provide are truly essential for environmental and economic sustainability in Ontario. We do valuable and important work, and you should all be proud of the progress and positive changes we are making together.

On a final note, I want to provide my view of the value of service within an organization like OOWA. Our exceptional volunteers collaborate for the benefit of all our members and the communities we serve. These are the type of people and businesses that shine through in the success of their own business endeavours. Volunteering with OOWA is a proven way to meet the right people, learn and contribute to your industry. I encourage you to get involved in some way to improve your business and to make a difference.

Rick Esselment
President

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Onsite Ontario Onsite Wastewater Association Newsletter

To submit an article or place an advertisement contact the editor at info@oowa.org

The opinions expressed in this newsletter by contributing authors are not necessarily the opinions of OOWA’s Board of Directors or the Association.

CONFERENCE MESSAGE

- continued from page 1 -

A common refrain, “ I can’t justify the cost”, uttered before attending the conference.

“I had no idea, how much I could learn”, uttered after attending the conference.

What most first time attendees didn’t realize was attending the conference is not an unjustified expense, it’s an investment. If you get just one idea which translates into more business or a better way to do things, will more than justify your cost of attending.

SPECIAL \$99.00 ROOM RATES FOR EARLY REGISTRANTS!

Bring the spouse or family!!!! Sheraton on the Falls has the best location in Niagara, an upgrade to the falls view room provides a spectacular view of both the American as well as the Canadian section of the falls.

Located on Falls Avenue, the Sheraton features indoor connections to great attractions and shopping. Falls Avenue is home to attractions for all ages including Hershey Chocolate World Niagara Falls (the only one of its kind in Canada), the excitement of Adventure City

The 3 acre Fallsview Indoor Waterpark is directly connected to the Sheraton on the Falls. Towering eight stories high, it is the only waterpark directly across from the Falls, dominating the Falls Avenue Resort.

Casino Niagara

Casino Niagara is “Just Plain More Fun” and gaming excitement is just steps from the Sheraton. Located next door to the



CASINO NIAGARA

hotel, the casino can be accessed directly through the indoor Falls Avenue walkway. Featuring a wide variety of gaming, dining and entertainment options Casino Niagara is the place to be.

Across the street from the Falls, the Sheraton hotel is surrounded by the beautiful Niagara Parks. Along the stunning parklands are some of Niagara’s best known and most popular tourist attractions including Hornblower Niagara Cruises, and the Journey Behind the Falls.

Clifton Hill Niagara Falls

Clifton Hill is the street of fun in Niagara Falls. The Sheraton on the Falls is located on the corner of Clifton Hill and keeps

guests close to additional attractions, restaurants and night life options.

Niagara Winery Guide

Award winning wineries can be found across the Niagara Region, Niagara boasts an impressive list of award winning wineries known around the world for outstanding quality, uniqueness and flavour.

Niagara Falls Sightseeing and Travel Tours There is a lot to see and do in Niagara Falls and the Niagara Region. Take a drive along the Niagara Wine route or enjoy one of the many recreation trails and activities, enjoy on your own or on a guided tour.

Join OOWA
www.oowa.org/join

... work in the onsite industry?

Why don’t you join the Ontario Onsite Wastewater Association! The onsite industry is at the front line of environmental protection. Only as a team can we build the profile and recognition that our industry deserves. We have discounts for corporate multiple memberships.



Seasons Greetings

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& BEST WISHES
FOR THE HOLIDAYS

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Wastewater Association**



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Join an OOWA Committee!

Want to really make an impact in the industry?

Why not contribute to our collective efforts in getting onsite and decentralized recognized as viable and critical rural infrastructure? OOWA is looking for enthusiastic and engaged individuals to help move the industry forward. Contact Mike Gibbs to find out how to join our ranks! outreach@oowa.org

MEMBER PROFILE



Doug Joy
Associate Director of Graduate
Studies, University of Guelph

For many of us, Doug Joy has been a fixture of the Ontario on-site wastewater industry. He's that guy that almost everybody knows somehow, whether it's because they've attended one of his workshops or because they've heard him speak at a conference.

Have you ever wondered why Doug seems to speak with a trace of an American accent? Born in Mississauga, Ontario, he spent much of his childhood and early teens in Birmingham Michigan after his father moved the family to the US for a better job. Attending high school in the US, he moved back to Canada to complete his engineering degree at the University of Toronto. He then went on to complete a Masters in Civil Engineering, specializing in Water Resources, at the University of Ottawa.

After completing his master's degree, Doug moved to Vancouver, British Columbia to begin a consulting career with Western Canada Hydraulics Laboratories, working on projects ranging from bridge construction, dredging shipping channels and mining jobs. After three years, Doug took his first teaching position at Kwantlen College in Surrey BC, where he developed the Civil Engineering Technologist program and taught everything from math to concrete design to computer programming.

