



NEWSLETTER

Gunnell Engineering Ltd.

SepticDesign.ca

Volume III, Issue I

Special points of interest:

- This issue's profiles
- New MOE Approval Process
- Rob Valle
- Industry News

Welcome 2012!

Changes to the Ontario Building Code, Ministry of Environment approval applications and new Building Permit Applications have all been part of the past year's happenings in the industry. Gunnell Engineering Ltd. has been an active contributor and voiced our opinion in terms of the proposed amendments to Part 8 sewage systems of the OBC. The proposed 28 changes included new BNQ certification for tertiary treatment units, and amended dispersal fields including filter beds and area beds.

The Spring Cottage Life Show in March was widely attended as always. Many cottage owners were seeking advice as many were considering expanding their cottages and were in need of a new septic system. We also had a booth at the Camping in Ontario Campex 2011, to talk to campground

owners who were also looking at expansions and upgrades.

The Annual 2011 OOWA Conference was held at the Deerhurst Resort in Huntsville. Once again it was well attended with over 450 professionals. Due to the success of the venue, next year's conference will be held again at the Deerhurst Resort.

Upgrades to septic systems do not always involve house renovations. An increase to the daily sewage flows can be a result of medical reasons such as home dialyses. Septic system design is based on having an understanding of the medical treatment, and is specific to the individual. Read Brock's article on how a proper design can save the homeowner time and money for the upgrade.

We have had some staff changes over the last year here, and we are happy to

have Tom Keane join our team at Gunnell Engineering Ltd. Tom is no stranger here, as he has completed his school co-ops with us. Tom recently graduated from the Architectural Technologist program at Georgian College.

In our next newsletter, there will be more industry news and we will share our experiences with rejuvenating failing sewage systems.

If you would like to contribute an article or have industry news to share, please feel free to forward.

We thank you for your interest, and appreciate any suggestions or feedback offered.

Elizabeth Lew, Editor

Inside this issue:

Ontario Building Code Changes	1
Green Dolphin	2
Installer Profile	2
Staff Profile	2
Dialysis and Septic Systems	3
OOWA News	3
Industry News	4

Ontario Building Code Changes by Eric Gunnell, P.Eng.

Every four years, or so, we see the development of a new building code edition. Extensive OBC changes, totaling 28 amendments effecting Part 8 – Sewage Systems of the code, were proposed by the Ministry of Municipal Affairs & Housing (MMAH). Public consultations took place in 2010 / 2011. These proposed amendments are detailed on MMAH website; www.mah.gov.on.ca/Page9297.aspx.

Proposed code changes are typically initiated by individuals, groups or associations, as well as the MMAH. Key code changes include adopting

BNQ standards for re-certification of all tertiary treatment units, and amendments to dispersal fields, including filter beds and area beds.

Gunnell Engineering submitted comments to MMAH for each of these proposed changes, and are detailed on our website; www.SepticDesign.ca

The Technical Advisory Committee (TAC) completed a final review of the proposed septic amendments, for submittal / recommendations to MMAH. These comments have been detailed in TAC minutes and can be found on our website.

We are not aware which septic code changes, or the exact wording, that the MMAH has proposed to be included in the upcoming OBC edition. We were originally anticipating that the proposed changes to the OBC would receive government approval in 2011, but with the new minority government, it is now anticipated that the next edition of the Building Code will be released in late spring 2012, with an anticipated 'in effect' date of July 1, 2013.

NEWSLETTER

Profile - Green Dolphin Systems Corp



Septic systems are a very efficient way to treat our sewage waste. The septic system can be easily maintained by having an understanding of the basic principles and simply avoiding certain things, for example:

1. The use of garbage disposers (i.e. "Garburator") for disposal of food waste can cause a rapid overload of the septic system and early failure. It is best to practice composting.
2. Chemicals such as, phosphates, chlorine bleach, and other non-biodegradable, harsh and toxic ingredients affect septic performance, as well as the environment. These chemicals

also work against the septic system, which relies on the work of the natural occurring bacteria. As the bacteria count gets diminished by the chemicals, the activity of the organic waste breakdown slows and will eventually cause back-up and other costly issues.

