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Winter 2008/2009 A publication of the Ontario Ground Water Association



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### The Source

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**Craig Stainton**  
President, OGWA

As you may know, we write our columns much in advance of when you receive this magazine. It is days to Halloween and I am sure that winter is just around the corner. There has been snow north of Toronto already and last night when I was in Tillsonburg there was quite a bit of hail, thunder and lightning, and I was surprised how long the hail remained frozen laying there on the patio. Summer is gone for another year.

This is the season where we generally get some needed work done with our provincial government and we hope our quests for guidance on the proper recording of well upgrades, what constitutes the need for a tag and report, and the tracking of all of this will come to a conclusion and we will be able to instruct you on what is required.

We are also still working on the blanking out of names on well reports. Our latest quest is to discover the difference between the treatment our well reports get and the vehicle history reports required for the private sale of a vehicle where all the previous owners' names and addresses are listed. We will keep you posted!

I have asked the Environmental Commissioner to consider the impact of geothermal drilling on farm and domestic water wells and have hopes that we will be successful in having geothermal drilling brought under Reg. 903 to protect our ground water. We receive many complaints from the public and contractors, as well, as geothermal drilling has resulted in issues with neighbouring wells.

Your Board of Directors has set the dates for our Regional Meetings and is working on the subject matter for these meetings. These meetings will credit the attendees the additional five hours that when added to last years two hour credit will provide one course of upgrading for the March 2009 license renewals.

I would also like to mention that the statistics show that there is a great

number of Technicians who require upgrading hours prior to March 2009. Sir Sanford Fleming has course dates set. Please visit their web site or contact the college and get yourself organized and registered as soon as possible to avoid disappointments when classes are full.

We will once again be participating in the Canadian International Farm Show at the International Centre in Toronto February 3rd to 5th, 2009. We will be promoting our members to attendees looking for work done on their wells and answering questions regarding Best Management Practices. Any members who would like to donate a few hours of their time in our booth are more than welcome; please make yourselves known to Anne and the date and time you would like to participate.

Don't forget to set your time aside and make reservations for our convention at Blue Mountain Resort, Collingwood, this year, it will be bigger and better than ever.

Have a safe and prosperous winter season.

## 2008-2009 SCHEDULE OF OFFICERS AND DIRECTORS

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**Earl C. Morwood**  
Executive Director, OGWA

### **Geothermal Drilling: A Large Unregulated Ontario Industry**

Over the past few years, we have frequently raised our concerns about the unregulated geothermal drilling industry in Ontario. We have presented our concerns to the MOE many times. Without regulations, untrained and inexperienced drillers put our ground water resources at risk.

The only official guidelines that exist for geothermal drillers are the Canadian Standard Association C448 document that was published in 2002. It sets out guidelines for addressing potential interference with neighbouring wells, logging of aquifers, and tremie grouting the entire borehole. But in reality, we cannot count on our aquifers being protected until the MOE brings in legislation that regulates and trains the geothermal drilling industry in the same methodology as the water well industry. The simplest way to do this is to have the geothermal drilling industry conform to drilling under Regulation 903 and be overseen by the MOE. This would also provide great benefit to our knowledge of geology and hydrogeology, as I will explain later.

The OGWA receives an average of one complaint per week from well owners concerned or affected by geothermal boreholes. You can imagine their surprise when they learn that in Ontario most geothermal drillers are unlicensed. They can drill anywhere, anytime, and anyhow, without adherence to the regulations

our industry must follow or fear of MOE prosecution.

The geothermal drilling industry in Ontario and the rest of the world has taken off. We estimate that 200 to 300 geothermal boreholes, or wells, as we perceive them, are drilled every month across Ontario. Geothermal drilling is rapidly spreading from the countryside to the cities, as municipalities and commercial developments learn of the long-term savings over fossil fuels.

The Ontario government now acknowledges that tapping the provincial aquifers, overburden, and bedrock can provide a source of sustainable energy to offset the dwindling supply of high-cost fuel. But it seems that the message of possible harm to these same aquifers has not been conceived or passed on to the MOE.

Why are we concerned about an unregulated geothermal drilling industry?

Firstly, geothermal boreholes typically drill through one or more overburden aquifers in an attempt to penetrate the bedrock, which has better thermal properties. Drilling depths of 400 to 500 ft. are not uncommon. At depths such as these, many aquifers or water bearing zones in the rock must be encountered and the same potential problems we must be mindful of exist in this deep geothermal drilling. There is a constant potential threat for overflowing wells and heavily mineralized water to push up and mix into other aquifers. This is one of the many reasons this industry must be regulated.

Secondly, there are no mandatory requirements to seal boreholes that are drilled through or into aquifers. Unsealed or not properly sealed boreholes in aquifers put our precious ground water supplies at risk forever.

Finally, there is no record of these boreholes and the MOE is missing out on collecting a massive database on the deep geology of Ontario. Although thousands of geothermal boreholes are drilled each year, the MOE has no means of recording the locations, logs, depths, or ground water conditions at each site. Such records would provide the geothermal industry, researchers, and Geologic Surveys valuable hydrogeologic mapping information.

Recently, we were told that the MOE and the Ministry of Energy are putting together a FACT sheet on geothermal drilling and systems. This was a big surprise to the OGWA, as we were not contacted for any input. In the past, we have always been consulted on drilling activities that threaten the safety of our ground water supplies and the quality of our aquifers.

The Canadian GeoExchange Coalition is a national organization that is attempting to unite all stakeholders in the geothermal industry, including the drillers. Although the CGC is providing national leadership, an attempt to develop a driller course and a manual in consultation with the Canadian Ground Water Association failed, earlier this year.

The MOE must regulate the geothermal drilling industry by bringing this drilling under Reg. 903. The OGWA has established a Geothermal working group to focus attention on our concerns. We plan to continue our initiatives to convince the MOE that the good regulations developed for the water well drilling industry will be the best place to start in regulating the geothermal drilling industry.

A handwritten signature in black ink that reads "Earl C. Morwood". The signature is fluid and cursive, with a long, sweeping tail on the final letter.

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# CGWA Executive Director's Message



I was sorry that I was not able to attend your provincial gathering at London as I was committed to chair the Nova Scotia Ground Water Awards Dinner. I heard that your convention was well attended and, as usual, very well received by the Ontario ground water industry.

The Canadian offered certification exams at Moncton, during the Atlantic Ground Water gathering in September and will be offering further exams at all the provincial gatherings across Canada.

The Canadian includes \$50,000 A.D.&D. Insurance to all its principal members across Canada with your membership fee, as well as to all our associates and to full-time employees who are paid through the provincial association where that individual resides. Please check our website for details on the A.D.&D. Insurance at your convenience. ([www.cgwa.org](http://www.cgwa.org))

The Canadian is also able to offer a three-tier health and wellness program for your company and your employees. For more information on this program you can contact Russell Oehmen, Fraser & Hoyt, at (888) 847-4424 or email address [roehmen@fraserhoyt.com](mailto:roehmen@fraserhoyt.com).

The Canadian also has an agreement with Petro-Canada which yields a 2.9 cent discount to our members through Petro-Pass on both gasoline and diesel fuel.

We at the Canadian continue to work on many and varied issues, including national lobbying for your industry through the Federal Government, as well as working with national suppliers to provide further discounts to our industry.

We continue to struggle with geothermal issues across Canada and have recently asked our Directors to review our position and determine how we may move forward and continue to protect Canada's ground water, which is our principal mandate.

As time goes on I hope we can meet on a regular basis with provincial ground water groups such as yours, to help provide information and advice and to hear directly from your groups the issues that matter most.

Please feel free to contact our office at your convenience and talk to Val or me about your issues.

**Wayne MacRae**  
Executive Director  
Canadian Ground Water Association

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# Results Are in For the Well Wise Needs Assessment



By Mary Jane Conboy

A great deal of work has been done since 2000 to improve drinking water in Ontario.