It was at Kwantlen College that Doug caught the teaching bug. After three and a half years there, Doug moved back to Southern Ontario to pursue a Ph. D. in Water Resources Engineering at the University of Waterloo. In 1988 Doug took a position as a faculty member in the Water Resources Engineering program at the University of Guelph, where he has been for the last 26 years. Over the years he has taught fluid mechanics, first and fourth year design courses, hydrology and watershed system design courses.

First introduced to on-site systems as a child when emptying the honey bucket at the cottage, and then experiencing a failure at his first home, he pursued on-site systems through his research activities, much of which has focused on performance and contaminant transport within on-site systems.

In 1997 he helped to establish the Ontario Rural Wastewater Centre, which has since become the province's premier



DOUG JOY
KOKANEE GLACIER PROVINCIAL PARK

training and research centre for on-site wastewater. Along the way he helped to found OOWA and served as a director from 1999 – 2010, with a term as president from 2002 – 2005.

Doug is married to wife Cathy and enjoys a variety of activities, including wood working and canoeing & kayaking. A life-long passion for skiing have informed many of his life choices – the first university he attended, Michigan Technological University, was admittedly chosen due to its proximity to the local ski hill. It might be even be said that Doug's early career as a consultant in Vancouver was influenced by the local skiing opportunities. He taught both his daughters to ski at Chicopee in Kitchener and has been going on an annual ski trip to Kokanee Glacier Provincial Park for the last 20 years. The photograph shows Doug proudly wearing his OOWA toque on the glacier.

Doug has been incredibly successful in this industry and has influenced the careers of many of us in the industry. When asked for words of wisdom for the industry he said "Take the time to be a professional. It will always pay off in the long term."

CONSERVATION AUTHORITIES FOSTER SEPTIC SYSTEM MANAGEMENT ACROSS ONTARIO

Jo-Anne Rzadki, Watershed Stewardship Coordinator, Business Development and Partnerships, Conservation Ontario

Conservation Authorities (CAs) have a history of promoting proper septic system management across Ontario which includes working with members of the Ontario Onsite Wastewater Association (OOWA). The range of responsibilities and services that some Conservation Authorities provide includes education and outreach, municipally assigned responsibilities for sewage system inspections under the Building Code, and financial assistance to landowners under various programs to assist in decommissioning and upgrading of these systems.

A number of Conservation Authorities offer direct septic management services. For example, the Rideau Valley Conservation Authority in the Ottawa area is a major partner in the Ontario Waste Water Centre and manages and delivers training and information to professionals and landowners at the one of the Centre's demonstration sites near Ottawa at the Baxter Conservation Area. North Bay-Mattawa Conservation Authority, Rideau Valley Conservation Authority and South Nation Conservation have been assigned responsibility for administration of septic system inspections under the Building Code on behalf of Municipalities within in their watersheds.

South Nation Conservation Delivers a Variety of Services

South Nation Conservation work in the Ottawa area with 12 municipalities in the United Counties of Prescott-Russell, and Stormont, Dundas & Glengarry; and is also the Source Protection Authority for 15 municipalities, so working in collaboration is nothing new for this conservation authority. However, delivering a project at this scale requires organization, hard work, and a customer oriented approach to service.

"Our goal is to protect ground water from contamination and ensure that it remains a safe resource for public use

and ecological health. We educate and assist property owners on the importance of properly operating and maintaining septic systems to prevent system failure," said Monique Sauve, South Nation Conservation's Chief Inspector. Since 1999, the Conservation Authority has obtained compliance on hundreds of failing septic systems, and currently completes over 1,200 inspections, and issues over 400 permits per year.

In 2006, when changes to the Building Code required mandatory Sewage System Inspections for residents with septic systems in vulnerable areas (i.e. areas in close proximity to local drinking water supplies) the Authority again began working with municipalities to deliver the service. In addition to making this approach straightforward and streamlined, the Conservation Authority secured funding from multiple partners to ensure that if any issues were identified, funds would be readily available to assist property owners with costs.

The funding pool assists property owners with the cost of inspection, maintenance, and septic system education. It seems the extra effort paid off, as the municipalities agreed to have South Nation Conservation deliver the implementation program for Source Water Protection. The Program is a logical extension of the existing relationship, and planning on a watershed basis makes good sense for these types of environmental reviews and education efforts.

Contractors have expressed great appreciation for the annual consultation meeting with staff, contractors, builders, and interested municipal officials that the Conservation Authority hosts each spring before the hustle and bustle of the construction season begins. When asked about the success of the program, the Director of Property and Approvals, Angela Coleman said simply, "We know our clients are happy when issues about septic systems are

not on the local Municipal Council's Agenda." The Authority credits frequent communication, common sense, and dedicated staff as the keys to success of the program.

