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Ontario Onsite Wastewater Association Newsletter

March 3 to 5, 2013 | **OOWA Annual Conference & Exhibtion**
Blue Mountain Resort, Collingwood, ON

Conference Edition
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Onsite
Ontario Onsite Wastewater Association Newsletter

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

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OntarioOnsite WastewaterAssociation

Possibilities for the Reduction of Pharmaceuticals in Onsite Wastewater

Discharge Using Advanced Oxidation Technology

by Great Lakes Clean Water — LP

Summary

Did you ever consider that when you were drinking your morning orange juice or coffee, you were taking your first day's dose of pharmaceuticals — somebody else's pharmaceuticals! In his keynote address to the 2008 Annual General Meeting of the Georgian Bay Association, the Environmental Commissioner of Ontario, Gordon Miller, stated that if we didn't eliminate estrogen and progestogen compounds from our drinking water, that in the next twenty years the entire female population in Ontario would be on birth control. Pharmaceuticals that are in our drinking water come from pharmaceuticals we discharge into the environment with our wastewater effluent. Conventional municipal filtration and wastewater pollution control plants don't remove them and they are accumulating in the environment and in our drinking water.

Introduction

Researchers and scientists became aware and concerned about this problem over ten years ago. These micropollutants require very sophisticated equipment both to identify and quantify. The system used is Solid-Phase Extraction and Liquid Chromatography — Tandem Mass Spectrometry (LC-MS/MS). Some of the universities have this system, but the service is not available from private laboratories based upon little use and need.

In the last few years, work has begun to reduce these micropollutants in municipal drinking water distribution and wastewater discharge. It is not known how much is too much and what the long term effects of daily consumption might be, but it is agreed that we are going in the wrong direction. Researchers are working in their laboratories to reduce these pollutants in isolation in test water.

Continued on page 4 ...

OOWA

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Onsite

Ontario Onsite Wastewater Association Newsletter

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

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President's Message

Happy New Year; I was told that it is still appropriate to wish good tidings to people upon your first encounter of the year. I sincerely hope for prosperity to all in 2013. Once again we are on the heels of another onsite construction season and with it some dramatic changes to the Ontario Building Code. Are you preparing for this year? Is your business ready to compete in an ever changing and competitive market? OOWA has been busy preparing for the annual conference and trade show which is fast approaching. As a matter of fact, it may even be upon us as you are reading this. The 2013 conference will be a "must see" this year with a very informative and interesting agenda. I would like to extend my gratitude and thanks to the entire conference committee for once again organizing an exceptional event. I am confident that this will be our best conference yet.

"Managing your Onsite Infrastructure" is sure to be filled with important topics and information that you will need to face your business challenges this year. The keynote speakers will leave you with some great information and insight, the sessions will be sure to educate you on changes to our industry and business opportunities that you may not have considered. There will be key stakeholders to network with and learn from and don't forget the trade show where the manufacturers and suppliers will showcase their innovations sure to enhance your business. Thanks to them for their commitment to our conference, without the exhibitors it would not be the success it is. Like the association itself, this year's conference will have a new face. More grass roots topics and discussions targeted to the installer members. An open to the public trade show where end users will be able to mingle and talk to suppliers and manufacturers; your customers and potential customers networking with you all in one forum.

We thank those members who have contributed to this publication. Please continue to send in your comments, photos, experiences, they are great and it feels good to see our members be a part of it. As you read through the rest of these pages note the bulletin board and training program partner's course offerings. There may be something that jumps out at you that will help your business or better yet, get you the needed training to be a part of the Registered Professional Program (RPP).

See you at the conference!

Don Krauss; President

Join OOWA

... 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. **www.oowa.org/join**

From page 1

Scientists are working at municipal plants using advanced oxidation technology to treat drinking water and wastewater effluent. But this is very clean water that has been extensively pretreated. Eventually this problem will be solved for municipal works and maybe we won't have to worry about pharmaceuticals in our morning coffee — but maybe NOT! Onsite wastewater treatment systems are a completely different story and nothing is currently being done!

Pharmaceuticals are primarily organic compounds (95%) — the balance are synthetics (5%). It is known that organic compounds can be mineralized in solutions with high oxidation potential. However, in wastewater, competing chemistry could be significant and the reduction of pharmaceuticals could be limited. The concern was that due to the variability of the wastewater, influent results could be inconsistent.

Existing Technology

Existing technology for either drinking water or wastewater treatment onsite does not have the capability to effectively destroy pharmaceuticals. Conventional systems simply do not have sufficient oxidation power to break down these organic compounds in a timely way. As well, bioreactors are frequently disabled by both antibiotic and chemotherapy compounds. New technology is therefore needed.

New Technology

New technology with variable processing time, variable oxidation concentration, variable filtration, and operating under variable pressure, might have a chance. A FED-DEV Applied Research Collaboration Grant was obtained and the testing of the WATERCLEAN™ System began in January 2013 at the Centre of Alternative Wastewater Treatment (CAWT). The CAWT contacted the Université de Montréal and they suggested testing for a range of pharmaceuticals including:

- anti-inflammatories
- antidepressants
- anti hypertension medications
- endocrine system disruptors
- chemotherapy medications
- antibiotics

It was important to first determine that the target pharmaceuticals were present in the wastewater influent to be tested. This required that a number of sources be pretested. The Lindsay Municipal STP was selected as the source. The pharmaceuticals selected included:

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- Triclocarban
- Theophylline and Paraxanthine
- Levonorgestrel
- Norethindrone
- Medroxyprogesterone
- Progesterone
- Sulfamethoxazole
- Trimethoprim
- Ciprofloxacin

The competing chemistry was quite light and was as follows:

Parameter	Influent
FC	64,000 cfu
BOD	100 mg/L
CBOD	105 mg/L
TSS	84 mg/L
TP	9.45 mg/L
TKN	28.2 mg/L

The results for the WATERCLEAN™ System operating at a hydraulic capacity of 2,000 LPD was as follows:

Pharmaceutical	Influent (ng/L)	EFFLUENT(ng/L)	Percentage Reduction	LOD (ng/L)
Acetaminophen	39,074	ND	>97.6	295
Caffeine	4,254	182	95.7	123
Carbamazepine	284	38	86.6	37
Diclofenac	483	ND	>71.2	139
Theophylline	11,802	ND	>98.9	133
Progesterone	58	ND	>27.6	42
Sulfamethoxazole	1,016	ND	>79.5	208
Trimethoprim	305	ND	>89.8	31

Notes: • *ND is not detected*
- *LOD is limit of detection*
- *just because a pharmaceutical was not detected, does not mean that is wasnot present at an amount equal to or less than the limit of detection*
- *when the effluent result was ND, the LOD was used for the calculation of percentage reductions*

There was an average of greater than eighty (80) percent reduction of the target pharmaceuticals in conjunction with municipal sewage influent. It would appear that the WATERCLEAN™ System using advanced oxidation technology has significant promise for the reduction of pharmaceuticals in onsite wastewater.

Pharmaceuticals in onsite wastewater can be useful markers in determining the source of pathogens and nutrients. "We know that caffeine is associated with humans. We know that other animals do not have this in their excrement." "Present in everything from coffee and cola to medications, caffeine ends up in the watershed both through septic systems and down the drain." "Sampling revealed a positive correlation between caffeine and phosphorus." (Kurissery *et al* 2011). This approach is being used by Lakehead University researchers to determine point sources of nutrient contamination in Lake Simcoe.