We have seen a big improvement in how municipal supplies are being managed since the Walkerton crisis with the introduction of the Safe Drinking Water Act and corresponding regulations governing smaller and designated systems. The Clean Water Act is being rolled out with source protection committees struck across the province.

Health units will be taking over responsibility for inspecting small non-municipal systems. In some areas rural well owners are breathing a sigh of relief that they are not being considered under these pieces of legislation. In other areas, they would like their water to receive the same amount of attention and scrutiny as city dwellers.

Consistently, whether you are in Africa or Canada, rural populations have less access to clean water than their urban counterparts. This is not just a health issue. It is also an environmental issue and needs to have a sustainable solution that looks at the safety of the water, the health of the private well, and the aquifer it is tapping into.

In Ontario:

- 750 000 registered wells and an estimate of an additional 1.5 million unregistered—likely deteriorating.
- 89 per cent of private wells observed in home visits need a repair.
- 20 per cent of non-farm well owners have an additional well needing to be decommissioned
- Only 1/3 of home visit participants test 3X per year for bacteria.
- 88 per cent don't test beyond complimentary bacterial test.
- The most common impurities found in Ontario well water—bacteria, nitrate, sodium.
- Aesthetically well owners complain about iron, manganese, hardness and hydrogen sulphide odour.
- 1/3 of Ontario wells are dug wells, 1/3 are well pits.
- Drilled wells finished above ground have seen changes in sealant requirements in the last three years and changes in the well cap in the last seven years.

Through a study funded by Ministry of the Environment, the Well Wise Resource centre consulted with LURA survey consultants to reach out to a broad audience to learn how to improve the management of private wells in Ontario. The report is now posted at [www.wellwise.ca](http://www.wellwise.ca).

Online surveys were administered to well technicians, agricultural leaders, conservation authority staff, health unit staff,

home inspectors and geoscientists. The breakdown of participation in the online surveys is summarized in the table below. Well owners were also engaged through a post card survey administered at the International Ploughing Match and the Cottage Life and through 6 well owner focus groups held in 3 geographic locations.

This research was conducted to try to determine outreach and education strategies to help improve the management of private wells.

Well owners are not thinking about their wells regularly and do not understand the specific actions they can take to proactively manage their well.

Lack of awareness, apathy and financial burden were listed as the main



Group	Number of Surveys completed
Public Health Inspector	50
Well technicians	56
Conservation Authorities	39
Ag leaders	31
Home Inspectors	8
Well Aware staff	16
Well Owner	177



reasons people are not taking action to address their well.

Well owners identified significant trust issues regarding their well. Well owners are not sure who has the authority to compel action with their well and are concerned that some actions may trigger follow up from different agencies. The groups were interested in learning more about managing their wells but were concerned about the approach.

Education and financial incentive programs are needed to help.

Professionals and well technicians also identified core funding to stabilize programs that support well owners.

The Well Wise Centre has developed a number of outreach and educational initiatives including: the province-wide Well Wise Water and Soil testing program and the Well Wise Resource Centre in Orono and an interactive children's program offered to primary and junior students. All groups surveyed indicated strong support for this work as a way to help well owners.

The Well Aware educational home visit was discussed with well owners. The aspects of this visit that well owners like were that it was peer delivered, voluntary, confidential and empowering. The well owners also identified many groups they would not want to see offering these educational home visits because of trust issues discovered throughout this study.

Future tools in development were discussed at focus groups and through survey responses.

The internet was seen as an essential component of an outreach and education program for well owners but it was not seen as a stand alone tool.

Decommissioning wells is not something the average well owner considers. However, the decommissioning of wells is an important component of the Clean Water Act as it relates to source

protection for drinking water sources. Higher rates of cost share and increased educational efforts are needed to address derelict wells.

Real estate transactions were identified as a key time to address problem wells in a sustainable manner.

We need to create a shift in community norms with respect to wells. We take our water for granted in Ontario and we need people to understand the actions they can take to care for their well in a diligent manner. In order for private wells

to be addressed, many groups will need to coordinate their efforts. If we look at how other community norms shifted—changes in views regarding smoking, seatbelts, recycling, we see that this took many people in many ways spreading the same messages. There is much to do to shift community norms and it takes strong leadership to coordinate all the interested groups willing to offer time and resources to this cause. We should be optimistic about the potential to achieve a permanent change. ~

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# Driver Improvement at Work

If your safety program does not already include driver improvement, now is the time to look at the benefits of implementing of the Canada Safety Council's Defensive Driving Course (DDC).

Which work-related tasks carry the most risk? If you survey your workplace, you may find, as others have, that most employees rank driving as their riskiest activity. One national Canadian company found that 60 per cent of its staff indicated they feel most at risk of injuries while driving on the job, or to and from work. This perception is valid. Statistics from Canadian workers' compensation boards show that in 2001, motor vehicle collisions accounted for 31 per cent of all traumatic injury fatalities as well as 10,000 time loss injuries.

Predictably, the transportation sector had the highest proportion of casualties. Nevertheless almost all industry divisions reported significant deaths and injuries due to "highway accidents."

These figures may not capture the full extent of the problem. This is because

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they only include lost time injuries resulting from motor vehicle collisions that are work-related and accepted for compensation by the various Workers' Compensation Boards and Commissions. They do not include incidents that are not directly work related, such as commuting. Also, they do not include injuries to workers not covered by Workers' Compensation legislation.

One national Canadian company found that 60 per cent of its staff indicated they feel most at risk of injuries while driving on the job, or to and from work. This perception is valid.

## **Better drivers, lower costs**

Any business that has company vehicles will have collisions. The more collisions in the fleet, the higher the medical and vehicle insurance costs. Moreover, direct costs are like the tip of an iceberg. If an employee is injured, the often-hidden indirect costs can include lost time and productivity, and possibly hiring and training a replacement.

From 1997 to 2004, the average cost per claim for private passenger vehicles rose 85 percent. Rising liability and repair costs are reflected in insurance costs. For individuals as well as fleets, collisions lead to higher insurance premiums. In addition, if an employee is injured while on the job, the employer may be subject to Workers' Compensation increases.

Today, due diligence is as important a consideration as cost control. Occupational health and safety regulations hold companies accountable if their employees are injured when conducting job-related duties for which they have not been trained.

For an individual or a small business with fewer than 10 vehicles, the benefits of a driver improvement program are

hard to quantify unless a crash actually occurs. Typically, the deductible for a small fleet is \$5,000 to \$10,000. That comes straight from the bottom line when a collision happens.

Larger fleets track the frequency and cost of collisions. This permits them to assess the preventive value of driver improvement programs. For example, a transport company reported that drivers who had taken DDC were involved in 70 per cent fewer chargeable collisions than those who had not; the average dollar cost per collision for the trained drivers was 33 per cent lower. A municipality reported a 58 per cent reduction in the number of vehicle collisions five years after introducing DDC.

For employees who have a company

car or drive their own vehicle on the job, driving is a matter of occupational safety. However, an estimated nine out of 10 time-loss injuries happen off the job. Safe drivers lose less time from work because they avoid collisions. That is why all employees who have a driver's licence can benefit from DDC.

### Defensive drivers use less fuel

The way you drive affects the amount of fuel your vehicle uses. Simply driving more smoothly can save up to 30 per cent or more on gas—and defensive driving habits enable smooth driving. For example, when you anticipate traffic conditions, leave a three-second following distance and respect speed limits you avoid constant acceleration and braking, which are hard on fuel consumption. Jack-rabbit starts and hard braking not only show poor driving technique but also waste fuel.

The Canada Safety Council's guidelines on incentive programs for long-haul truckers combine safety and

productivity, including fuel efficiency. Transport fleet managers who analyse performance know that, statistically, drivers with a good safety record also use less fuel.

