ONSITE
WASTEWATER NEWS
ONTARIO ON-SITE WASTEWATER ASSOCIATION NEWSLETTER

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Technical Review
Doug Joy

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http://www.orwc.uoguelph.ca

Ontario Rural Wastewater Centre: Conference

After five months of hard work by many volunteers and ORWC staff, the first annual On-site Wastewater conference was held in Mississauga. This inaugural event attracted 24 exhibitors and 220 conference participants. The overall turn out exceeded our expectations and we were thrilled at the level of participation by all members of the industry. The mix of designers, installers, manufacturers, regulators, researchers and other contractors created a great forum for the exchange of ideas and information that was definitely a benefit for everyone involved.

Participants listened to topics that ranged from appropriate technologies for difficult sites to the use of wetlands to treat landfill leachate and nutrient management and biosolid issues. During coffee breaks and lunch time people could browse the exhibit areas and talk to the exhibitors. There was a wide variety of exhibitors, some of which had traveled from as far away as Delta, B.C. and Fort Wayne Indiana. The terrific quality and number of exhibitors was a real asset for the conference participants.

We were very lucky to have Mike Hoover of North Carolina State University as our first keynote speaker. His talk on the issues surrounding national standards for on-site wastewater technologies generated many interesting discussions on the first day of the conference. The keynote address on the second day by Suzelle Barrington of MacDonald College on issues and solutions to agricultural waste management was entertaining and informative. Both speakers did a great job!

Now that it is all over and we've had the opportunity to sit back, reflect and congratulate ourselves on a successful conference we are getting ready for the next one. This time we are going into the planning phase with more experience, more time and most importantly with the feedback from returned evaluation forms.

Thank you to everyone that attended the conference, and to members of the conference organization team. We look forward to seeing you again next spring at the second annual On-site Wastewater Conference.

Doug Joy of the ORWC proudly presents the draw prize generously donated by Ed Kovacs of F.E. Meyers to George Eastwood

Ontario Rural Wastewater Centre: Post-conference Workshop

March 27 to 29 was a busy time for the ORWC, but it was time well spent. Tagged onto the end of the inaugural conference was the post-conference workshop: On-site System Inspection, Troubleshooting and Remediation Methods. This workshop was held at the ORWC demonstration site at the Arkell Poultry Research Farm and was led by Alex Campbell of R.J. Burnside and Associates. The workshop was sold out with 24 people registered. As with the conference, there was representation from almost all sectors of the on-site industry including: a manufacturer, several regulators and installers, as well as some engineers, home inspectors and even a university student.

Alex presented introductory material on a variety of topics including safety and water conservation, and then went onto discuss inspection, troubleshooting and remediation. The course included a quick tour of the Guelph demonstration building and a field demonstration of the Terralift by Phil Groves of Burlington.

Course evaluations were returned by most participants and the enthusiasm for this workshop and on-site education in general was clearly evident. Some of these included:

Continued . . .

Bill Hunter and Bert Knip of Make-Way Plastics Ltd. share their thoughts on the Whitewater system

Pierre Gratton discusses the merits of peat at the Ecoflo display

"Looking forward to the next workshop and hope more people realize its importance."

"This organization and related conferences, workshops and training courses is a much needed and much appreciated addition to the wild world of on-site sewage systems inspection and installation. Thank you for taking the initiative!"

"I found the course informative not only because of the materials provided but also because of the discussions."

ORWC is planning to expand the number of workshops offered in all of its locations, so check our course list in this newsletter.

Ontario On-site Wastewater Association — First General Meeting

The first general meeting of the Ontario On-site Wastewater Association took place on March 27, 2000 in Mississauga at the Delta Meadowvale Resort and Conference Centre. The meeting took place in conjunction with the On-site Wastewater Systems Conference hosted by the Ontario Rural Wastewater Centre.

Approximately 50 people attended the meeting representing all disciplines associated with the on-site sewage industry. During the meeting an election was held to add four members to the Board of Directors, the financial statements were presented, and a brain storming exercise was conducted to establish objectives for the 4 sub-committees.

Board Of Directors

- Jim Aitkin, OASIS
- Al Brown, Sand Filtration Inc.
- Alex Campbell, R.J. Burnside & Associates Ltd.
- David Cooke, Public Health Inspector
- Terry Davidson, Rideau Valley Conservation Authority
- Craig Jowett, Waterloo Biofilter Systems Inc.
- Doug Joy, ORWC
- Philippe Masuy, Ecoflo Ontario
- Doug Robinson, Unit Precast
- Bill Seabrook, Green Valley Environmental
- Ahmed Sharaf, MMAH

Newly Elected Members

- George Eastwood, HOMESTEAD Inspection and Engineering Ltd.
- Andrew Tovell, John D. Paterson & Associates Ltd.
- Frank Wales, Frank's Backhoe Service
- Peter Lavrench, Town of Georgina

The following lists the sub-committees and their members to date. If you would like to participate on one of these committees, please Terry Davidson a call at (613) 692-0160 ext. 107.

Membership Committee

- Tom Musgrove, Northern Purification Systems
- Mike Newark, Gamsby & Mannerow Ltd.
- Craig Jowett
- Shelly Bonte-Gelok, ORWC

Public Relations Committee

- Alex Campbell
- Rob Palin, Ecoflo Ontario
- Frank Wales
- Gary Sharp, Infiltrator Systems Inc.

Research Committee

- George Eastwood
- Brian Whitehead, Rural Development Consultants Ltd.

Regulations Committee

- Andy Tovell
- Mike Belaire, G.P. Value Engineering Ltd.
- Ken Dickson, ABECK Equipment Inc.

For those interested in joining the Association, please note that your membership fee includes your membership in the National On-site Wastewater Recycling Association (NOWRA). Also, our membership as risen to 138 members, please keep up the good work of spreading our message to potential members. The On-site Industry is now in position to be recognized as profession in Ontario!