Conclusions

Pharmaceuticals will play an increasingly important role in onsite wastewater treatment technology in the future. New technology will need to consider both the reduction of pharmaceuticals and their usage as markers for nutrient source location. ■

Welcome to the 2013 OOWA Conference

Thank you for attending! Firstly, I would like to personally thank this year's Conference Organizing Committee for their tireless efforts putting this year's conference together. Everyone worked very hard to make every Tuesday morning conference call, and delivered every week on the tasks required. Katherine Rentsch and Rob Palin deserve particular praise for their work putting the conference agenda together, along with help from Terry Davidson and others. I want to thank Sandy Bos and Terry Davidson for putting together the speaker packages, and gifts for the attendees, along with Terry's staff's help in designing our hard hat logos and our signage for the conference. Brian Howden has been particularly helpful with his insight from being last year's conference chair, and has been an invaluable resource to me and the entire committee. Eric Draper has been of particular help with the exhibitor area organization and development. Our President, Don Krauss, has been on board participating in the calls and helping us stay on target and on point. I appreciate the input we have received from Don as well during the whole planning process. Also, our V.P. Rick Esselment has been of particular help not only with much input into the content of the conference, but also with a contribution of marketing time by his staff to help increase conference participation.

I'd also like to thank in advance the volunteers that are contributing to the conference. As the conference goes on, you will see many board members, spouses and employees who have given their free time to help make this years' conference a huge success. Please take a moment to thank these folks for their hard work.

Please take a moment to say Hello to our new Membership Co-ordinator, Mallory Lloyd. Mallory will be mostly found near the registration area, but probably in a number of other places during the event. I can honestly say this conference is her work, and I give her much credit, as we could not have pulled this off without her tireless efforts at the helm of our association.

So enjoy, take it all in, as we are sure we have put on a great conference and sincerely hope you have a great time and learn lots. We also hope we have set up a good networking opportunity for you.

As conference chair it has been my privilege to work with the Conference Committee to put this event together. It has also been my honour to work on the OOWA Board of Directors for the past 9 years, and as I step down from the Board of Directors this year, it is with great pride in our association and its future as the voice for decentralized systems in Ontario.

God Bless and Enjoy the Conference.

John Doner, Conference Chair

Conference Schedule **Sunday, March 3**

Time	Session	Location
12:00 p.m. – 6:00 p.m.	Exhibitors Set up	Monterra Dome
11:00 a.m. – 6:00 p.m.	Registration Desk Opens	Outside Huron Grand Ballroom
1:30 p.m. – 4:00 p.m.	Manufacturer's Sessions	Silver Creek Ballroom 1 & 2 (see schedule below)
7:00 p.m. – 8:30 p.m.	OOWA Annual General Meeting — Reception to follow	Huron Grand Ballroom

Manufacturer Sessions

Time	Silver Creek Ballroom 1	Time	Silver Creek Ballroom 2
1:30 p.m. – 2:00 p.m.	Makeway Environmental Technologies	1:30 p.m. – 2:00 p.m.	Northern Purification Systems
2:00 p.m. – 2:30 p.m.	Premier Tech	2:00 p.m. – 2:30 p.m.	Bionest
2:30 p.m. – 3:00 p.m.	Waterloo Biofilter	2:30 p.m. – 3:00 p.m.	RH20
3:00 p.m. – 3:30 p.m.	Puraflo	3:00 p.m. – 3:30 p.m.	Infiltrator Systems
3:30 p.m. – 4:00 p.m	Orenco	3:30 p.m. – 4:00 p.m	Roth Global Plastics

** Conference Schedule subject to change*

Conference Schedule **Monday, March 4**

Huron Grand Ballroom			Silver Creek Ballroom	
Time	**Main Session**	**Speaker**	**Breakout Session**	**Speaker**
7:00 a.m. – 8:00 a.m.	**Breakfast**			
8:00 a.m. – 8:05 a.m.	Opening Remarks	John Doner, Chair		
8:20 a.m. – 8:25 a.m.	Mayor's Welcome	Mayor of Collingwood		
8:25 a.m. – 8:30 a.m.	OOWA Board of Directors Announcement	Don Krauss, OOWA President		
8:30 a.m. – 9:30 a.m.	Key Note Address "Saving Jobs & Money Through Onsite Wastewater Management"	Karen Mancl, University of Ohio		
9:30 a.m. – 10:30 a.m.	PANEL Discussion — Management Responsibility – Who is Responsible for What?			
10:30 a.m. – 11:00 a.m.	**Coffee Break**			
11:00 a.m. – 11:30 a.m.	Planning Framework for Wastewater in Ontario	Roddy Bolivar, Bolivar-Phillips	Good Records, Good Business	Gary Danner, FBC
11:30 a.m. – 12:00 p.m.	Onsite Wastewater Management Options for Canada	Cate Soroczan, CMHC	Equipment Safety & Management	Toromont
12:00 p.m. – 12:30 p.m.	The Stars are Aligning for Small Systems & How to Further the Cause	Trish Johnson, RV Anderson	Confined Space Entry (Hazards and Controls)	Ron Campbell, Acute Environmental & Safety Services Inc.
12:30 p.m. – 1:45 p.m.	**Networking Lunch**		**Networking Lunch**	
1:45 p.m. – 2:15 p.m.	Source Water Protection's Impact on the Ontario Building Code	Lynn Dollin, Chair of the South Georgian Bay Lake Simcoe Source Protection Committee	Pumps & Time Dosing	Ted Kulongoski, Orenco Systems Inc.
2:15 p.m. – 2:45 p.m.	Certified Phosphorus Removal Solution with no chemical handling for single dwellings	Marie-Christine Bélanger, Premier Tech Aqua	Soils & Biomat Biology	Robert Passmore, Paterson Group
2:45 p.m. – 3:15 p.m.	Commercial Onsite System Maintenance — Attention To Detail	Brady Straw, Waterloo Biofilter Inc.	Septic Tank Effluent Quality	Katherine Rentsch, ORWC
3:15 p.m. – 3:45 p.m.	**Coffee Break**			
3:45 p.m. – 4:15 p.m.	Milkhouse Wastewater Treatment & Approvals	Chris Kinsley, University of Guelph		
4:15 p.m. – 4:45 p.m.	Possibility for the Reduction of Pharmaceuticals in Onsite Wastewater Discharge Using Advanced Oxidation Techniques	Tom Bain, Great Lakes Clean Water LP		
4:45 p.m. – 4:50 p.m.	Closing Remarks	Don Krauss, OOWA President		
6:00 p.m. – 6:45 p.m. 7:00 p.m. – 9:30 p.m.	**Reception** **OOWA Banquet**			

** Conference Schedule subject to change*

Conference Schedule **Tuesday, March 5**

Huron Grand Ballroom			Silver Creek Ballroom	
Time	**Main Session**	**Speaker**	**Breakout Session**	**Speaker**
7:00 a.m. – 8:00 a.m.	**Breakfast**			
8:15 a.m. – 8:30 a.m.	Opening Remarks	John Doner, Chair		
8:30 a.m. – 9:30 a.m.	Key Note Address "The Four Environmental Crises that are Changing Everything"	Gord Miller, Ontario Environmental Commissioner		
9:30 a.m. – 10:30 a.m.	PANEL Discussion — Best Management Practices for Maintenance Inspection Programs			
10:30 a.m. – 11:00 a.m.	**Coffee Break**			
11:00 a.m. – 11:30 a.m.	Update on Knowledge Maintenance Requirements	Chris Thompson, Ministry of Municipal Affairs & Housing	Construction Site Management	Lou Cavaleri, Infrastructure Health and Safety Association
11:30 a.m. – 12:00 p.m.	Update on 2013 Part 8 *Ontario Building Code* Changes	Representative from the Ministry of Municipal Affairs & Housing	Training New Employees	Randy Dignard, Industrial Safety Trainers
12:00 p.m. – 12:30 p.m.	Development of Study Parameters for Field Testing of Onsite Sewage Systems in Ontario	Anne Egan, RJ Burnside & Associates	Electrical Safety Awareness	Kevin Richards, Electrical Safety Authority
12:30 p.m. – 1:45 p.m.	**Networking Lunch**		**Networking Lunch**	
1:45 p.m. – 2:15 p.m.	Cost Implications of Various Approaches to Maintenance Inspection Programs	Kristy Gibson, GENIVAR	Developing a Contract for Construction or Maintenance: What you need to Consider	Moderator: Rick Esselment Panel: Rick Howden, Anthony Acchione
2:15 p.m. – 2:45 p.m.	Community Assessment Tool for Wastewater Servicing	Terry Davidson, Rideau Valley Conservation Authority		
2:45 p.m. – 3:15 p.m.	Real Estate Inspection Procedures	Rick Esselment, ESSE Environmental	Find It, Know It, Fix It	Doug Niles, Trenchless Utilities
3:15 p.m. – 3:45 p.m.	**Coffee Break**			
3:45 p.m. – 4:15 p.m.	Incorporating GIS into a Maintenance Program Database	Douglas M. Joy, University of Guelph		
4:15 p.m. – 4:45 p.m.	Benefits of Uniform Onsite Treatment Systems Management Program in Ontario	John Desbiens, Cambium Environmental		
4:45 p.m. – 4:50 p.m.	Closing Remarks	Don Krauss, OOWA President		

** Conference Schedule subject to change*

Keynote Speakers

Dr. Karen Mancl

Dr. Karen Mancl is a Professor of Food, Agricultural and Biological Engineering and Water Quality Specialist at The Ohio State University where she has published 35 journal articles and about 70 Extension publications on rural infrastructure and outreach initiatives.