The 2003 edition of DDC, a.k.a. the Green DDC, offers a unit on how to improve gas mileage and reduce emissions. That unit covers fuel-efficient driving techniques, vehicle options, use of cruise and air conditioning, maintenance, alternative fuels and other aspects of environmentally friendly driving.

### Beyond the bottom line

It may well be "the other guy" who causes a collision. Nonetheless, it's not always the guilty driver who suffers death, injury, financial loss or inconvenience. Even if you are absolutely blameless, you may have been able to prevent the collision. Furthermore, you can suffer, and so can your passengers, as though you had been at fault.


Being in the right will not save you from a crash. You must be prepared for

the unsafe actions of others or for poor driving conditions. A driver improvement program will show you how to protect yourself and your loved ones by driving defensively.

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### References

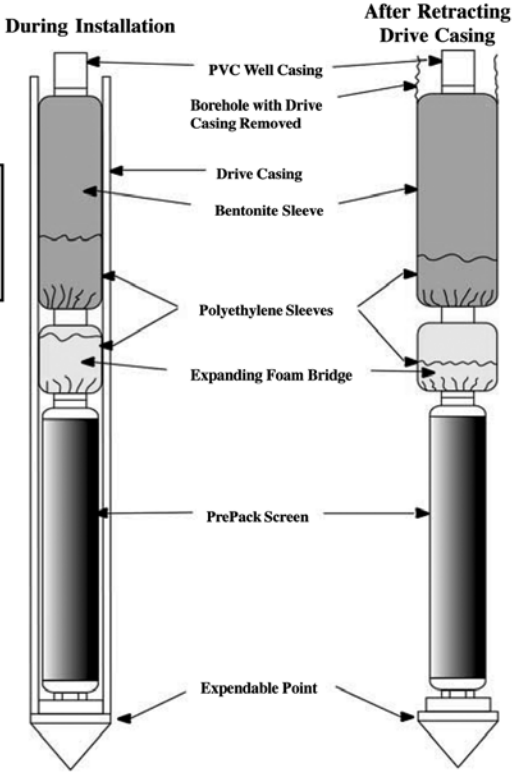
1. Work Injuries and Diseases: Canada 1999-2001, National Work Injuries Statistics Program, Association of Workers' Compensation Boards of Canada. (Proportion excludes work-related diseases and conditions.)
2. The Insurance Bureau of Canada reported an increase from \$4,258 in 1997 to \$8,004 in 2004. These costs do not take into account Quebec, Manitoba, Saskatchewan and British Columbia, which have government auto insurance.
3. Estimates vary. The 30 per cent figure is based on 2000 test drive results from the Royal Automobile Club of Victoria (RCAV) in Australia.



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# Geothermal Installation –

## Laskey's Services, Strathroy

By Anne Gammage, Office Manager, OGWA

I recently had the good fortune to visit Laskey's Services in Strathroy to see a geothermal installation project. As you saw in the fall issue of *The Source*, Mark Laskey is in the process of expanding his shop. Part of that expansion involves installation of a geothermal heat pump system.

This installation at Laskey's required drilling to around the 200 foot depth. They utilized the vertical loop system in this situation because space is limited to the area directly beside the shop.

Geothermal installations require a high level of expertise. Contractors must meet rigorous standards to protect ground water during the process of drilling and grouting. Laskey's Services is a prime example of a contractor who

exceeds the current requirements for geothermal contractors.

The Ontario Ground Water Association (OGWA) is committed to ensuring that contractors who install geothermal systems that intersect Ontario's ground water receive the same qualifications as licenced water well drillers. This will ensure that contractors are "protecting and promoting our most precious resource"—ground water.

Geothermal installations require a high level of expertise. Contractors must meet rigorous standards to protect ground water during the process of drilling and grouting.



(Left to Right): Chris Irwin, Andrew VanBynen, Adam Cornish.



(Left to right): Andrew VanBynen, Adam Cornish.



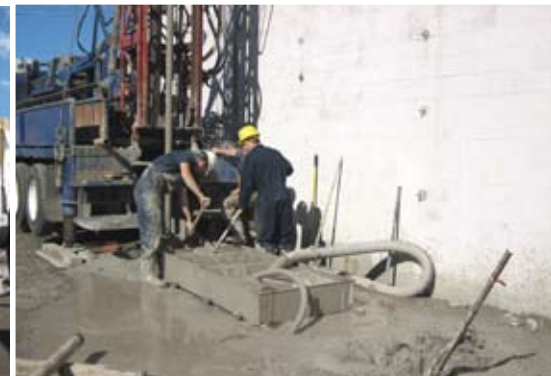
Well Drilling Technician: Chris Irwin.



Laskey's Rig and Shop, Andrew VanBynen.



Laskey's Rig.



(Left): Adam Cornish; (Right): Andrew VanBynen; (Back): Chris Irwin.



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# Well Aware: Working with the Ontario Ground Water Association and Well Owners to Help Protect Ground Water

As most Ontario Ground Water Association (OGWA) members know, Well Aware is Ontario's community outreach program designed to educate private well owners about how to be good managers of their wells.

Green Communities Canada (GCC) delivers the Well Aware program, which was developed in partnership with the OGWA and other well experts. The key messages of Well Aware reflect the goals of OGWA and its members:

- Protect the source;
- Test well water regularly;
- Maintain wells;
- Decommission unused and abandoned wells; and
- Hire Ministry of the Environment (MOE) licensed well contractors.

In all the Well Aware information materials and program activities, the public is referred to licensed MOE well contractors to have them complete any work on their well. See [www.wellaware.ca](http://www.wellaware.ca) for program details.

In local communities, the contact information of area licensed contractors is distributed. The OGWA is credited as a partner on the cover of the Well Aware booklet which has been distributed to over 160,000 well owners.

The Well Aware booklet is a great resource to leave with your clients and over 28,500 booklets have been distributed through OGWA members.

The Ontario Ground Water Association has a role in the delivery of Well Aware by speaking at over 90 Community Forums regarding well construction and maintenance. In addition, 53 individuals from the well drilling industry have participated in Well Aware Information Provider Workshops. The workshops are facilitated by Dr. Mary Jane Conboy, who is a current OGWA Board member.

In many communities, OGWA



The Well Aware booklet is a great resource to leave with your clients and over 28,500 booklets have been distributed through OGWA members.

members are resources for Well Aware Water Guides regarding the local conditions for constructing wells. Water Guides are "ideal well owners" not well technicians or hydrogeologists. They do not promote themselves as experts and deliver structured recommendations for healthy well and septic system maintenance without going beyond their level of knowledge.

Partnerships are integral to help the Well Aware messages resonate through local communities and at a provincial level. The strength of working with partners is that each party brings a new skill or resource to the program to

complement each other, which is more effective than working in isolation.

Green Communities Canada is an Associate Member of OGWA because we want to support the organization and its members who are continually striving to be on the cutting edge in the well industry.

Staff from GCC and the Well Aware program will continue to market the services of OGWA and its members in all divisions. If you would like to distribute booklets or participate in other program activities please contact GCC at (705) 745-7479 or [info@wellaware.ca](mailto:info@wellaware.ca).

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 2008 OGWA member

# OGWA Member Profile – Fred Constable & Son Ltd.

It may not have been the conventional way to begin a well drilling business, but today Fred Constable & Son Ltd. is a thriving well drilling company. As Kevin Constable said, “We started as farmers who happened to need the well on the farm repaired. When the old gentleman who fixed the well retired, he offered the tools to Fred who learned from experience. Soon all the local people with wells were calling Fred to have their wells repaired. This simply evolved into the drilling business.”

Kevin’s grandfather, Fred Constable, started the business along with his wife Bessie. As a family owned enterprise and started by Fred, it carried on next with Kevin’s father, Ken, and then on to Kevin, who currently runs the operation. Fred founded the business in 1947 and it was incorporated in November of 1965.