Over the past few years a number of Conservation Authorities have delivered financial assistance for septic decommissioning and upgrades on behalf of municipalities. Most recently septic systems have been identified as one of the major potential significant threats to municipal drinking water under the Ontario Drinking Water Source Protection program. In addition to offering outreach and education to landowners about the importance of septic system management, Conservation Authorities administered funding to landowners under the Ontario Drinking Water Stewardship (ODWSP) program between 2007 and 2012. At least 1200 Septic systems were upgraded or decommissioned over that period. This program has since ended but there are areas of the province where funding has been made available with the assistance of funding from other sources such as municipalities. Another Conservation Authority – the Lake Simcoe Region Conservation Authority north of Toronto - provides technical and financial assistance through its Landowner Environmental Assistance Program (LEAP). Septic system upgrades are one of the many categories in LEAP. The current funding rates are 50% up to \$2,500 for conventional systems and \$5,000 for advanced systems.

From 2004 until September 2014 a total of 452 septic system management projects were completed in the Lake Simcoe watershed. These projects have been funded in partnership with following organizations:

- LEAP – LSRCA member municipalities
- Ontario Drinking Water Stewardship Program – Ministry of Environment
- Private landowners



Failing Septic Project
LAKE SIMCOE REGION, CA



LAKE SIMCOE REGION, CA



New Septic Tank
LAKE SIMCOE REGION, CA



New Septic Tank
LAKE SIMCOE REGION, CA

- Lake Simcoe Clean up Fund(2008-2012) and Lake Simcoe South Georgian Bay Clean Up Fund, Environment Canada
- Lake Simcoe Conservation Foundation

Consistent funding assistance to landowners results in the highest success rate

Christa Sharp, Watershed Coordinator at Lake Simcoe Conservation Authority reports that "The highest uptake of septic system projects in the Lake Simcoe watershed were from 2009 to 2012 which directly coincide with the years that we had the most funding available to landowners. The average landowner contribution was 56%." Landowners find it very helpful to have the financial and technical assistance throughout their septic system management project. Sharp reported the

testimonial of one landowner "We had no idea of what was going on under ground. Thanks for keeping the Lake healthy. We even found an old septic system under the one we had. So it was a real clean up! This is a needed program."

Unfortunately financial support for septic decommissioning and upgrading is not consistently available across the province, yet the demand for financial assistance is high.

For example, Nottawasaga Valley Conservation Authority Healthy Waters Program Coordinator, Shannon Stephens reports that "requests for financial assistance for failing septic systems is among the top requests from residents", but currently "financial assistance is only available to upgrade advance treatment

systems for septic within 30 metres of a natural permanent water body".

In the meantime, many Conservation Authorities like the Essex Region Conservation Authority near Windsor continue to find various opportunities to provide information to their watershed residents about proper septic system management. Danielle Stuebing, Director of Community Outreach Services highlights their recent Septic Maintenance outreach initiative;

"We reached out to landowners via direct mail to remind them that septic systems required regular maintenance. A survey undertaken by the Detroit River Cleanup committee discovered that there were landowners who did not even know if (continued on page 15)

ROB'S WORLD

THE TRUTH IS CRAZIER THAN FICTION THIS TIME!

By Robert Passmore, P.Eng, robert@fieldstoneeng.com

Earlier this year I decided to make a subtle career change and venture out on my own. It is intriguing just how crazy, yet extremely rewarding these past several months have been. In fact, while the work load has been chaotic and overwhelming at times, the effort has almost been therapeutic. As they say (whoever "they" are?) a change is as good as a rest. Such a "rest" is good for me as I feel invigorated in being focussed, full time, on the onsite wastewater industry now. Many may eventually agree, in the coming months, that this newfound focus may not be a very good thing for some in our industry.

In the past few months, several issues affecting the onsite wastewater industry have come to light that require the immediate attention to all interested parties. Just off the top of my head, we have ongoing problems with the Ontario Building Code (OBC) interpretation for fill being placed under shallow buried trenches (SBT's), sampling and reporting issues still plague tertiary treatment maintenance providers, installers and regulators, and municipalities across the Province are still diligently working away on stopping rural development. While the SBT issue is relatively recent, the other issues have a long standing history with the industry. Some of these issues have moved onto my bucket list so I suppose it's time to get on with chipping away at them.