She is a nationally known expert in onsite wastewater treatment having conducted research, written and taught the subject 30 years. In 2000, along with Dr. Brian Slater, Soil Scientist, constructed the OSU Soil Environment Technology Learning Lab. At this outdoor teaching and research facility, Drs. Mancl and Slater teach designers, installer and regulators the science and technology of onsite wastewater treatment.

She is originally from Wisconsin where she received her Bachelor's Degree in Environmental Science from the University of Wisconsin.

Karen has a Master's Degree in Environmental Science from the University of Texas, and received her PhD at Iowa State University in Water Resources.

In 2010 she received a second Master's Degree in East Asian Studies and conducts research and teaches wastewater treatment in rural China.

Gord Miller — *Environmental Commissioner of Ontario*

Gord Miller was first sworn in as the Environmental Commissioner of Ontario on January 31, 2000, to oversee the continued implementation of the Environmental Bill of Rights (EBR). He has now been re-appointed for his third term. As an independent officer appointed by the Legislative Assembly, Commissioner Miller oversees 13 ministries and monitors and reports annually on:

Government compliance with the provisions of the EBR
Government progress on reducing greenhouse gas emissions
Activities in Ontario to reduce the use or make more efficient use of electricity, natural gas, propane, oil and transportation fuels.
Prior to his appointment as Environmental Commissioner on January 31, 2000, Gord Miller worked as a scientist in pollution abatement and in environmental education and training. As Environmental Commissioner, Gord Miller has released twelve annual reports, seven special reports, four Greenhouse Gas Progress Reports and four Energy Conservation Progress Reports to the Ontario Legislature.

Speakers

Thomas W. Bain, P. Eng., *Managing General Partner, Great Lakes Clean Water, Limited Partnership* — Tom is an electrical engineer from Queen's University and worked for many years in architectural acoustics, noise reduction and vibration, and communication systems. In 1993 while working on a collaborative investigation into recreational water quality on Georgian Bay with the University of Toronto, he became interested in the treatment of onsite wastewater on geographically, geologically, and topographically challenged sites. This resulted in the development of the WATERCLEAN™ system for onsite wastewater treatment using advanced oxidation technology for both livaboard boats and residences. Tom is a former Chair of Professional Practice – Professional Engineers of Ontario (PEO). GLCW-LP holds four U.S. and Canada patents for the WATERCLEAN™ technology and has numerous U.S., Canada, and PTO applications pending. He is currently working with the Centre for Alternative Wastewater Treatment at Fleming College in partnership with the Université de Montréal under a FedDev Applied Research Collaboration (ARC) for the reduction of micropollutants in onsite wastewater.

Roddy Bolivar, P. Eng. — Roddy was the Manager of Infrastructure Planning for the City of Ottawa for eight years. With 26 rural villages in a rural area of almost 3,000 square kilometres, he has dealt with all aspects of rural servicing challenges including the policy, design, municipal purchasing of proprietary solutions and operation of decentralized servicing solutions.

Ron Campbell *Acute Environmental & Safety Services Inc. President* — Ron has over 30 years of experience in the field of Environmental Health and Safety. He has an Environmental Technology Diploma from Fanshawe College (1981) in London, Ontario. Ron has also achieved Environmental Engineering Technology equivalency from the state of New York (1986). He has held positions including Environmental Technologist, Senior Project Manager, and Operations Manager for large corporations prior to ACUTE and has worked for Ortech International and Laidlaw (formerly Tricil).

Lou Cavaleri — Lou is an economics and political science graduate at York University. He began his career with Wimpy Construction based in Birmingham England where he was employed as a cost controller. He has traveled extensively, working throughout Europe and the Middle East. In 1988 Lou became employed with the Construction Safety Association (now the IHSA) and has been a consultant for the past 23 years. Lou is an experienced professional who assists construction companies in prevention strategies and developing effective health and safety policies and programs. Duties include management worker training and site consultation. Presently Lou is assigned to the Sewer and Waterman and Road Building Sectors.

Speakers

Gary Danner — Gary is a Business Development Supervisor with FBC. He has over 26 years management experience in a variety of sectors including manufacturing, construction, training and financial services. In addition, Gary continues to work with Dale Carnegie Training as a multi-course Business Coach/Trainer. He is a dedicated volunteer with both the Children's Hospital and Junior Achievement and has been recognized by the London Chamber of Commerce with the President's Award for volunteer contribution to the business community. Gary is married to his lovely wife Karri and is the proud stepfather of Blake.

Terry Davidson, P. Eng. — Terry is the Director of Regulations at the Ottawa Septic System Office located at the Rideau Valley Conservation Authority in Manotick, Ontario. The Ottawa Septic System Office has been delivering the septic approvals program since 1995 in the City of Ottawa, and expanded to the Tay Valley Township in 2004. His responsibilities include managing inspection and approvals of all onsite wastewater systems in the City of Ottawa and Tay Valley Township. Terry has also been instrumental in implementing and delivering a septic reinspection program in his jurisdiction. He has been on the Board of Directors for the Ontario Onsite Wastewater Association since its inception in 1999. Terry also coordinates and teaches onsite wastewater treatment courses offered through the Ontario Rural Wastewater Centre in Eastern Ontario.

John P. Desbiens, P. Eng., *Cambium Inc.* — John holds a degree in Civil/Environmental Engineering from Queen's University, and is a licensed Professional Engineer in the Province of Ontario. Since 1996, John has provided his skills towards the successful resolution of a broad range of environmental management projects in North and South America, with specific experience in water quality and quantity. John is currently the president and CEO of Cambium, a multidisciplinary engineering and consulting firm that offers environmental, geotechnical, planning, material testing, and inspection services. John is currently a member of the Board of Directors for OOWA and the Greater Peterborough Area Economic Development Corporation. John also is Chair of the Greater Peterborough Innovation Cluster Board of Directors.

Randy Dignard — Randy, as president of Industrial Safety Trainers Inc., oversees a team of safety trainers and consultants that travels all over Canada training thousands of workers. Randy got his first exposure to workplace accidents while in high school when he observed a student have a serious accident. From that point on, workplace safety has been a mission in life for him. Besides the thousands of people that Randy has trained over the years, he has been awarded the "Provincial Award Of Merit" from the province of Ontario for the training that he has done in Ontario High Schools. Training close to 10,000 students over the years, he has become a bit of an expert in understanding how to train new and inexperienced workers. Randy is hoping to share some of his ideas on ways to conduct safety orientation that will be effective for both your business and the worker at this year's conference.

Anne Egan, M.Sc. (Eng.), P. Eng. — Anne is an Onsite Wastewater Specialist with R.J. Burnside & Associates Limited, and is involved primarily in wastewater system design for Burnside's private sector, public sector, and First Nations clients. Her experience includes all aspects of sewage system design, including collection and conveyance, various types of treatment, and disposal systems for subsurface and surface discharge of treated effluent. Ms. Egan is involved in all project phases, from planning level studies to conceptual design, detail design, procurement of approvals, and construction, for residential, institutional, commercial and recreational land uses.