“At the start, there were two employees—Fred and a farm hand, Neil Harding. This quickly evolved into four to six employees. Neil continued to work for the company until his retirement in 1988. Today the company employs eight people; five technicians, one office manager, and two labourers.”

“We are and always have been a family run business. Over the years there have been numerous family members employed

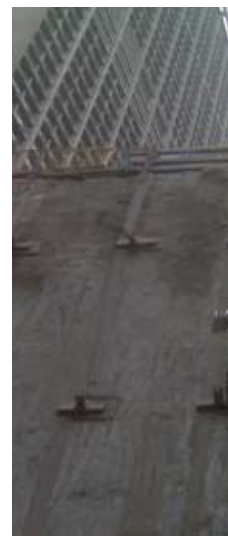
for varying amounts of time. Some for summer employment, to my uncle Garry Fry who started in 1967 and worked until his retirement in 1999. My wife Nicole currently works in the business as secretary/bookkeeper and office manager.”

“We cover the majority of south central Ontario from Toronto to Barrie in the north, West from Orangeville, and East to Stouffville.”

“Over the years, we have added services to the simple well drilling business. We offer comprehensive test drilling programs for any number of requirements. A part of our services which is steadily growing is deep well dewatering/depressurizing of deep aquifers for construction purposes. This provides builders an option to conventional dewatering which is sometimes more economical and more effective for large, deep building sites.”

“Although I would call the company diversified I would not say anything we do is new. All things we tackle are in the water well drilling domain. The only change is that the drilling and sampling has become much more in-depth. Instead of a simple 5’ well screen, some of the dewatering wells will have as much as 100’ of screen assembly, different slot sizes and blank pipe sections within the length. All this requires very talented drillers with a lot of experience and confidence in their abilities. The only big change is that instead of doing all the drilling and making all the decisions ourselves, we work very closely with some of the top hydrogeologists in the province.”

“As everyone in this industry that knows me, knows, my passion for this industry is second to none. The problem we have across the industry is not charging what we and our services are worth. I have championed this across the province and in some cases across the country. We are the only construction sector that cannot cover the costs of new equipment every five years on a consistent basis. We continually sell ourselves and our product short, just because the consumer can’t see what we provide and show it off to their friends they don’t see the value until they have a water problem. Because of this, we feel pressure from the consumer to work cheaper and, unfortunately, we have a sector of our industry that will bow down and in turn bring down others around them. In the late 60s the price of drilling a well averaged about 10 per cent of the cost of home construction. Today we average less than 5 per cent. I don’t want



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to make it sound like the whole industry is going down, there is no more rewarding job on earth. To be able to start on dry ground, drill beneath our feet into something we can't see and find clean pure groundwater is a talent no one can top."

"Over the next decade, there will be many changes. The economy is always first on the list of things to affect any business, but with proper planning and management, a good business can overcome this adversity. The thing that can never be counted

on is the effect of Government policy there are areas of the province where there are pipelines

covering whole counties. These areas are where the local well drillers can be in some trouble. Overall I believe there will always be a need for well drillers in this province but each company will need to carve out a spot where they can shine, whether that is through diversification or some other method, we will all need to work a little harder to maintain our share."

*The Constables have been defenders, advocates, and supporters of the Ontario Ground Water Association for three generations. They have been OGWA members for 34 years and both Ken and Kevin are past presidents of the Board of Directors, while Kevin is a current Director. We thank them for their seemingly tireless contributions to "protecting and promoting Ontario's most precious resource—ground water".*



Nothing appears impossible for Fred Constable & Son Ltd. This job required drilling some extra wells in the bottom of a completed excavation with about a 60' drop from the road. The building in the background is the ManuLife centre, downtown Toronto.

Construction applications

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Mining

Environmental/geotechnical

Water well

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# Memories from the 2008 May 29-31



*And the Winner is... the OQWA! The Board of Directors poses with Daylon Hideaway, his owners, trainers and driver – as the winning horse running Race 4 for OQWA.*



*Highlights from the Trade Show.*



*Lea MacKinnon, Tracie ready for the hop.*



*Highlights from the Trade Show.*



*Andrew and Patty Caine – grease is the word!*



*Highlights from*



*OQWA Members.*



*Highlights from the Trade Show.*



*Elvis has entered*

# Convention & Trade Show!

## London, Ontario



*Marquardt, Dodie Bullock –*



*Highlights from the Trade Show.*



*Brian and Brandy Watson – Grease 2.*



*the Trade Show.*



*Earl and Heather Morwood – right out of the fifties!*



*Highlights from the Trade Show.*

*All photos courtesy of Stephen Bleizeffer, Lackner, McLennan Insurance Ltd.*



*the building!*



*Highlights from the Trade Show.*



*Steve Bleizeffer and Michelle Oakley.*

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# OGWA Regional Meetings – Spring 2009

## Mark Your Calendars...

The OGWA Board of Directors invites you to attend our regular Spring Regional Meetings for 2009. It is our intention to make these meetings more effective and interesting for you all. As always, we ask our members for suggestions or requests for topics to be covered. Please forward your ideas to the OGWA office.

## Dates of the 2009 Regional Meetings:

January 29 ..... Ingersoll  
February 11 ..... Perth  
February 12 ..... Lindsay  
February 17 ..... Sudbury  
February 18 ..... Bradford

## ENTRY FEES:

Members ..... \$ 30.00  
Non-members ..... \$ 60.00

*(Please bring your OGWA membership card with you to help speed up registration)*

**Watch your e-mail, fax, and mailboxes for details and RSVP information early in the new year. These meetings will top up your continuing education hours from the 2008 Regional Meetings.**

# OGWA Convention & Trade Show

May 21-23, 2009

## “Return to Blue Mountain”

The OGWA Convention Committee is hard at work making plans for you to enjoy the 2009 Convention & Trade Show. With plenty of beautiful scenery and the fabulous location of the Blue Mountain Resort in Collingwood, Ontario, you'll need to mark your calendars now. This location provides exceptional golf, shopping at “The Village” at the Resort, our great Trade Show on Friday, plus plenty of exciting activities! We'll be sending out more details to you soon, so plan your spring fling with the OGWA at the Blue Mountain Resort!



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### **FRIDAY MAY 22**

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### **SATURDAY MAY 23**

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**Come - Enjoy yourselves and support your OGWA!**

# Ontario Ground Water News

## Canada at risk of water shortages: federal document

An August 2008 article from The Canadian Press outlined an Environment Canada report about how Canada's supply of fresh water isn't as plentiful as once believed. The document says that this fact threatens to hurt the economy and set up provinces against each other.

The article went on to say that an internal report drafted last December by Environment Canada warns that climate change and a growing population will further drain resources. The report, titled "A Federal Perspective on Water Quantity Issues," which was obtained through an Access To Information request warns "there may be heightened risk for jurisdictional conflict for water allocation between provinces and also between Canada and the United States."

The Environment Canada report also

highlights the myth of abundance of freshwater in Canada and emphasizes that only one per cent of Canada's total water supply is renewed annually. It points to unsustainable industrial consumption of water in the energy and agricultural sectors.

While the Conservatives promised a national water strategy in last fall's throne speech, they've been widely criticized since for announcing only piecemeal projects.

"The Harper government has repeatedly dismissed the threat of bulk water exports, while suppressing this report. We are concerned that this information, which contradicts Harper's claims, was not publicly released months ago," says Maude Barlow, national chairperson of the Council of Canadians. "Now we know that Environment Canada has pointed to the possibility of pressure to export water

to the United States, given the water crisis in the American Southwest and the impacts of climate change."

By contrast, the United States has spent more than a decade mapping its underground water reserves. Canada shares aquifers with the U.S., and the report says: "our lack of data places Canada at strategic disadvantage for bilateral negotiations with the U.S."