The issue that I would like to focus on for winter edition of the column revolves around this ludicrous idea that you can't put leaching bed fill under shallow buried trenches. As you will recall, prior to the rollout of the 2012 edition of the OBC, there

were many municipalities in the Province who interpreted the OBC to require to meet the loading rates prescribed in Table 8.7.4.1 for fill based systems. The premise was that if you brought in fill to achieve the vertical separation distances to bedrock or high groundwater table, this material met the definition of leaching bed fill and must meet the prescriptive loading rates of that Table. That interpretation, which was, for the record, technically correct, failed to incorporate the actual scientific function of SBT's themselves. SBT's placed directly on clay having a ttime of between 50 and 100 minutes/cm had a loading rate of the order of 100 L/m2 per day (based on 300 mm trench width per unit length). However, if one needed a few centimetres of clearance to, say the high groundwater table, the fill then needed to meet a loading rate of 4 L/m2/day and needed to be a minimum of 250 mm thick across that area. What resulted was an absurd miscarriage of good science with SBT's being scrapped for other technologies- filter beds primarily.

Consultations between the Ministry of Municipal Affairs and Housing (MMAH) and the onsite industry, facilitated by the Ontario Onsite Wastewater Association (OOWA), leading up to the 2012 OBC update, showed significant promise in correcting this glaring issue. The MMAH, to their credit, even released a Code Change Request (S-B-08-07-05) to fix Sentence 8.7.4.2. (1) of the OBC. Granted, the code change request could have been better worded, but nonetheless they added the words "Except for a shallow buried trench..." to the start of the Sentence so now it reads "Except for a shallow buried trench, a leaching bed comprised of absorption trenches may be constructed in leaching bed fill, if unsaturated soil or leaching

bed fill complying with the Subclause 8.7.2.1 (1)(b)(ii) extends,...". While that text, itself, isn't overly helpful in clearing things up, the rationale for the proposed code changes makes in pretty clear. It states "The proponent states that tertiary quality effluent and time dose application does not require having comparable loading areas to leaching beds that receive septic tank effluent."

While that seems to have addressed loading rate issues when SBT's are placed on fill, several regulators in the Province are apparently interpreting this clause to mean that one cannot install SBT's on leaching bed fill – PERIOD. What is even worse is that there is some evidence, albeit anecdotal at best, to suggest that some of these regulators are being directed to make that interpretation by MMAH directly.

Now I can completely understand that you are likely reading this and thinking that I must be mistaken or exaggerating the issue, but the crazy part is –I'm not making this up! There is likely to be a formal challenge in this issue put forth the OBC shortly on this issue. Personally, by the time you are reading this issue, I will have written a letter to the Minister of Municipal Affairs and Housing, asking for an immediate ruling on this issue. Anyone who feels strongly about issue can contact me for more information. The repercussions of this erroneous interpretation cannot go unchallenged.

The opinions expressed herin are my own personal opinions and do not reflect the opinions of OOWA's Board of Directors or of the Association.

MMAH CHANGES DELIVERY MODEL FOR ONTARIO BUILDING CODE QUALIFICATION EXAMS

By Katherine Rentsch, P. Eng

The Ministry of Municipal Affairs & Housing (MMAH) recently announced changes to the way that exams for building code qualifications will be delivered. This comes on the heels of a longer term trend of MMAH to get out of the business of training and testing for Ontario Building Code practitioners.

MMAH introduced mandatory licensing for all septic system installers 1998. To support this initiative MMAH took on the responsibility of the development of training material and the facilitation of the courses and exams. Delivery of training material was outsourced to various authorized delivery agencies across the province, including the Ontario Building Officials Association (OBOA) and the Ontario Rural Wastewater Centre (ORWC). In 2005 MMAH expanded the licensing program to include all building code practitioners for all parts of the building code, including designers and building officials.

Over the last two years, MMAH has been tweaking this model of training and qualification. In 2013, MMAH transferred the responsibility for the development and delivery of training material to George Brown College, and gave permission to all colleges to offer building code courses in an effort to make them more widely available across

the province. It should be noted that the province through George Brown College still recognizes third party authorized delivery agencies such as the OBOA and the ORWC.

MMAH has most recently changed the delivery model for the qualification exams. All building code exams will now be facilitated through Humber College, effective November 19, 2014. A legitimate complaint of the examination process under MMAH was that technology, specifically the use of electronic technology for registration and testing was being under-utilized. Humber College has made a concerted effort to bring the examination process into the 21st century both through the exam registration process as well as the exam delivery modes.

Exam registrations can now be submitted online or by phone, email or via a paper form. Exams will be offered online or at Humber College test centres which will be available across the province. Long criticised for the delay between writing an exam and getting a result, Humber College promises to communicate an exam result to the practitioner via email within two weeks of writing the exam.