Kristy Gibson, B.A.Sc., E.I.T. — Kristy has a bachelor degree from the University of Waterloo's Environmental Engineering program. She is a Project Manager at GENIVAR Inc. responsible for all aspects of project planning and implementation for the Rural Servicing group. Ms. Gibson's areas of expertise includes design, construction supervision, inspection, and monitoring of large and small onsite wastewater disposal systems for residential, commercial, and industrial applications; completion of rural servicing studies for proposed rural subdivision developments and severances; and hydrogeological investigations for rural water supplies and water balance studies. Ms. Gibson is a registered OOWA Member, and E.I.T. with the Professional Engineers of Ontario.

Trish Johnson, *Senior Environmental Consultant R.V. Anderson Associates Limited, Ottawa, ON* — Trish is a project manager and senior environmental consultant with RVA. She has worked for over 25 years in public, private and non-profit environmental management. Her specialties include developing environmental strategies and program implementation for all levels of government. She has managed environmental assessments for water, wastewater and solid waste projects and serves as a senior environmental advisor for two municipalities. Before joining RVA, Trish was with the City of Ottawa for 13 years as a Program Manager in water and solid waste. She led all the waste diversion /recycling programs and managed operations of the Trail Road Waste Facility Landfill. She has also worked extensively for Aboriginal Affairs and Northern Development Canada (AANDC) assessing Water and Wastewater needs for Canada's First Nations, and is a passionate promoter of onsite/communal solutions and small-scale technologies.

Chris Kinsley, M.Eng, P. Eng. — Chris is Manager of the ORWC. Chris has worked with the Wastewater Centre since its inception in 1998 and was instrumental in the development of the centre. Chris has developed and delivered over thirty training courses in the agri-food and decentralised wastewater sectors, both within Canada and overseas. Chris is a full time Researcher and Professor at the Alfred Campus of the University of Guelph where he teaches courses in environmental management and leads a research program in the field of decentralised wastewater treatment with an emphasis on constructed wetlands. Chris sits on the research committee of the Ontario Onsite Wastewater Association, Ontario Soil, Air and Water Research Committee, and chairs the research committee of the Canadian Decentralised Wastewater Consortium. Chris has a Master of Engineering from McGill University and is a Professional Engineer in the Province of Ontario.

Speakers

Doug Joy, P. Eng. — Doug is the General Manager of the ORWC, which he co-founded in 1998. Over the past several years Doug has participated in over 50 workshops dealing with onsite issues and has headed up over a dozen research studies focusing on onsite wastewater treatment technologies, approaches and other subjects related to the field. Doug has been a full-time faculty member at the School of Engineering at the University of Guelph for the past 18 years. As a professor of water resources engineering, his main areas of research are as follows:

- Impact of onsite systems on ground and surface waters
- onsite System Design and Regulation
- Bacterial Transport in Hydrologic Systems and River Processes

Doug is a board member of the Ontario Onsite Wastewater Association, a member of the Building Materials Evaluation Committee and Chair of the Technical Review Committee on changes to Part 8 of the *Ontario Building Code*.

Katherine Rentsch— Katherine joined the Ontario Rural Wastewater Centre at the University of Guelph after four years with R.J. Burnside & Associates Ltd., a consulting firm where she specialized in onsite wastewater system design and inspection. As project coordinator at the ORWC, Katherine is responsible for coordinating, developing and delivering workshops, courses, and information sessions to various groups within the onsite wastewater community. She is also involved in research projects partnering with various government agencies and the School of Engineering and is responsible for the day to day operations at the Centre. Katherine is an active member in the onsite community and is a member of the Board of Directors of OOWA. She is currently the Secretary of the Association as well as the chair of the Media Committee.

Cate Soroczan, M. Eng. — Cate is a senior researcher in the Sustainable Housing and Communities group at Canada Mortgage and Housing Corporation. Cate's research areas include: water conservation, water reuse, rainwater harvesting, onsite wastewater management, and innovative stormwater management. Cate has worked closely with Health Canada in the development of the Residential Water Quality Reuse Guidelines, with the BNQ in the development of a national standard for onsite wastewater systems, and with the CSA in the development of standards for water reuse and water cisterns. Cate currently sits on the Task Group examining options for incorporating Water Use Efficiency into the national building and plumbing codes.

Brady Straw, B.Sc. — Brady is a graduate of the University of Guelph with a bachelor's degree in Environmental Science (Environmental Economics & Policy). As the lead onsite sewage treatment and disposal designer for Waterloo Biofilter Systems Inc., Brady assists installers, designers, and regulators on designs for a range of facilities; from individual houses to communal systems and large commercial facilities. Brady focuses on difficult and sensitive sites to provide the optimal treatment and disposal design for each site.

Kirk Wimber — Kirk represents Orenco Systems, Inc., which designs and manufactures leading-edge products for collection, treatment, and monitoring of decentralized wastewater. Kirk's background includes designing onsite and small community wastewater systems, as well as engineered systems sales. He has been an active participant in onsite, rural, and municipal wastewater associations and a member of the Ocmulgee Basin Advisory Council (BAC) for the Metropolitan North Georgia Water Planning District. With a business degree in finance, he is currently focused on developing Orenco's international business in Canada, Latin America, and Africa.

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MEMBER PROFILE

Eric Draper

Eric Draper lives and works in Osgoode Ontario. He began life in Quebec, born and raised on a farm between Quyon and Shawville, eventually moving to Ontario.

He attended Centennial College in Toronto then completed an apprenticeship as a heavy equipment mechanic. The first chance for his own business came when the company he worked for as a mechanic was offered to him by the owner. The company was very successful but larger than what he wanted for his first business. After buying his first backhoe in 1985 he became a contractor starting Eric Draper Backhoe Services Inc.

By 2000 wastewater technology was beginning to appear so Eric started importing US technology into Ontario. Eventually the demand for a one stop shop created "The Septic Store" and Eric became a supplier to other contractors. He gave up the contracting part of his business and began offering a variety of technologies along with everything else you needed for a septic system installation.

Together with technologies came the requirement for maintenance and Eric was soon providing maintenance along with treatment technologies. Today, Eric runs a number of successful businesses as well as "The Septic Store". As we all know behind every successful man is a successful woman and Eric's wife Helena is no exception. You won't see Eric in too many places without Helena showing how great they are as a team and business partners.

Eric has a long time connection to OOWA starting from inception and working behind the scene with some of the original founders. He has been an OOWA member since the association began, and has served on the Board of Directors since 2010.

Eric and Helena have two daughters, both who have worked in the business. You will always find Eric at most wastewater meetings, shows and conventions ready to throw his support into whatever he is asked to do.

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Telemetry: Dream or Reality?

ONSITE installer July 2012

By Tom Fritts, NOWRA

Many have heard me describe our onsite industry as similar to the computer industry of 30 years ago. Remember your first computer? Remember your first email? Now think how rapidly things have developed and changed in computers and email since then. Smartphones, tablets, Facebook — how exciting!

The same thing is happening in the onsite industry on many fronts, and one of those is telemetry. This technology is attaching itself to the computer rocket with surprising success. In 1912, the City of Chicago, Ill., installed a telemetry system using the city's phone lines to transmit the performance of power generating plants to a central control station. In July 1997, the Sojourner spacecraft analyzed the makeup and temperature of the surface of Mars and transmitted it back to the Jet Propulsion Laboratory in Pasadena, Calif.

Similarly, the onsite industry began using phone lines to transmit the most basic data points of an onsite system. Usually, this was nothing more than notification of a high-water condition transmitted via copper wire to a phone on the other end.

As this technology became more and more affordable, we were thrown a curve ball. Copper telephone lines started to disappear in newly constructed homes. The wire on which it had become so easy to transmit conditions about the onsite system is going away. Just as demand creates supply, several manufacturers reached out to the computer industry to create an alternative to the copper wire. The wireless Internet fills this gap.

Why telemetry and monitoring?

The reason behind telemetry is simple: It lets you stay in a convenient location — your office with your computer, or in the field with your laptop or cellphone — while monitoring what is taking place in an inconvenient location.