The report also forecasts droughts in the Prairies and groundwater shortages in British Columbia and the Great Lakes-St. Lawrence River basin. These predictions are already coming true—there are already signs of water shortages in the Great Lakes. Lake Superior, the largest of the five, fell to its lowest level on record in September 2007. Lakes Michigan and Huron were about 50 centimetres below their historical average levels last fall.

The report notes that a 0.08- to 1.18-metre drop in Great Lakes water levels costs the hydro-electric industry between \$240 million and \$350 million each year.

Suburban sprawl in the southern United States and agricultural water usage have spawned a water crisis that threatens to worsen in the future.

In addition, Natural Resources Canada released a major study this spring predicting more frequent droughts, severe floods and wildfires, and declining water quality and quantity.

The report is available at [www.canadians.org](http://www.canadians.org).

## Groundwater Information Network: A coordinated approach to disseminating groundwater information

*Natural Resources Canada Groundwater Mapping Program Newsletter (Volume 4, Issue 2, December 2007)*

Reprinted from web site: [http://ess.nrcan.gc.ca/gm/bulletin/bulletin\\_v4\\_2\\_e.php](http://ess.nrcan.gc.ca/gm/bulletin/bulletin_v4_2_e.php)

Groundwater information is increasingly needed to help address pressing societal and scientific concerns. However,

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although many Canadian government agencies collect, analyse and report groundwater information, it is not always accessible. That's because it is distributed by many geographically dispersed agencies, exists in different formats and data structures, is collected for different purposes and is not always available on the Web. Hence there is an increasing need for agencies to work together to improve access to groundwater information (Rivera, et al., 2003, section 7.3). To meet this need, a group of federal, provincial and watershed agencies are working in partnership with the national GeoConnections program to develop a groundwater information network.

The network will utilize advances in Web-based geospatial standards and technologies as well as the Canadian Geospatial Data Infrastructure (CGDI). It will serve as a national catalogue of groundwater information, as a place on

the Web where groundwater information can be accessed using standard technologies and data formats, and as a national-scale Web-mapping portal with enhanced analytical tools. This will enable user groups to improve the management of their water resources and contribute to enhanced decision-support capabilities. It will also permit access to online data by people who are not geographic information systems (GIS) specialists or are in settings where expensive GIS software is not available.

The initiative has three principal aspects:

1. Data provision - Data sources will provide information using CGDI-compliant Web services, without altering their existing databases.
2. Standards - Data providers will register these services with a central registry maintained by NRCan and provide a translation, so a central broker can

dynamically convert data to the standard format.

3. Web applications - A Web application (developed with a commercial partner) will provide tools to cache display and analyse water-well data and watershed information.

In addition, it is anticipated that the network will stimulate further application development among the groundwater community and that existing portals, such as RésEau and the Atlas of Canada, will take advantage of the network, thus providing several channels into groundwater information.

The initiative aligns with the three-tiered CGDI architecture of data, services and applications, as shown in the figure to the right.

The establishment of the groundwater information network will make Canadian groundwater information more accessible to scientists,



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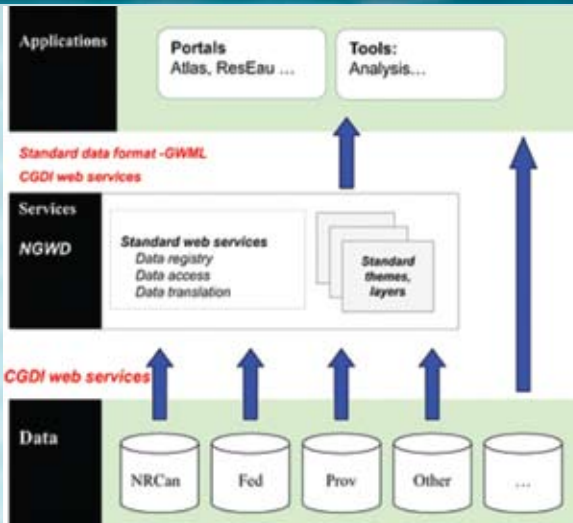
decision-makers and the public. For more information about this project, send an e-mail to Boyan Brodaric (brodaric@nrcan-rncan.gc.ca) or David Sharpe (dsharpe@nrcan-rncan.gc.ca).

### Pilot program for RO cartridge recycling in Canada

Tuesday, June 03, 2008

Source: Trenton Trentonian

BELLEVILLE, ONTARIO – EcoWater Belleville, a water



treatment dealer, has been selected to participate in a pilot program for recycling reverse osmosis cartridges used in home water systems, according to a June 3 article in the Trentonian.

The program will help ensure that the reverse osmosis filters and their contaminants don't end up in landfills, the article said.

"Using a reverse osmosis system ... reduces our carbon footprint and greenhouse gas emissions," Jim Blakeley, President of EcoWater Belleville, told the Trentonian.

Blakely said they are very excited about being chosen as one of eight dealers in Canada to participate in the recycling program.

Blakely said there are between 300 and 400 residents in his area who use RO systems in their homes and that filters need to be returned to EcoWater in Belleville for them to be recycled. The company serves customers in Belleville, Trenton and Prince Edward County.

Reprinted from CWQA Communiqué –June/July2008.

### UN President appoints Canadian as new Senior Advisor on Water

October 21, 2008

OTTAWA – Maude Barlow, national chairperson of the Council of Canadians and founder of the Blue Planet Project, has been appointed as the first Senior Advisor on water issues by Miguel d'Escoto Brockmann, President of the 63rd session of the United Nations.

Barlow, reacting in Ottawa to the announcement, says she is honoured to be working with someone of President d'Escoto's calibre. "I am excited for the year ahead, and am pleased to note that President d'Escoto has already adopted the call for water to be recognized as a human right."

In his letter to Barlow, confirming her appointment as Senior Advisor, President d'Escoto says, "One of the priority issues for my Presidency is the need to achieve the goals of the United Nations Decade "Water for Life" (2005-2015)... Given your outstanding experience, your

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creativity and your leadership in water issues, I would like to appoint you as my Senior Advisor for this 63rd session of the General Assembly."

"This is a wonderful opportunity to advance a more democratic and transparent method of policy making around water at the global level than now exists," says Barlow, in reference to her new role. "Water is a commons, a public trust, and a human right."

"I firmly believe that our Assembly, as the most representative and democratic global political body, is the right forum to debate policy, affirm principles and provide answers for the global water crisis that you have worked so hard to put on our agenda," continues d'Escoto in his letter. "I am looking to leaders like you, who combine humanitarian vision with a practical approach to problem solving, to help me."

"There has been growing momentum in the international community for water justice," adds Barlow. "I also plan to take this opportunity to get the Canadian government to change its shameful position, and to finally join the international community in recognizing water as a human right."

"Water is not a commodity to be bought and sold on the open market," d'Escoto said in his Inaugural Address to the 63rd General Assembly. "Those who seek to derive economic advantage, even from the worst of human tragedies, are pursuing the privatization of water, thereby denying peoples a human right as basic as the air we breathe."

**For More Information:**

Dylan Penner, Media Officer, Council of Canadians, Ottawa, (613) 233-4487 x 249; dpenner@canadians.org. For background information on water: [www.canadians.org/water/index.html](http://www.canadians.org/water/index.html) and [www.canadians.org/about/Maude\\_Barlow/Blue\\_Covenant/index.html](http://www.canadians.org/about/Maude_Barlow/Blue_Covenant/index.html).

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ONGOING ASSESSMENTS

**COUNCIL NEWS**

ISSUE 4, SEPTEMBER/OCTOBER 2008

Poets herald water as the elixir of life. Chemists explain that water is the ideal solvent for a carbon-based ecosystem, establishing the bond between water and life. Economists forecast that fresh water is becoming the primary constraint on growth for many nations and it is expected to be the most important and strategic natural resource of the coming century. Hydrogeologists confirm that about 97 percent of fresh water is buried beneath our feet and engineers acknowledge

that groundwater is already our most consumed raw material reflective of an increasing per-capita thirst of a growing global population. How do we manage such a valuable resource in Canada, and are we doing so sustainably?