To apply to write an examination you will need a Building Code Identification

Number (BCIN). Anyone writing a Building Code examination for the first time will require a BCIN in order to register for an examination with Humber College. This must only be obtained for the first exam – your BCIN will not change for subsequent additional building code qualifications. Subsequent to passing the exam practitioners must still register with MMAH. Registering allows the practitioner to be entered into an on-line database which allows building officials to search BCIN's and confirm qualifications. To learn more go to www.humber.ca/buildingcodeexams.

Minor changes have also be made to insurance requirements. Some designers are required to carry insurance during their period of registration with MMAH and the Branch has recently developed a new standardized insurance form to be used when submitting evidence of insurance. This form will be available for use as part of registration applications on November 1, 2014. The use of the new form will be mandatory beginning January 1, 2015. It should also be noted that registration fees for installers and designers will be increasing to \$105 & \$165, respectively, effective January 1, 2015, and that all practitioners, including municipal building officials and on-site sewage installers, will be subject to annual registration.

THANK You!

OOWA would like to thank the Annual Conference Bronze Sponsors for their early show of support

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OOWA ANNUAL CONFERENCE NEWS AND UPCOMING EVENTS

OOWA ANNUAL CONFERENCE AND TRADE SHOW

March 22-24, 2015, Sheraton on the Falls, Niagara Falls, ON

5875 Falls Avenue, Niagara Falls, Ontario Canada, L2G 3K7

The theme for this year's Annual Conference and Trade Show is 'Best Practices in Onsite'. The technologies, services and solutions that only you can provide now form critical components to Ontario's rural infrastructure. Make sure that your products, services, research and innovations are recognized by your peers while growing your professional network. Be a part of it!

CALL FOR PAPERS

We are looking for presentations that will be informative, engaging and that will help to increase the quality of your products and services. If you have case studies, projects, or technological solutions that have produced concrete results, we would like to hear from you. Please contact OOWA's Programs and Outreach Coordinator for information on how to submit a presentation proposal.

DEADLINE FOR SUBMISSIONS IS JANUARY 15th

EXHIBITOR EXPOSURE

Exhibitor Registration is now open for the Conference's Trade Show. This event is the largest wastewater trade show in Ontario and it is growing! Conference organizers continue to take steps to increase the foot traffic on the floor in making sure it is worth your time and effort to be there.

Get exposure to a large niche audience of wastewater professionals and network with new and potential clients!

TRADE BOOTH PACKAGES:

OOWA Members: \$975.00 (+HST)

Non-Members: \$1175.00 (+HST)

SPONSORSHIPS STILL AVAILABLE

A special thanks to RH₂O North America and Waterloo Biofilter Systems for their Bronze level sponsorships for the 2015 Conference! Their early contributions mean that there is one more Bronze level sponsorship (\$1,500), two Silver level sponsorships (\$2,500) and one Gold level sponsorship still available.

Contribute to a great event and have your company featured prominently in the conference edition of ONSITE magazine and throughout the conference site.

INDIVIDUAL REGISTRATION

For individual registration you can go the **Eventbrite** website (www.eventbrite.ca) and then enter "2015 OOWA Annual Conference and Trade Show" in the search field to be taken to our on-line registration.

For more details and information contact OOWA:

Mike Gibbs,

Programs and Outreach Coordinator

1-885-905-6692 (OOWA) x 101

outreach@oowa.org

oowa.org

EASTERN ONTARIO REGIONAL MEETING

Save the Date! 9am-3:30pm on Wednesday, January 28th, 2015.

J.R. Brisson Complex

758 Brébeuf St., Casselman, ON

Join dozens of local installers, contractors and regulators for this highly anticipated and informative session. The agenda and registration details are currently in development. Please check back to the OOWA 'Events' webpage (www.oowa.org/education-training/event-listing/) for more information in the coming weeks or contact Mike Gibbs at 1-885-905-6692(ext. 101) or via email at outreach@oowa.org. We look forward to seeing you there!

DECENTRALIZED SEWAGE SYSTEMS FOR SMALL COMMUNITIES

There are upcoming opportunities for sewage system installers, designers and treatment manufacturers and service providers.

By Eric Gunnell, P.Eng

From a sewage system spectrum, we generally service individual rural homes and commercial businesses with on-site sewage systems. The majority of these sewage systems have daily design sewage flows less than 10,000 litres / day, and are therefore permitted by the local Municipality, Health Unit or Conservation Authority, who issue an appropriate building permit. For sewage systems with daily design sewage flows greater than 10,000 litres per day, the approval authority is the Ministry of Environment (MOE), who will issue an Environmental Compliance Approval (ECA) [formerly known as a Certificate of Approval, or C of A].

ECA approvals are regularly issued for commercial projects, restaurants, campgrounds, with some residential rental properties, and only rarely for communal sewage systems servicing residential 'subdivision' projects or condominium buildings.