One reason this technology has gained popularity is the rising complexity and cost of onsite systems. We have all heard the story about grandma's septic tank that never needed pumping. Grandma didn't want or need telemetry. Grandma would have been violating the most basic investment rule: Don't spend a dollar to save a dollar.

But today's systems require homeowners to invest so much more money that it makes sense to monitor their systems to help prevent costly failures.

With the cost and complexity of today's systems comes the added need for operation and maintenance. As a maintenance provider, being able to monitor a system benefits the homeowner in several ways. The service provider receives and responds to alarms directly — the phone call comes from the service provider to the homeowner, not the other way around. This instills confidence in the homeowners of your ability to manage an expensive system that probably wasn't even in their construction budget.

Continued on page 20

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Introduction to Design of Onsite Sewage Treatment Systems
— February 12, 2013,Arkell Research Station, Guelph

Advanced Design of Onsite Sewage Treatment Systems
— March 27, 2013,Arkell Research Station, Guelph

Pumps & Controls
— February 27, 2013, Arkell Research Station, Guelph

Inspection and Evaluation of Onsite Wastewater Systems
— April 10, 2013,Arkell Research Station, Guelph

Soils 101 — Evaluation of Soils for Onsite Technologies— May 1, 2013; Arkell Research Station, Guelph

Ottawa Area Courses

Part 8 Ontario Building Code Onsite Sewage Systems Installer/Inspector Certification Course — *please note that this course does NOT include the licensing exam*
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— April 8 to 22, 2013, Baxter Conservation Area

Ontario Building Officials Association Courses

Onsite Sewage Systems — 2006
— February 25 to March 1, 2013, Fleming College. Haliburton,Contact: Ted Brandon 705-457-1680 Ext. 6709

Onsite Sewage Systems — 2006
— February 25, 26, 27, 28, March 1, OBOA Office, Woodbridge

Onsite Sewage Systems — 2006
— March 4 to 8, 2013 Loyalist College, Bancroft, contact call Maureen Kelly at 613-332-1743

WHAT'S NEW @ OOWA

Committee News by John Desbiens

Step Forward — The vast majority of those reading this article need not be convinced that onsite and decentralized treatment exists as a vital component of the wastewater treatment spectrum servicing our society. As a member of OOWA, you most probably represent one or more aspects of onsite and decentralized treatment, which for discussion purposes, I will generally refer to as the origin activities and the legacy activities. I would suggest that our association has made great strides in the advancement of origin activities such as design, manufacture, installation, and regulation; whereas we have not placed nearly as much emphasis upon the legacy activities of re-inspection, operation, maintenance, and septage disposal.

We all would agree that all activities play a vital role in the success of an integrated onsite and decentralized treatment infrastructure; however government and society have yet to accept onsite and decentralized treatement as a reliable, enduring option to the wastewater servicing needs of Ontario. As more governments grasp the reality of population growth coupled with inadequate or nonexistent infrastructure, it is our duty to make them realize and understand the advantages of decentralized water management and realize that the 'old' solutions are not always the best approach.

Onsite/cluster/distributed systems support a growing economy and address wastewater infrastructure issues while improving water quality and providing treatment capacity. Their use compliments existing infrastructure in situations where centralized sewerage is impractical, unaffordable, or water reuse is desired.

Therefore, it is clear that our association will need to demonstrate our collective commitment to the long-term obligations of onsite and decentralized systems and that a holistic, cohesive, onsite support network can be established to consistently deliver the support services of both origin and legacy activities. In order for this to occur, OOWA must take responsibility and advocate for the entire onsite and decentralized treatment service chain from design all the way through to septage disposal.

So I ask; are we ready to move forward together as a cohesive, competent, and enduring network of professionals? OOWA has the capability, through its membership, to provide the leadership and guidance necessary to establish the onsite and decentralized treatment framework as a dependable solution in the minds of our leaders and stop to be viewed as the second best option to the 'big pipe'? I believe it's time for us to collaborate in the formalization of a province-wide management network for onsite and decentralized treatment infrastructure for the good of the industry and the good of society. ■

EQUIPMENT CORNER

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Do you **import** or **manufacture** off-road diesel engines or machines?

If YES, legal requirements may apply to you.

The Off-Road Compression-Ignition Engine Emission Regulations contribute to improved air quality. Standards for these engines were first introduced in 2006, as part of the Government of Canada's actions to improve air quality in order to protect the environment and the health of Canadians. The implementation of these regulations has contributed to reductions in emissions of smog-forming pollutants, such as nitrous oxides and particulate matter, which have negative environmental and health effects. Stricter standards, called **Tier 4**, came into force on **January 16, 2012**, leading to further reductions in emissions from this sector. The emission standards and the testing procedures are aligned with those of the United States Environmental Protection Agency (U.S. EPA).

To whom and to what types of engines do the Regulations apply?

The Regulations apply to all persons **importing or manufacturing** off-road compression-ignition engines, also referred to as off-road diesel engines, whether these are on their own or already installed in machines.

Off-road diesel engines are typically found in **construction, forestry and agricultural** machines, which may include tractors, bulldozers, heavy haulers and portable generator sets.

Will all engines and machines entering Canada after January 16, 2012, need to immediately meet the new Tier 4 standards?

No. The gradual implementation of the standards based on engine power, as well as the transition engine provisions, will permit the continued import of engines meeting previous standards for a period of time. Specifically, starting at the end of 2014, engines in some power categories will be required to meet the stricter Tier 4 standards. By the end of 2018, all engines will be required to meet the new Tier 4 standards. There is no limit on the number of transition engines that can be imported during the phase-in period and/or prior to the coming into effect of Tier 4 requirements for a given engine category.

What are the main requirements of the Regulations?

The Regulations set requirements for importers and manufacturers of off-road diesel engines. The requirements include:

- meeting the prescribed engine emission standards (which depend on model year) and demonstrating compliance with the standards;
- labelling of engines;
- reporting; and
- keeping records.

Failure to comply with these obligations can result in fines of up to $1,000,000 and/or up to three (3) years of imprisonment.

Canada

What are transition engines?

A transition engine is an engine that is installed in, or on, a machine that meets a previous emission standard. The transition engine provisions allow for the import and manufacture of these engines for set time periods (see tables 1 and 2). Transition engine standards and time frames are based on the U.S. EPA Flex engine program.

The quantity of these transition engines will not be limited, but will be monitored through annual reporting. Environment Canada will be assessing the proportion of transition engines imported or manufactured into Canada in comparison to the proportion in the United States. If the use of the transition engine provisions, in comparison to their use in the United States, becomes excessive, Environment Canada will consider modifying the provisions in future.

What are the Tier 4 coming into force dates and transition engine time frames?

Table 1 shows the gradual coming into force of the final Tier 4 standards per engine power category. Table 2 shows the general availability transition engine time frames per power category. To illustrate, using an example of an engine rated at 225 kW, the final Tier 4 standards would begin to apply starting with the 2014 model year. However, the transition engine provisions would allow the import or manufacture of 225 kW engines meeting Tier 3 standards up until December 31, 2017. It is in 2018 that all 225 kW engines imported into or manufactured in Canada will need to meet the Tier 4 standards.

Table 1: Gradual Coming Into Force of the Final Tier 4 Standards

Power (kW)	Coming into force of the Final Tier 4 standards (model year)
kW < 19	2012
19 ≤ kW < 56[1]	2013
56 ≤ kW < 130[2]	2014
130 ≤ kW ≤ 560[2]	2014
kW > 560	2015

[1] For this power category, Interim Tier 4 and Final Tier 4 standards are identical for the 2013 and 2014 model years.
[2] For these power categories, Interim Tier 4 and Final Tier 4 standards are identical for the 2014 model year.