One of the worst culprits is automatic dishwasher detergent, as most commonly used brands contain phosphates (as much as 35%), or phosphate replacements that are not biodegradable (such as EDTA and NTA), chlorine and polymers.

Today, there are products available that do not contain harsh, caustic,

toxic chemicals and actually perform exceptionally well, without having to spend an arm and a leg. Certainly, making a conscious effort to buy "green" cleaning products would go a long way to avoiding septic failures, or worse still, an illness of a family member.

For the wellness of the septic system, as well as humans and all living things, we should all take care to use more health-friendly products.

Amie Hingston
Vice President
GREEN DOLPHIN SYSTEMS CORP.
www.greendolphin.net

Profile - Contractor / Installer – Dave Dobinson



Dave Dobinson
Dobinson Excavating Inc

Dave Dobinson Excavating Inc. was established 19 years ago, but Dave has worked in the septic business for over 35 years. Operating as an Excavating Contractor, this company offers services in grading, haulage, video drain inspection, septic installation and septic maintenance, with an emphasis in onsite wastewater management. The septic systems they focus on include: Waterloo Biofilter, Ecoflo and Clearstream, as well as conventional absorption trench and filter beds.

This company is run in a proactive way, with Dave making it one of his jobs to be aware of new regulations, grants, and innovative ideas that will service their clients in a professional and efficient manner. As a licensed installer, Dave knows the importance of keeping the skills and knowledge base of both himself and his staff up to date. His staff is kept current in training and safety protocol and are expected to work to the best of their skill ability at all times.

Dave instills in all his staff the importance of perfection. He believes in

personal service and makes time to help educate customers individually on types of septic systems as well as how to maintain them.

Dave recently completed a three year commitment on the board of directors for the Ontario Onsite Wastewater Association and continues to be a proud member of this association as well as a member of the Barrie Construction Association.

Dave Dobinson Excavating is located in Innisfil. You can contact Dave at 705-436-5254 or davedobinson@bellnet.ca

Profile - Staff Member - Imad Aouli



Imad Aouli
Engineering Technologist

Imad Aouli is a graduate of St. Clair College in Windsor from the civil engineering technology program, and has been with Gunnell Engineering Ltd. since July 2009. His field of expertise includes septic system design, investigations of failing sewage systems and contract administration.

When Imad is not in the office designing septic systems, he is out undertak-

ing site inspections during construction or attending septic test pit investigations.

Imad is also part of our survey team and has extensive experience with the Total Station survey technology.

Imad has a wealth of technical knowledge and experience and we are proud

to have him as part of the Gunnell Engineering team.

Imad welcomes any questions you may have and can be reached at ext 229 or email imad@gunnellengineering.com

Caring at Home - Dialysis and Sewage Systems by Brock Cross

As our families age or succumb to illness it becomes important to assist them with their medical needs. Increasingly, these needs are being met in our homes with the assistance of family, friends and medical personnel.

One such medical treatment that can occur in the home is dialysis. In fact many dialysis patients prefer to undergo this procedure in the comfort of their homes as it allows them to receive the treatment more slowly and at their own convenience, limiting trips to a dialysis clinic and allowing for a more normal daily routine.

Generally, dialysis systems function by removing blood from the body and cleansing it of toxins, normally removed by healthy kidneys, prior to being returned to the body. In order to cleanse the blood of the impurities it is passed through a dialyzer (filter) that removes excess wastes and water and re-introduces clean water.

So how does this affect sewage system design?

The volume of water used during a treatment is specific to each machine and the required operating time. Flows generated can vary from 500 to 1000 L during a single treatment. These treatments can occur multiple times each week, adding significant flows to the existing sewage system.

From a design standpoint it is important to first establish the flows generated by the proposed dialysis unit by speaking with the homeowner and understanding the treatment needs of the patient. It is also good practice to confirm if additional fixture units, bedrooms, or building additions have been added since the original sewage permit was issued.

Then, an assessment of the existing sewage system should be confirmed that it can accommodate the additional flows. This should include an inspection of the tanks. Are they sized appropriately? Are there any upgrades that may be required?