The Council's upcoming report on Groundwater Sustainability aims to answer this question. For more information visit the Council's website at [www.scienceadvice.ca](http://www.scienceadvice.ca).

Ground water mapping: [http://ess.nrcan.gc.ca/gm/bulletin/bulletin\\_v4\\_2\\_e.php](http://ess.nrcan.gc.ca/gm/bulletin/bulletin_v4_2_e.php).

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Canada. Cambridge is situated at the confluence of the Grand and Speed rivers, which are important sources of drinking water for a number of communities. Underlying bedrock aquifers supply most of the drinking water to Cambridge (population 130,000) as well as to the other municipalities

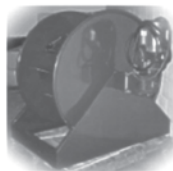
within the Regional Municipality of Waterloo (which has a total population of approximately 500,000).

The City relies on twenty-seven water supply wells up to 60 metres (200 feet) deep. The highest producing wells occur in the heart of the City and these supply almost half of the water used by residents and industries. Many of these wells date back to the 1900's with the first wells being drilled in 1891. Approximately 80 percent of the water consumption in the City is drawn from groundwater. The remaining 20 percent comes from the Grand River and is pumped into the Manheim aquifer and mixed with groundwater before distribution.

Although this precious resource is relied upon as our source of drinking water, other water uses place a great strain on its availability. However, attitudes towards water usage and conservation have begun to change with the recent water restriction bylaws, educational activities and events, and very successful incentive programs (rain barrels, high efficiency toilet replacement programs, among others).

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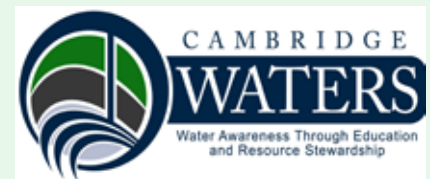
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## Groundwater Guardian Community



Cambridge WATERS is currently the only Groundwater Guardian community in Canada. Since 1997, Cambridge WATERS has undertaken groundwater protection and conservation related activities including the development of educational posters and teaching packages, and participated in public awareness events and wellhead protection implementation plans.

# The City is a local area municipality within the Regional Municipality of Waterloo, the largest urban area dependent upon groundwater in Canada.

Cambridge Groundwater Guardian recently changed their name on their 10th anniversary (December 2007) to better reflect their focus. The new name, "Cambridge WATERS" (which stands for Water Awareness Through Education and Resource Stewardship) represents the group's interest in "water" issues (both surface and groundwater), "awareness" and "education" (for general public as well as schools), and "resource stewardship." The new name reflects the subcommittee's past (and future) projects that involve "telling the Cambridge water story."

Cambridge WATERS retains its membership in the Groundwater Foundation as the only Canadian member and as "a proud Groundwater Guardian member since 1997."

Cambridge WATERS is a standing subcommittee of the Cambridge Environmental Advisory Committee of Council. The purpose of the subcommittee is to be the coordinating organization for the Cambridge community and to develop and implement the Groundwater Guardian program and water awareness, education, and resource stewardship projects. The subcommittee works with Cambridge schools, community groups, churches and businesses as well as individuals to develop projects that improve water awareness, education, and resource stewardship in the community. Cambridge WATERS membership is comprised of water professionals from private industry, government, and members of the public.

Past projects have included developing Cambridge-specific teacher packages for elementary grades, articles for various publications, personal appearances in classrooms and information booths at local festivals.

## About Groundwater Guardian

The Groundwater Foundation is a non-profit organization dedicated to educating and



motivating people to care for and about groundwater. The foundation established the Groundwater Guardian (GG) to encourage communities of all types (cities, counties, watersheds, etc.) to begin and enhance groundwater education and protection activities. Groundwater Guardian supports communities in their efforts and recognizes their achievements.

For more info on the Groundwater Foundation, including membership or if you want to start a similar group in your municipality, please visit [www.groundwater.org](http://www.groundwater.org).

Community Contact:

Cambridge WATERS

Paul Willm

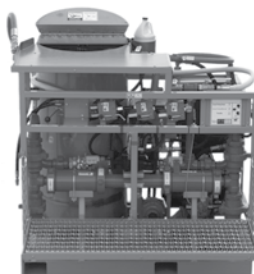
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# Meeting Minutes

Here's a re-cap of the various meetings held at the Four Points by Sheraton, London, ON – May 31, 2008

## ONTARIO GROUND WATER ASSOCIATION DRILLERS' DIVISION MINUTES

### In attendance:

Air Rock Drilling Co. Ltd. – Wallace Desaulniers  
Al Hammers Well Drilling Inc. – A. Hammers  
Allan Wright Water Wells – Allan Wright  
Big Creek Well Drilling – Scott Burroughs  
Bernard Marquardt & Son Ltd. – Brad Marquardt  
Eades Well Drilling – Greg Bullock  
Eades Well Drilling – Steve Wilkinson  
Earl V. Marquardt & Son Inc. – Terry Marquardt  
Fred Constable & Son Ltd. – Ken Constable  
Fred Constable & Son Ltd. – Kevin Constable  
G. Hart & Sons Well Drilling Ltd. – Bryan Watson  
G. Hart & Sons Well Drilling Ltd. – Clarke Watson  
Herb Lang Well Drilling – Garry Foster  
Herb Lang Well Drilling – Herb Lang  
J.B. Wilson & Son Well Drilling – John R. Wilson  
Lone Star Well Digging – Jim Moore  
MacKinnon Well Drilling Ltd. – Jamie MacKinnon  
MacKinnon Well Drilling Ltd. – Rob MacKinnon  
Mervin Jones Drilling – Murray S. Jones  
Northern Well Drilling – Jerry Renwick  
Ontario Drilling – Dave Moore  
Rumble Water Wells – Garnet Rumble Jr.  
OGWA Executive Director – Earl Morwood

- The meeting was called to order by Greg Bullock at 8:30 a.m.
- The meeting minutes of June 2, 2007, were read.
- Discussion ensued on why there are both Well Aware and Well Wise programs. There is a feeling that Well Aware people are overstepping their qualifications. Mary Jane Conboy and Well Wise should be the authority.
- Discussion took place regarding well upgrading and decommissioning funding. There seems to be very little funding available and programs are disjointed around the province. John Wilson said it is necessary OGWA promote awareness of the need for well maintenance and abandonment across the province instead of for municipal wells.
- Herb Lang asked about regulation for geothermal licensing and regulation. Discussion ensued on this topic. Kevin Constable explained that the program between CGC and CGWA fell apart with nothing to replace it yet. Concerns were expressed about how long funding will last. OGWA will work on the Ministry of the Environment and/or Ministry of Energy regarding these licensing issues.
- Clarke Watson asked about Ministry of Transport (MTO) logbooks, inspections, etc. Clarke asked that OGWA confirm requirements with the MTO. Discussion ensued on licence

- requirements for drilling rigs and whether the OGWA should discuss these with MTO for clarification.
- Fuel taxes and clear versus coloured fuel was discussed. Clarke suggested going to the federal government regarding this taxation.
- A committee was struck to look into the above.
- Earl Morwood supervised the election of Directors:
  - Current Directors: Brad Marquardt, Rob MacKinnon, Wally Desaulniers, Kevin Constable, Greg Bullock.
  - **MOTION:** That the current directors be acclaimed for the 2008–2009 year.
  - **Moved:** by Ken Constable, Seconded by Clarke Watson.
  - **CARRIED.**
- Scott Burroughs questioned the Class 5 drillers being allowed to pump test large volumes. There seems to be loop holes in the system due to test holes as a designation.
- Herb Lang asked about one contractor in his area. He asked how the contractor obtained a licence and how he obtained the hours requirement. The OGWA is looking into the situation.
- Jerry Renwick asked how and why a Class 3 drilling licence is easy to obtain and why Class 3 drillers are not publicly designated as to what each individual is qualified to do.
- The meeting adjourned at 9:45 a.m.