Table 2: General Availability Transition Engine Time Frames

Power (kW)	Emission standard	End of general availability provisions[1]
kW < 19	Tier 2	December 31, 2014
19 ≤ kW < 37	Tier 2	December 31, 2014
37 ≤ kW < 56	Tier 2	December 31, 2014
56 ≤ kW < 75	Tier 3	December 31, 2018
75 ≤ kW < 130	Tier 3	December 31, 2018
130 ≤ kW ≤ 560	Tier 3	December 31, 2017
kW > 560[2]	Tier 2	December 31, 2017

[1] There are also "delayed" availability provisions where engines may meet Interim Tier 4 standards (see **Further information** below).
[2] For this power category, engines may continue to meet Tier 1 emission standards until December 31, 2012.

How is compliance with the Regulations demonstrated?

Generally, compliance with the Regulations may be demonstrated in one of two ways: if the engine has been certified by the U.S. EPA, compliance may be demonstrated by providing proof of the EPA certification; in the event that the engine is not EPA-certified, compliance must be demonstrated by providing proof that the engine meets the applicable standards, which will usually involve the importer or engine manufacturer performing emissions testing of the engine.

Further information

For more detailed information, please consult the Regulations and the related guidance documents on the CEPA registry website, at **www.ec.gc.ca/lcpe-cepa/eng/regulations/detailReg.cfm?intReg=88**.

Further information can also be obtained by contacting Environment Canada at 819-997-2800 / 1-800-668-6767 (in Canada only) or **VehicleandEngineInfo@ec.gc.ca**.

Disclaimer

This document is for information purposes only and does not in any way supersede or modify the *Off-Road Compression-Ignition Engine Emission Regulations* and any amendments, or offer any legal interpretation of those Regulations.

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Aussi disponible en français

ROB'S world

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

Where's the Beef?

I had the fortune (or misfortune depending on how one sees things) of sitting through several hours of "Retro TV" a few weeks back. One program took the viewers through a historical look at 80s commercials and that's when I saw the old Wendy's Commercial with that old lady looking under the bun of a hamburger and saying, " Where's the Beef?" What a great line — not just for a commercial, but for a focussed question to the Ontario Onsite Wastewater Association (OOWA) governing Board of Directors concerning what value we are getting for our membership in this organization. Well, where's the beef folks?

Our membership level has reached a relative plateau over the past couple of years and I fear that we, as an industry, have started to stagnate. We are fortunate to have many eager, forward thinking and knowledgeable people steering the proverbial ship that is the good ship OOWA. Recent discussions that I have had with several long time OOWA members, who are some of the most engaged among us, have left me with the belief that we may be on the verge of losing our momentum.

There have been many great initiatives brought forward to the membership, by OOWA, over the last several years. However, the membership has not openly embraced and participated in them. The prime example would be the Registered Professional Program (RPP). It has been in existence for a couple of years now, but the number of participants is woefully lacking. Why is that?

It would be hypocritical of me to continue and not convey my reasons for not participating in the RPP. Simply put, it has not been important enough for me to pursue registration in the program with a very busy work and family life. Yes, I acknowledge that my reason is nothing more than an excuse, but it is, nonetheless, the truth. What is worse than this admission, is the fact that I am quite certain I am not alone.

It appears that even the most active and engaged among us have become mired down in complacency and apathy and are quickly losing sight of what OOWA was created to achieve. When OOWA was conceived, it was done so with the idea that there was a need to bring together like minded members of the onsite wastewater industry to present a united voice for our industry to the Province. We initially partnered with like-minded organizations and focussed on growing our membership while trying to ensure that the members received some tangible benefit from being part of OOWA.

I fear that we are moving away from the original vision and that good ship OOWA may have run aground while the convoy of ships from the other onsite wastewater associations it was originally sailing with, move forward. The governing members of OOWA need to reach out to the membership and rekindle the spirit of cooperation amongst the membership, while at the same time, provide demonstrable benefits beyond simple discounts, etc. At the same time, I appeal to the membership, to the people who have become complacent and apathetic like me, to break out of our slump and remember why we joined OOWA in the first place. It has always been the membership that has sustained the organization, we need to help each other to get the good ship OOWA sailing again and help the governing members of this organization in realizing the goals that have been set before it and show them the beef! ■

OOWA Scholarship

The Ontario Onsite Wastewater Association is sponsoring two annual awards to support students with a strong interest in onsite wastewater systems. The value of the university award is $1,200.00 and the college award is $600.00. Both are awarded annually.

The university scholarship is available to anyone enrolled in an environmental, chemical, or civil engineering program at an Ontario University. Participants can only receive the award once during their studies and must be conducting research which focuses on onsite wastewater issues.

For more information: www.oowa.org/scholarship/index.html

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Telemetry: Dream or Reality? ... from page 14

Decision-support tool

This is just the very basic use of telemetry. What if you could see patterns developing that would indicate a possible future failure? Now the call is to the homeowner before the alarm. In my neck of the woods, alarms always come at about five o'clock on Friday afternoon before a family reunion weekend.

What if you were able to notify a homeowner of an unusually large amount of water being used — something that could have a long-term effect on the soil treatment area? The alarm would not only prevent that problem but also enable the owner to rectify a leak in the home. Creating a mindset with the customer that you as a service provider are on top of things is a great benefit and sales tool when trying to convince people to buy your service. But there is another benefit, and it falls to the service provider: The more you know about a system while sitting at your office, the less money you will spend servicing that system. The severity of an alarm should dictate your response time. There is no need to send a technician out on overtime for a problem that could wait for straight time. Telemetry can help you make those decisions.

I know what you are thinking even as you read this: Who is going to pay for the telemetry system? Did you know there are manufacturers who already provide some types of remote monitoring at little or no cost?

Telemetry technology is coming at us fast. Just search around the Internet and check out all the manufacturers now taking advantage of monitoring and telemetry in the onsite wastewater industry. You might be surprised. But the most exciting part is what is just around the corner. What could it be? Let your imagination wander and understand that these may not be dreams of what might come, but rather prototypes already being tested ■

Regulator News

B65–12 — Installation code for decentralized wastewater systems

The CSA Group is a not-for-profit membership-based association serving business, industry, government and consumers in Canada and the global marketplace.

As a solutions-oriented organization, they in Canada and around the world to develop standards that address real needs, such as enhancing public safety and health. Advancing the quality of life. Helping to preserve the environment.

In 2012, the CSA released the first edition of CSA B65, Installation code for decentralized wastewater systems. The following is the preface for this standard:

1.1.1 — This Code covers decentralized wastewater systems that use soil absorption systems for infiltration, dispersal, and final treatment of wastewater and serve residential, institutional, and commercial establishments.

Note: In this Code, the term "system" refers to a decentralized wastewater system.

1.1.2 — This Code also covers sewage holding tanks.

Note: Holding tanks are not a self-sustaining method of onsite wastewater management because they rely on the availability of an adequate off-site wastewater treatment facility, which generally creates a load on municipal infrastructure. Owners of

Continued on page 25...