It may be possible to only need to increase the size of the septic tank or perhaps balance the additional flows by

installing a pump chamber or replacing an existing pump chamber with a larger one. Each Municipality should be consulted to verify that balanced flows are permitted within their respective jurisdictions. The condition of the septic field should be investigated by examining the stone and pipe for biomat build-up, or the stone and sand interface in the case of a filter bed or area bed. It should also be confirmed that the septic field is sized appropriately for the increase in flows.

A common concern from Municipalities is the suspected release of contaminants into the sewage system however the water required to complete the dialysis cycle needs to be free of chlorine and any contaminants. As such, a reverse osmosis process is employed.

The bulk of the flows generated by each treatment is used in the pre-dialysis reverse osmosis filtration and is highly filtered and purified water.

The remaining water generated is spent dialysate effluent, which is formed after blood contact and consists of the filtered out impurities. These wastes are typical of the wastes generated by healthy, functioning kidneys. When these wastewaters enter the sewage system the concentration of chemicals are low due to dilution and generally have little effect on the treatment of the sewage.

With careful analysis and review, septic systems can be provided to accommodate dialysis patients at home.

Ministry of Environment - New Approval Process for Large Systems

The MOE introduced a new modern and more streamlined application process in October 2011. The Environmental Compliance Approval (ECA) replaces the Certificate of Ap-

proval. A single ECA addresses all of the emissions, discharges and wastes. Separate approvals for air, noise and waste are no longer required. An MOE approval is required where daily

design sewage flows exceed 10,000 L / day. For more information: Visit the MOE website at www.ontario.ca/environmentalapprovals or call 416-314-8001 or 1-800-461-6290



Ontario Onsite Wastewater Association (OOWA)

With OOWA membership rapidly approaching 600 members, the Association is the voice of the Ontario onsite sewage industry, and participates in many MMAH and MOE meetings / committees. All installers, designers, O&M service providers & inspectors are encouraged to obtain their 'Industry Recognition' through

the new OOWA Registered Professional Program (RPP).

The upcoming annual OOWA conference "The Future of Onsite Wastewater Treatment in Ontario", is to be held April 15 to 17, 2012 at the Deerhurst Resort in Huntsville.

For all information, services, benefits, and new membership, visit the OOWA website at www.oowa.org. Contact Denis Orendt at 905-372-2722 or denis.orendt@oowa.org



Industry News



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Biolan Greywater System

BMEC Authorization # 11-01-353
January 27, 2011

The System may be used to treat and dispose greywater up to a daily greywater flow of 800 litres /day.

www.biolan.fi.com



New BMEC Area Bed approvals / amendments were also issued for Clearstream, Ecoflo and Waterloo Biofilter. Please visit the MMAH website for more information.

Microceptor Coffee Grounds Interceptor

BMEC Authorization # 11-02-354
February 24, 2011

The Microceptor Coffee Grounds Interceptor is an under the sink interceptor engineered to remove coffee grounds that would otherwise enter the drainpipe and collect over time causing drain blockages. The Microceptor is ideal for sinks that are primarily used for rinsing coffee equipment .

Contact John Walker at 416-294-6092 or
jwalker@greenturtle.com



Goslyn Grease Recovery System

BMEC Authorization # 11-03-355
April 28, 2011

The Goslyn Grease Recovery System is a grease interceptor designed to remove fat, oil, and grease (FOG) from waste effluent. The Device is comprised of the Goslyn Grease Recovery Device, drainage, and venting connections, electrical hook up and active grease accumulation and disposal to an approved facility. Contact Angelo Mikrogiannakis at 416 -841-0990 or

angelo@goslynenvironmentalsystems.ca



Remembering Rob Valle, Sandpiper Excavating

This time of the year marks the one year anniversary of the passing of Rob Valle of Sandpiper Excavating . We had worked with Rob for many years and we were pleased to have profiled him in our March 2009 newsletter. Well known in the septic industry, Rob was a professional in every way and we often heard how pleased his clients were with his services. He is truly missed!



Who we are...

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Upcoming Events:

National Home Show
March 16-25, 2012
Direct Energy Centre, Toronto

Cottage Life Show
March 30-April 1, 2012
International Centre, Miss.

OOWA Annual Conference
April 15-17, 2012
Deerhurst Resort, Huntsville

WEAO Annual Conference
April 22-24, 2012
Ottawa Convention Centre