The simple reason as why very few residential projects are serviced with 'communal' sewage systems, or as we will now refer to 'Decentralized Sewage Systems', is our Provincial Planning Act, and specifically the Provincial Policy Statement (PPS), which sets out the hierarchy for servicing residential homes. The first selection has traditionally been the 'big pipe' for servicing, discharging to a 'municipal treatment plant'. The other major stumbling block, or 'perceived' stumbling block is the MOE requirement that the project developer must enter into a 'Municipal Responsibility Agreement' (MRA), with the local municipality for residential projects.

The MRA includes a number of financial provisions, as well as a clause that states in the event of default in the operation or maintenance of the sewage system by the developer / condominium / homeowner association, the municipality must step up and assume ownership and operation of the sewage system. Municipalities have an unfound fear in this regard. Proper planning and preparation of an MRA will provide the necessary 'protection' to all parties, as well as assuring safe water and a safe environment.

Our Ontario Onsite Wastewater Association (OOWA - www.oowa.org) lobbied for changes to the PPP, and progress was made to allow for increased use of decentralized sewage systems. Refer to the new Provincial Policy Statement, 2014 (www.mah.gov.on.ca/Page10679.aspx).

The era of low cost municipal sewage treatment plants and expansions is over. Government grants and funding for municipal servicing of residential development is largely over.

Municipalities are looking for lower cost solutions to service residential development and increase their tax base. Decentralized sewage systems now become an attractive alternative to the 'big pipe'.

This past October 8, 2014, OOWA organized a one day 'Decentralized and Small Communities Systems Symposium', held in Perth, Ontario. The agenda was developed to explore the options available to small communities, towns and rural developments, to further

improve the collective understanding of the benefits of Onsite and Decentralized infrastructure solutions as they aim to meet growing needs for redevelopment and new development. Across Ontario, small towns and municipalities are looking to meet their growth and redevelopment requirements with cost-effective, scalable and practical wastewater servicing solutions.

The symposium was well attended, and by all accounts was well received by the planners, municipal employees, engineers, contractors, treatment manufacturers, service providers and others, in attendance. A number of real life decentralized projects were discussed in detail. Education, training and the concept of 'protection of the home owners, municipalities, developers and the environment' are key elements in moving forward to the greater acceptance of Decentralized Wastewater Systems.

We all must be aware and supportive of this expanding direction for our industry. In addition, we would highly recommend your involvement and support of OOWA, as our professional organization, with the ability to speak and seek support from all levels of government, and ministries.

The future success of Decentralized Wastewater Systems, will provide opportunities to enhance the businesses of our onsite industry, including septic system contractors, sewage system designers / engineers (non 'big pipe' / municipal treatment plant), treatment manufacturers, service providers, and suppliers.

HOW THE HECK DOES A SIPHON DOSE A DRAINFIELD?

By Jim Anderson, Ph.D.

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All your siphon questions answered. This is your guide to understanding how siphons work for drainfield dosing.

A reader recently submitted some questions about the use and operation of siphons in onsite systems. An increasing number of systems are installed with siphons, so it's important to understand how they work and what problems you might encounter.

For those of you familiar with Consortium of Institutes for Decentralized Wastewater education materials, there are descriptions of how siphons operate in both the operation and maintenance service provider program manual and the installation of wastewater treatment system manual. These can be helpful references.

A siphon delivers a set volume dose of effluent. The volume of effluent dosed depends on the size of the siphon bell and the height of the siphon trap. So, it is important that the siphon used be appropriate for the application intended.

Any manufactured or custom-built siphon will not do; it needs to be matched with the necessary volume and delivery rates required for the application.

In addition, the device will not function if the system component that effluent is being delivered to is not at a lower elevation of several feet. This should be common sense; just think of the last time you tried to siphon something out of a container – the liquid wouldn't transfer until the elevation requirement was met.

How does it work?

During a siphon cycle, the siphon traps must be filled with water. When liquid rises above the open end of a pipe called a snifter or vent pipe, air is sealed in the bell and long leg of the siphon. As the fluid in the tank rises, the pressure on the confined air increases and forces water out of the long leg of the trap. When the air pressure is great enough to force all the water out of the long leg, trapped air escapes through the short leg to the air release vent pipe. At this point, the

siphon has been "tripped" and fluid is discharged from the siphon until the liquid level in the tank drops to the bottom of the bell. Air is then drawn under the bell, which "breaks" the siphoning action, and the process begins again.

Just as in applications requiring the use of pumps; it is important that there be a way to determine whether the flow delivered from the siphon is within the design specifications, so using digital cycle counters to establish the flow is a good practice.