If you have any questions, please contact:

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Frequently Asked Questions —
About Sewage Systems and the Building Code

Q ▸ What is the status of the Ministry of the Environment's document titled *Manual of Policy, Procedures and Guidelines for On-site Sewage System?*

A ▸ The Manual of Policy, Procedures and Guidelines for On-site Sewage Systems was a document considered by previous enforcement agencies during the inspection and approval of septic systems. While the document contains useful information, the Building Code Act and the OBC contain the relevant regulatory framework respecting on- site sewage system.

Q ▸ How should leaching bed fill in a raised bed be stabilized against erosion?

A ▸ Generally, planting or sodding of the leaching bed area will be adequate to prevent erosion.

Q ▸ How much should the OBC's clearance distances from wells or water bodies be increased when the percolation time is less than 10 minutes?

A ▸ The OBC does not specify these distances and leaves it up to the building official to determine the appropriate distance. This flexibility is intended to ensure that in relatively free draining soils, site-specific considerations are taken into account when separating the sewage system from sensitive natural features or drinking water supplies which could be impaired by sewage contamination.

Process of Approval for New Technologies

There are three ways of getting a new technology approved for use in Ontario. The first method is to apply for evaluation of the technology by the Building Materials Evaluation Commission. BMEC authorizations are not site-specific. The alternative is to apply for a Minister's ruling based on the findings of an evaluation of the technology by the Canadian Construction Materials Centre. A Minister's rulings may be subject to conditions and restricted geographic areas. The third option is to obtain an approval from the Chief Building Official as an equivalent under Section 2.7 of the *Ontario Building Code* (OBC). Section 9 of the Building Code Act permits the use of materials, systems, and building designs that are not authorized in the OBC.

So far, the BMEC has issued four authorizations related to sewage systems. These authorizations are posted on the Ministry of Municipal Affairs and Housing web-site: http://obc.mah.gov.on.ca.

An application to the BMEC will cost you $750 plus GST, and is non-refundable.

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Power Consumption

by Jason D. Fletcher, PE Design Engineer Zoeller Company

Often an individual wants to know how much that pump is costing to run. This article will attempt to explain how to calculate the power consumption based on a couple of different methods. The cost to operate is pretty simple if you know the duty cycle and input watts. Follow along:

Cost to operate per day = (hours run per day) * (input power) * (electrical cost)
Where: input power is in kilowatts (kilowatt = watts / 1000)
Electrical cost is in dollars per kilowatt-hour
Amperage is in amps
Power factor is in percent (usually about 0.8 for single phase and 0.9 for three phase)

Example: a single phase — horsepower pump used in a STEP system. A time dosing panel is used that runs eight times a day for ten minutes each time. The electrical readings are 242 volts and 5.2 amps.

First we must covert the electrical readings to an input power (kilowatt):

Input power = (voltage) * (amperage) * (power factor) * (square root of the phase)
= (242 volts) * (5.2 amps) * (0.8) * (1)
= 1007 watts
= 1.0 kilowatts

Second determine how many hours per day the pump will run:

Hours run per day = (times run per day) * (length of each time in minutes)/(60 minutes per hour)
= (8 times per day) * (10 minutes each) / (60 minutes per hour)
= 1.33 hours

Cost to operate per day = (hours run per day) * (input power) * (electrical cost)
= (1.33 hours) * (1 kilowatt) * ($0.10 per kW hour)
= $0.13 per day

Cost to operate per year = ($0.13) * (365 days per year)
= Approximately $49 per year

One last item to note is that the inrush power to a pump is not taken into account during the cost to operate calculation. Although the inrush can be several times higher than the actual run amperage of the pump and therefore seem to increase the cost to operate considerably, this is not the case. Since the inrush duration is a very short period of time, typically less than a second, the overall is power consumption calculation would be effected by a very minor amount.

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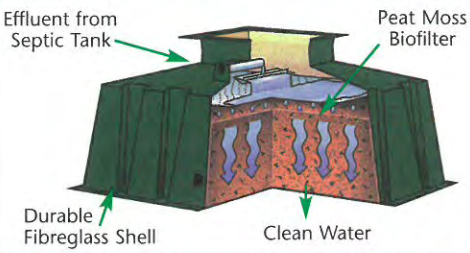

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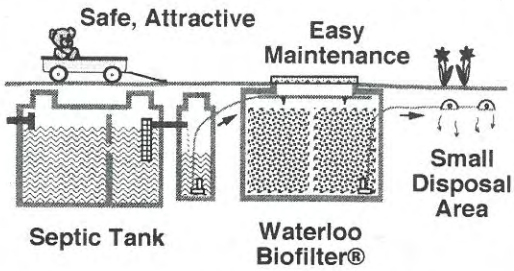

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Up-Coming Courses

Living with Your Septic System
- Guelph, May 27, 2000
- Baxter Conservation Area (to be announced)

Alternative Systems
- Baxter Conservation Area, June 29, 2000
- Guelph (to be announced)

On-Site System Inspection, Troubleshooting & Remediation Methods
- Baxter Conservation Area, June 22, 2000

On-Site Water & Wastewater Systems for Real Estate Professionals
- Baxter Conservation Area, August 2000
- Guelph, August 29, 2000

Manure Application (Sponsored by the Region of Ottawa-Carleton Rural Clean Water Program)
- North Gower, Ontario, September 12, 2000

Soils
- coming soon!

Field Inspection
- coming soon!

Design of On-site Systems
- coming soon!

Milkhouse Washwater Treatment and Disposal
- coming soon!

Ontario Rural Wastewater Centre
On-Site Systems ◆ Municipal Systems ◆ Agri-food Systems