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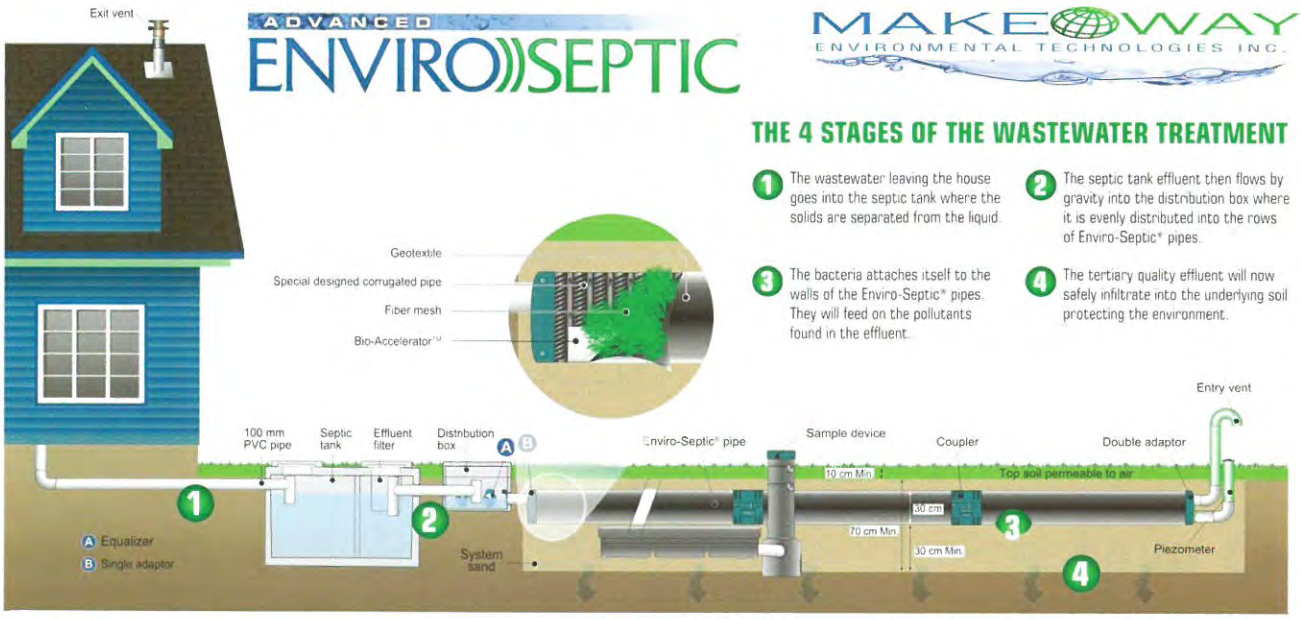

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A free inspection before clearing blocked sewer lines avoids danger!

Natural gas lines can sometimes intersect with sewer lines beyond the outside walls of your home or building. In these cases, clearing a blocked sewer line with motorized or water jetting equipment could damage the natural gas line and lead to a gas leak creating a serious safety risk for you and others.

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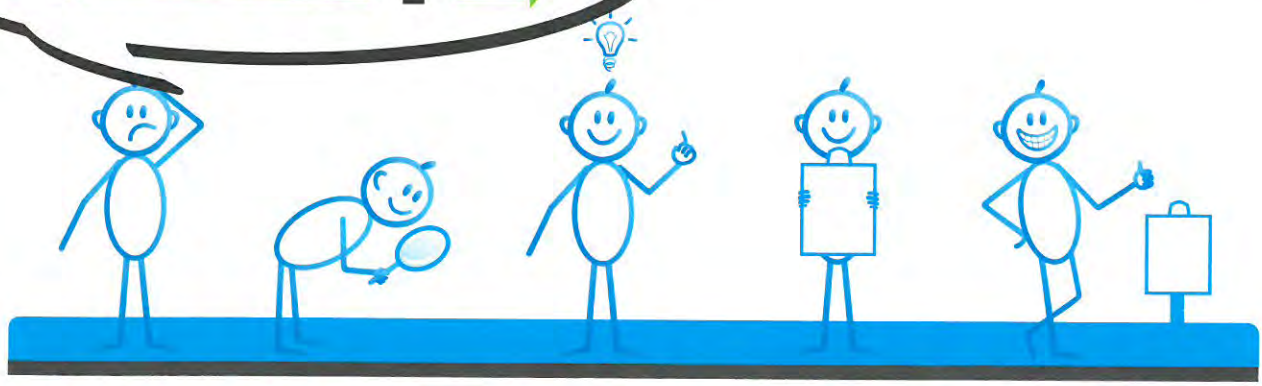

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Which One is Right for My Application?

In our industry, control panels are widely used in many onsite applications to control pump functions, monitor pumps, and alarm when certain conditions occur. Control panels also provide the user accessibility to service the application such as electrical disconnects, manual override, and testing functions.

One of the most frequently asked questions about controls panels is "Which one is right for my application?" The sheer number of control panel products available in the market today can be overwhelming and confusing to customers.

The good news is, with a little guidance, a solution is available to meet most application needs. After determining basic application needs, customers are faced with the decision of relay logic vs. digital control panels. Often they don't understand the difference. In this article, we will review the advantages and disadvantages of basic relay logic control panels compared to the more "advanced" digital control panels.

Single Phase Simplex Motor Contactor Control Panel

Let's Review Relay Logic Control Panels

In our industry, relay logic panels have a long history and are known for reliability and being easy to service. Relay logic circuits use a method of basic control by using simple electronic circuits with on and off contacts. The relay contacts are used to control certain functions; let's use the example of a latching circuit in a control panel.

The latching circuit uses a stop and start float working together to provide a greater pumping range. When liquid enters the pump tank, the stop float rises; the pump does not run yet. When the liquid reaches the start float, the float rises and the pump starts. As the pump runs, the liquid level falls and the start float drops. The pump continues running until the stop float drops. The advantage of using the latching circuit is the increased pumping range between the start and stop floats. Relay logic can be used to control test, silence, and auxiliary contact functions, among others.

Typical control panel options for relay logic panels include; alarm flashers, elapsed time meters, cycle counters, and auxiliary contacts. Many of these options require a separate component to be mounted inside the control panel. When a number of options are used in one control panel, the size of the panel enclosure must be increased to accommodate these components. Many installers like larger enclosures, because there is more working room for wiring and servicing.

Disadvantages include a higher cost and many homeowners do not like to see the large panel in their yard.

tech talk

Now Let's Review Digital Control Panels

Digital control panels have been used in our industry for well over a decade. Digital panels use a digital controller, or a "mini computer", to control the logic of the panel. A single digital controller can perform all the functions of a relay logic panel, plus more. Most digital control panels have what is referred to as an HMI (Human Machine Interface) which is typically a display with push buttons. By using this display, we can look at all types of data, such as elapsed pump run time, number of cycles, alarm counts, and float errors. These "standard" features on a digital panel would be "options" on a relay logic panel.

Single Phase Duplex Digital Control Panel

Digital panels are flexible in the field; the panels can be converted from demand dose to timed dose (or vice versa) with the simple push of a button. This is a great advantage for wholesalers who want to stock one panel that can perform both applications; and also for the installer to remedy a troubled drain field by converting the panel from demand dose to timed dose.

Many customers like the small size of digital panels. The digital display reads all of the panel's data, so there isn't a need for separate components, like elapsed time meters or cycle counters that can increase enclosure size for relay logic panels.

Local and state onsite code requirements can influence panel selection. Recently, some codes require panels to include more pump monitoring (ETMs) or alarms for both the pump tank and effluent screen or filter device. These options are available for both relay logic panels and digital panels. Digital panels include pump monitoring as a standard feature and have the option of two separate alarm inputs so you can see what alarm occurred by looking at the panel data.

Troubleshooting onsite systems can be challenging. The first thing to do when troubleshooting is to review the panel information available, including elapsed time meters and event counters. This information can help in determining if the system was overused, water ingress into the tank, or incorrect float settings. Digital panels have an advantage, as they typically have more historical data available. In addition to the elapsed time meter and event counter information, they also offer float error and alarm count information which can be helpful.

There are many variables in selecting the correct panel for your application. We, as manufactures, are here to help you make a good decision and guide you to products that will make your installations easier.