Likewise, having a high-water alarm to let the homeowner know that the siphon is not functioning is also good practice and is often required by state and local codes. The high-water alarm, however, will not identify one of the common problems with siphons when they continuously trickle rather than discharge the required dose. This is where looking at the cycle counter and inspecting the device is necessary.

EQUIPMENT CORNER

10 Ways to Maximize Fuel Efficiency in Older Trucks

Annie Lubinsky, Business Fleet, March 2013



An aftermarket upgrade expert recommends modifications that make your trucks more fuel-efficient to keep them on the road longer.

Fleet managers are always looking for ways to cut costs, and one way is to keep fleet trucks in service — and running efficiently — for as long as possible. While maintenance remains a big factor in increasing fuel efficiency, certain modifications to fleet trucks can help them burn less fuel, run smoother and last longer.

Business Fleet spoke with Anthony Jarantilla, an aftermarket install shop manager and head of vehicle upgrades for XMT Construction of Surrey, British Columbia, who shared his ideas for optimizing trucks for fuel efficiency and durability.

For a visual representation of his fuel-saving suggestions as well as other how-to tutorials, visit Jarantilla's YouTube channel under AnthonyJ350.

1. Overcompensate on oil changes.

It's no surprise that Jarantilla addresses maintenance first. He recommends using synthetic oil and high-capacity filters. "I like to overcompensate when it comes to maintenance items," Jarantilla says. "I'm pretty religious when it comes to things like oil changes."

Jarantilla recommends synthetic motor oil because it maintains its lubricating properties longer, allowing the engine to do its work with less friction and less wear, especially in temperature extremes. "If I miss [an oil change] by a month or two, I'm not really hurting the vehicle," he says. "The same thing goes with my oil filters and my air filters."

Though this method may cost a bit of extra money, he says it will pay for itself in the long run.

2. Upgrade to a high-flow exhaust system and high-flow air filter.

After years in operation, exhaust systems in fleet vehicles may be rusty and ready for replacement, especially where roads are salted. If parts of the exhaust system need replacing, Jarantilla recommends purchasing a high-flow aftermarket exhaust system for about the same price as a regular one. "If the motor can't breathe, it won't be efficient," he says.

Turndown kits cost less than \$200 and mufflers run under \$100. If the pipes are in good shape and are already low restriction, Jarantilla recommends just changing the muffler.

He doesn't suggest changing the exhaust manifold or the catalytic converter unless it's absolutely necessary since labor and parts are expensive.

If a truck is not running efficiently, a visual inspection for damage or wear of the exhaust system can help determine why. If performance is sluggish, even after a tune-up, check the exhaust system for weak pipes and rust. Some high-flow replacement filters come with a 1-million-mile warranty and maintain air flow even when dirty. "It's the last air filter you'll ever buy," Jarantilla says.

3. Monitor your spark plugs.

Change spark plugs at 60,000 miles if you have iridium or platinum plugs, and every year or 7,000 miles for copper plugs. Regardless, check them yearly.

"Spark plugs tell a lot about what's going on in an internal combustion engine," Jarantilla says, adding that although you may not need to change them, it's a good idea to visually inspect them once a year.

Discolored spark plugs can indicate that the motor is running rich or lean. If it's running rich, the truck is probably using too much fuel, and if lean, there isn't enough fuel. In this case the O2 sensor might need to be checked. Jarantilla recommends changing the O2 sensors about every 80,000 miles.

4. Buy the right tires and check tire pressure often.



Is it best to use one set of all-weather tires or two sets — one for highway driving and one for snow? Jarantilla recommends buying a good all-weather light truck tire for those not in severe winter climates.

While it costs more money upfront, having two sets reduces wear and increases safety on the road. In some places, snow tires are required by law.

Jarantilla estimates that tires can affect gas mileage by up to 10%, so it's important to maintain proper tire pressure and to check it often. Proper tire pressure optimizes fuel efficiency and tire wear, and monitoring pressure helps operators catch air leaks while they're small. "In a perfect world, someone would be checking tire pressure every other day," he says.

Avoid the temptation to buy bigger tires, which look great but reduce fuel economy, Jarantilla says.
(continued on page 15)

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Call for Nominations for the OOWA Board of Directors

The Association will soon begin seeking nominations for elections of Directors to the Board. Elections for Director positions will be held during the Annual General Meeting at the 2015 Conference & Exhibition in Niagara Falls. The term length is three years, and Directors are expected to participate in monthly meetings either in person or via conference call. Now is the perfect time to consider whether you or someone you know could be a candidate for our Board of Directors.

This is a great opportunity for you or a colleague to participate in the ongoing improvement and growth of our Association. OOWA is an important voice and advocate for the on-site sewage industry in Ontario. There are many capable members with valuable knowledge and experience to help guide the Association farther along this path – now's the time to share your skills!