## ONTARIO GROUND WATER ASSOCIATION PUMP INSTALLERS DIVISION MINUTES

### In attendance:

Clark Pumps – Dale Clark  
John McCann Professional Water Pumping Systems – John McCann  
Laskey Services – Don Casier  
Rodger's Water Pumps & Water Treatment – Rodger Spoor  
Rumble Water Wells – Garnet Rumble Jr.  
WRC Purifying Ltd – Adrian Van Mourik  
OGWA Executive Director – Earl Morwood

- The meeting was called to order at 8:45 a.m.
- Earl Morwood conducted elections in 2007 and the current directors are Scott Burroughs, Garnet Rumble, Lloyd Laidman, Hugh Scholz, and Craig Stainton.
- The meeting minutes of June 2, 2007, were read.
  - **MOTION:** That the minutes of June 2, 2007, be approved.
  - **Moved by:** John McCann, Seconded by: Garnet Rumble
  - **CARRIED.**

### New Business:

- Discussion covered the form for reporting infractions on wells and installations.
- More knowledge is required with the CVOR reports. Circle checks with reference sheets.

- Pump installer calling for Hydro inspection. It was questioned how far they can go.

**Election:**

- An election is not required as Scott Burroughs replaced retiring Adrian Van Mourik. Adrian was thanked for his time in the past.

**Adjournment:**

- The meeting was adjourned at 9:45 a.m.
- Moved by Garnet Rumble.
- Seconded by Dale Clark.

**ONTARIO GROUND WATER ASSOCIATION SCIENTISTS & ENGINEERS DIVISION MEETING**

**In attendance:**

Well Wise - Mary Jane Conboy

MOE - Kip Hawley

SSFC - Gord Bailey

Waterloo Geoscience - Bill Clarke and Justin Clarke

**Call to Order:**

- Bill Clarke called the meeting to order.

**Business Arising:**

1. **Directors:** Earl Morwood facilitated the selection of Directors for the coming year. Mary Jane Conboy and Bill Clarke offered to stand as directors. Brian Beatty has been an S&E Director for 13 years and is now standing down. Our thanks to Brian for his past contribution to the industry and we trust that we can continue to count on him as a resource.
2. **Ground Water Education:** Mary Jane suggested a “private well summit” meeting to get all the various stakeholders together. Example: get real estate agents better informed and/or know where to get accurate information. Funding can be an issue but we need funds for renting a room and getting refreshments. Gord Bailey volunteered SSFC as a location for this type of meeting. There is a concern about an unlicensed person attending these meetings and using this as a license to say that they are qualified to do this work (e.g. an untrained pump installer now performing well upgrades). Gord noted that the slowing economy may show more well

drillers working to perform well upgrades so they need to know how to perform these tasks properly. Mary Jane has a large number of examples (104) of very poor well upgrades. Gord asked if the head of real estate agents come to an S & E meeting to develop an educational program. Mary Jane is currently accredited by Real Estate Council of Ontario to provide a CE course regarding wells, including upgrades. Kip asked if there is a way to get the well record as a legal part of the sale of a property. Gord added that a “well inspection” is also necessary to show the current status of the well. Gord offered that a course can be developed through SSFC.

3. **Archie Watt Award:** This is presented to Fleming graduate who has shown a long-term commitment within the GW industry. Bill likes the idea that the award be applied to someone in the GW industry who mainly participates in the field—data collection, testing, monitoring and data compilation. Gord will contact Brian Beatty to obtain original criteria for the Archie Watt award. Mary Jane asked that trained people, who perform their work well, could be part of the criteria, but the candidate should also show other characteristics that are above and beyond the usual contribution.
4. **Continuing Education:** Gord asked Kip if MOE staff should take CE courses. Kip asked who that might be and suggested that abatement staff would be likely candidates. Abatement staff are the first MOE personnel to respond to a problem. Mary Jane suggested that the Agricultural officers should be included in this course. Kip showed concern about the Abatement Officers attending these courses. There is a question as to how this could be accomplished. Kip recognized that these officers would benefit from the courses, since most of these people may not have the scientific background. Gord suggested that we extend an invitation from S&E/OGWA to MOE to attend the existing SSFC courses on wells. The main benefit is that MOE personnel will meet and interact with those who work in various aspects of GW industry to further ‘build bridges’ and working relationships. Mary Jane noted that MOE staff attend the OMAFRA



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courses, so why not the well courses? If that occurs, the MOE staff should be encouraged to attend courses personally and not on-line. Justin reiterated the benefit of attending courses personally. Mary Jane mentioned the example of the irrigation uses in SE Ontario where the frustration was addressed by organizing a field meeting to tour the operations. MOE staff learned how their operations work and this made the application process easier. This type of tour is being conducted annually, where various agencies are invited. Kip requested that course schedules be better advertised so that more people know of them in advance. Kip could provide list of MOE staff to Gord. Gord knows that geothermal info is available to define closed loop and open loop systems. Gord can advise on where to obtain this information.

**ONTARIO GROUND WATER ASSOCIATION M&S DIVISION MINUTES In Attendance:**

Rideau - Ron Fournier

Rideau - Peter Hanna

Rideau - John Fournier

Wellmaster - Don Lane

Bariod - Mark Duckworth

Can-Pipe - Gary Zamecnik

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 OGWA Executive Director – Earl Morwood

- Call to Order – 8:30 a.m.
- Approval of the minutes of our last meeting.
  - MOTION:
  - Moved by: Mark Duckworth,
  - Seconded by: Don Lane – CARRIED.
- Directors –
  - Vote for two new M&S directors – New Directors will be by Acclamation.
  - Roger McHugh – Grundfos.
  - Stephen Bleizeffer – Lackner McLennan.
- Trade Show Discussion –
  - We all thought the trade show went off well and the presentation portion was well received by the members. They were short and sweet with good content. The M&S would definitely like to see this concept used again.
- Golf Tournament –
  - Good participation and many thanks to the attendees and the M&S members who donated and golfed in the event.
- Adjournment –
  - MOTION: Moved by: Mark Duckworth.
  - Seconded by: Don Lane. – CARRIED.

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# Did You Receive Your Copy This Year?

The OGWA Membership Directory is yours...

Only when you join or renew your OGWA membership!



## MEMBERSHIP CHANGES – Correct Your Directory

### NEW MEMBERS:

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**Federal Screen Products Inc.**  
Vito Sabia  
7524 Bath Road  
Mississauga, ON L4T 1L2  
Phone: 905-677-4171  
Fax: 905-677-8959  
E-mail: vito@federalscreen.com  
Web: www.federalscreen.com

### RENEWED MEMBERS:

**Pump Installers Division**  
**Seaway Water Supply**  
Dennis M. Murray  
PO Box 275  
Pickering, ON L1V 2R4  
Phone: 905-683-1397  
Fax: 905-649-1205  
E-mail: seawaywater@bellnet.ca  
Web: www.seawaywatersupply.ca

### Clearflow Pumps & Water Treatment Ltd.

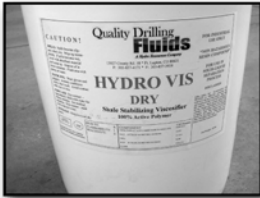
Ronald Jorgensen, CWSIII, CI  
167 North Port Road, Unit 4  
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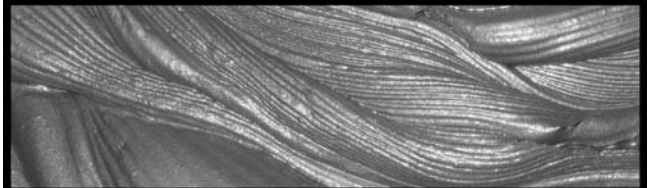
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# Fleming College Training Update



The 2009 wells courses are now open for registration. Contractors and license holders should register now to ensure their spot in Continuing Education Courses. All licensed Well Technicians must complete 21 hours of Continuing Education before their deadline for license renewal.