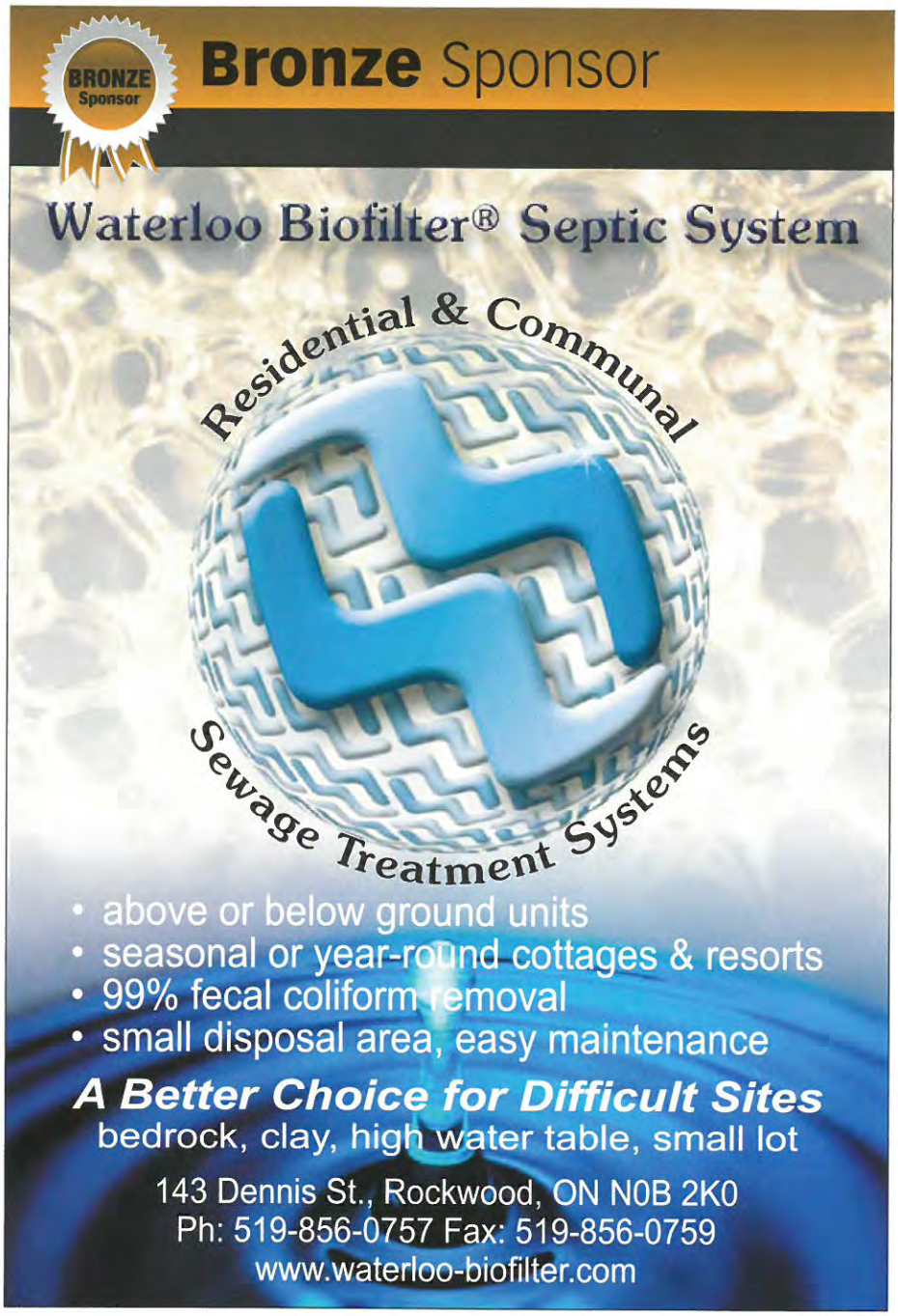
Contact your distributor or panel manufacture if you have any questions. To contact Joe, call 1-888-342-5753 or email joe.zimmerman@sjerhombus.com. To learn more about SJE-Rhombus pump controls, visit www.sjerhombus.com.

Joe Zimmerman
Sales Manager, SJE-Rhombus

Joe Zimmerman is Sales Manager for SJE-Rhombus, a leading global supplier of water, wastewater and embedded controls located in Detroit Lakes, MN. Joe's responsibilities include working with OEMs, reps, wholesalers and contractors throughout the United States and Canada.

Joe holds a B.S. degree from Bemidji State University (MN) and has over 15 years of sales experience in the water/wastewater industry. In addition to sales, Joe specializes in helping customers find solutions to their needs and product training.

In his spare time, Joe enjoys hunting, fishing, working on boat motors and spending time with family.



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holding tanks also incur ongoing costs for the removal and hauling of wastewater to approved treatment facilities. The use of a holding tank system as the wastewater management solution for a property is subject to the requirements of the local authority having jurisdiction.

1.2.1 — This Code does not cover
(a) lagoons or surface discharge of effluent; and
(b) wastewater generated by industrial processes.

1.2.2 — This Code does not specify requirements for, or provide direction on, the selection of the type of system and required effluent quality that might be needed to manage cumulative impacts
(a) on a multi-lot, subdivision, or watershed scale caused by multiple decentralized wastewater systems; or
(b) where systems are located in a sensitive receiving environment.

Note: The determination of treatment objectives, effluent quality, and system types required for a multi-lot subdivision should consider cumulative impact or loading limits. Loading limits required to prevent unacceptable impacts on groundwater or surface water, caused by the total wastewater generated from multi-lot subdivisions or where needed to protect a sensitive receiving environment, should be considered in the selection and use of decentralized wastewater treatment systems.

To obtain a copy go to : www.shop.csa.ca/en/canada/plumbing-products-and-materials/b65-12/invt/27033772012/ ■

Ontario Onsite Wastewater Association
Insurance Program

Clearing a blocked sewer? Get a free inspection and protect public safety!

Kitchener Utilities and Union Gas want you to call Ontario One Call for a free sewer safety inspection before you attempt to clear a blocked sewer service line beyond the outside walls of a building.

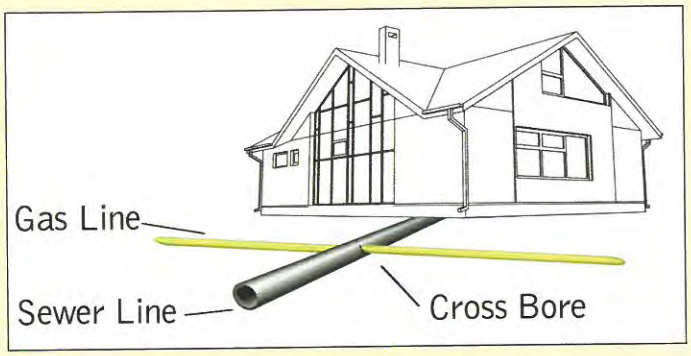
In some circumstances, trenchless practices used to install natural gas lines may have resulted in a natural gas line penetrating a sewer line, creating what is called a cross bore. This poses no immediate risk to public safety as long as the natural gas line is not damaged. Rotating equipment or water jet equipment used to clear a blockage could damage the natural gas line, causing natural gas to leak into the sewer line resulting in a real and immediate risk to public safety.

Kitchener Utilities and Union Gas have instated a new inspection program to protect the safety of our contractors, our customers and our community.

When clearing a blocked sewer service using rotating or water jet equipment, call Ontario One Call at 1-800-400-2225 first to arrange for a sewer safety inspection. Ontario One Call will contact the customer or contractor within an hour to locate the sewer and gas line to rule out a potential cross bore. This inspection can also be scheduled for a later mutually agreeable time.

Inspectors will assess all properties falling within the limits of any gas main replacement project installed by trenchless practices. The inspection will evaluate the potential risk of having a gas pipe installed through a sewer lateral pipe.

We understand this program adds another step in completing contractors work; however this safety inspection is necessary to reduce the risk of natural gas leak or explosion. This process meets the requirements set out by the Technical Standards and Safety Authority (TSSA). ■



For more information, please contact:

Kitchener Utilities
www.kitchenerutilities.ca
519-741-2345

Union Gas
www.uniongas.com
888 774 3111

Ontario has released a new Building Code

On November 2, 2012, Ontario Regulation 332/12 was filed to introduce the new Building Code | From: Code News Issue 210

Most of the new Building Code will come into force on Jan. 1, 2014. However, certain requirements will come into force later on Jan. 1, 2015 and Jan. 1, 2017.

The new Building Code substantially improves energy-efficiency requirements and makes Ontario one of the leading jurisdictions in North America for water conservation.

Ontario Regulation 332/12 is available on Service Ontario's e-Laws website @ www.e-laws.gov.on.ca/

The Province's new Building Code compendium will be available by summer 2013 from Service Ontario.

Further information concerning the availability of companion Code products will be announced on CodeNews.

For more information on Ontario's new Building Code, including the publication plan, please visit the Building Code website @ www.mah.gov.on.ca/Page7393.aspx. ■

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