Not sure about being able to commit to the role of a Director?

OOWA also has several active committees always looking for more participants – these include Government Relations, Media, Member Services, Conference & Events Planning, Onsite Technical Issues, Governance and Professional Development. Often, it's at the committee level that the hard work gets done!

If you or someone you know are interested in serving the Association as a Director, please contact our Operations Coordinator, Rachel Robichaud at op-coordinator@oowa.org.

CONSERVATION AUTHORITIES FOSTER SEPTIC SYSTEM MANAGEMENT ACROSS ONTARIO

Continued from page 7

their sewage was treated by a septic, and many more who did not know that septic systems require regular maintenance”.

In addition to a postcard, Essex Region Conservation Authority staff partnered with maintenance contractors to provide a 10% maintenance discount to anyone who mentioned the advertisement, and also provided a prompt in the form of a fridge magnet to remind homeowners to maintain their septic systems, much like an oil change reminder. Stuebing adds “We presented to municipal councils and also to our regional building inspectors, who maintain the primary responsibility for responding to complaints.

This generated a good deal of media interest and we had reports of some uptake on the program. We believe this was a good start, but continued education and outreach efforts are needed on this subject.”

Conservation Ontario and Conservation Authorities continue to seek opportunities to collaborate and identify sources of financial support to promote and foster sound septic system management. This includes with building partnerships with local municipalities, landowners, contractors and the Ontario Onsite Wastewater Association members. For more information about possible septic services and programs being offered in your local watershed, you can find a link from Conservation Ontario's website: www.conservation-ontario.on.ca/about-us/conservation-authorities/ca-contact-list.

Conservation Ontario is the provincial organization which represents Ontario's 36 Conservation Authorities. Conservation Ontario offers a number of educational materials about protecting water, including a fact sheet:

www.conservation-ontario.on.ca/library?view=document&id=81:septic-systems-2011&catid=59:source-water-protection

EQUIPMENT CORNER

Continued from page 13

5. Add helper springs.

It's important to pay attention to suspension, “one of most overlooked things,” Jarantilla says. “I see guys overload their trucks all the time.”

A maxed out suspension will put undue pressure on tires, especially over bumps. Bulging tires wear out faster and create more friction, making the truck work harder and burn more fuel. Installing auxiliary metal springs or air springs (\$300 for a basic kit) gives the operator more leeway in terms of payload capacity, and air springs can be adjusted to accommodate the truck's load.

6. Firm up the shifts and check the gear ratio.

Transmission repairs and replacements are a fact of life in older trucks. If a repair shop is going to open up the transmission anyway, Jarantilla suggests asking the shop to firm up the shifts and check the axle gear ratio. “Don't go for a mushy, sloppy soft shift,” he says.

The less time spent shifting means more time the fuel is used to move the truck instead of shifting gears. For a firmer shift and to increase transmission durability, Jarantilla recommends installing a shift kit, which usually starts around \$100 plus labor.

If necessary, the transmission shop can also change the truck's rear axle gear ratio to one more appropriate for the weight loaded onto the truck and how it's driven (city or highway). Transmission experts can use driver feedback on how and where a truck is driven to ensure it is operated primarily within its power band (the range of operating speeds that the vehicle operates most efficiently).

7. Eliminate unneeded aftermarket accessories.

Assess whether any large accessories are necessary, as the added weight does make a difference in fuel economy. Bully bars and headache racks look good, but if that's all they do, take them off. As well, assess if you really need your ladder racks.

Front air dams should be left on, as they improve aerodynamics. Also, keep aerodynamics in mind when loading a truck, especially when driving on the highway. Keep loads to the center of the vehicle and behind the cab so items don't catch the wind.

8. Add an oil catch can.

An oil catch can will help keep the upper intake manifold clean by collecting oil mist generated from the rotating components of the engine and protecting it from gunk.

Jarantilla says an oil catch can requires added maintenance but promotes a cleaner burn because the oil is not mixing with gasoline. “If you take more oil out of the combustion, it's a much more efficient explosion at that point, just gasoline and air,” he adds.

Ask your mechanic or installer if it would help your truck.

9. Upgrade the electrical grounds.

A quick and easy preventive maintenance modification for older vehicles is to upgrade the grounds, which helps ensure all the electrical sensors such as O2 sensors and mass air flow sensors communicate accurately with the truck's computer system.

A local aftermarket install shop can upgrade the grounds by adding thicker wires to increase the contact points.

10. Consider a fuel injection cleaner.

Jarantilla uses high-quality gasoline and for years has used a fuel injection cleaner, designed to help keep intake valves clean and lubricate the upper cylinders to aid in maintaining efficiency. “A good one from Lucas or Chevron Techron seems to do the job,” he says.

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