## ONE-DAY CONTINUING EDUCATION COURSES FOR WELL TECHNICIANS

### Available in Classroom or Online Delivery

- Monitoring Wells for Licensed Well Technicians;
- Subsurface Connections for Licensed Well Technicians;
- Flowing Wells for Licensed Well Technicians; and
- The Safety Course for Licensed Well Technicians.

### Available Online Only – Register Now

- Pump Sizing for Licensed Well Technicians;
- Sealing Wells for Licensed Well Technicians; and
- Disinfection using Chlorine, Pumping Tests for Licensed Well Technicians.

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*For dates, locations and further information see the training web site at [www.welltechtraining.org](http://www.welltechtraining.org).*

*To register for all courses call Fleming College at (888) 269-6929.*

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# ONTARIO GROUND WATER ASSOCIATION

## 2009 MEMBERSHIP APPLICATION

<b>IMPORTANT: PLEASE MARK THE APPROPRIATE BOXES FOR OUR RECORDS →</b> <input type="checkbox"/> <b>NEW MEMBERSHIP</b> <input type="checkbox"/> <b>DO NOT</b> list my company on the OGWA website. <small>(Listing = Company Name, Contact Name, Address, City, Province, Postal Code, Phone/Fax Numbers, Web Site, and County. E-mail addresses will not be listed).</small>			
Company Name:			
Contact Name:			
Mailing Address: P.O. Box /No. & Street / R.R. # :			*MANDATORY– MOE Licence #:
City:	Prov:	Postal Code:	County (Ontario Only):
Telephone No.	Cell No (Optional):	Fax. No.:	
E-mail Address:		Website URL:	

**\*MANDATORY: MOE CONTRACTOR LICENCE # REQUIRED ABOVE FOR DRILLERS AND PUMP INSTALLERS**

<input checked="" type="checkbox"/> <b>MEMBERSHIP CATEGORY</b>	<b>FEE +</b>	<b>G.ST. =</b>	<b>TOTAL</b>	<b>TO REMIT</b>
<b>DONATION FOR SPECIAL OGWA PROJECTS:</b>				
_____ Drilling Contractor	\$357.00	\$17.85	\$374.85	\$ _____
_____ *Geothermal Yes__ No__ Environmental/Geotechnical Drilling Contractor	\$357.00	\$17.85	\$374.85	\$ _____
_____ *Geo Thermal Yes__ No__ Pump Installer	\$357.00	\$17.85	\$374.85	\$ _____
_____ Manufacturer/Supplier	\$357.00	\$17.85	\$374.85	\$ _____
_____ Groundwater Scientist/Engineer	\$357.00	\$17.85	\$374.85	\$ _____
_____ Associate Members (see note)**	\$ 71.40	\$ 3.57	\$ 74.97 times # _____	\$ _____
<b>TOTAL MEMBERSHIP &amp; DONATION PAYMENT:</b>				<b>\$ _____</b>

**\*\*ASSOCIATE MEMBERSHIP:** (See Page 2 for Definition of Associate per OGWA By-laws)

**Associate Names:** \_\_\_\_\_

**PLEASE NOTE:**

1. The logo of the Ontario Ground Water Association (OGWA) is a registered trademark (TM). permission for its reproduction is RESTRICTED TO PAID UP MEMBERS ONLY for advertising purposes. Investigation into unauthorized use may result in legal action.
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**THANK YOU!!**

*Please complete next page if applicable...*



# ONTARIO GROUND WATER ASSOCIATION 2009 MEMBERSHIP APPLICATION or RENEWAL

PLEASE READ CAREFULLY

The information given below is how it will appear in the Membership Booklet

When you join the Ontario Ground Water Association as a Corporate Member, your licensed well technicians are automatically eligible to be listed in our Membership Directory in the Technicians Division, at no additional cost.

Company Name on Membership Application: \_\_\_\_\_

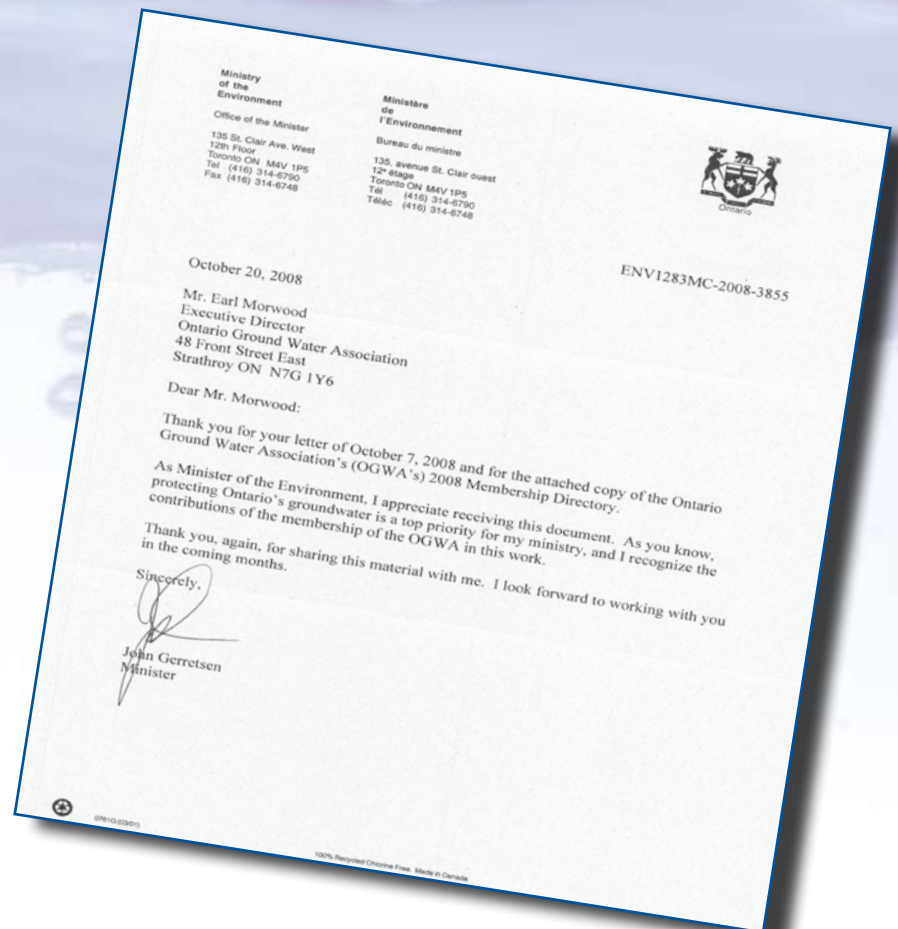
Names & MOE Licence Numbers of Licensed Well Technicians working for my company:

First Name	Last Name	Lic. # ( T - # )

Please fax or mail to:

OGWA  
48 Front St. E., Strathroy, ON N7G 1Y6  
Fax: (519) 245-7196  
Email: ogwa@ogwa.ca

**\*\*ASSOCIATE MEMBERSHIP:** "OGWA By-Law No.1: Members - 3(f) Associate Division: Associate membership in the Corporation shall include all persons interested in the welfare and success of the Ontario Ground Water Association and the water well drilling industry, other than business, firms, companies and corporations that qualify for membership in the Drillers, Manufacturers & Suppliers, Groundwater Scientists & Engineers, or Pump Installers divisions\*. The associate division shall have no voting power."  
\*This means if your company can be classified in one of these main membership categories, you are not eligible for Associate membership and must send in the regular membership fee. Associate Memberships are available to persons/employees whose companies are full members.



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