ONSITE
WASTEWATER NEWS
ONTARIO ON-SITE WASTEWATER ASSOCIATION NEWSLETTER

InSide

- **The Saga of Septic System Additives**
- **Ontario Building Code Review**
- **Electrical Safety**
- **On-site Conference** Summary Review
- **Government Sub-Committee Report**
- **New Columns!**

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The Saga of Septic System Additives

By Al Brown – OOWA Public Relations Committee

I would like to address the concerns of some of our members, who took the time to write us a letter on March 15, 2002, regarding septic system additives. The letter noted that in our new pamphlet, *On-site Sewage Systems Do's and Don'ts Guide,* a point is made stating; don't use special additives that are touted to enhance the performance of your tank or system. Their letter went on say that, "this is far too general a statement and is false."

Is it false, is it far too general? I wondered whether new information was available to which I was not privy (unintentional pun). I did read *NC State Produces Landmark Research on Septic Tank Additives* by M. Caigan McKenzie, NSFC staff writer, which was taken from a much longer article in: *Small Flows,* Summer 1999; Vol. 13, No.3. We reprinted that article in our *Ontario Onsite Wastewater Association Newsletter,* Volume 1, Issue 4, September 2000.

The article was based on a master's thesis titled *The Effect of Bacterial Additives on Septic Tank Performance* by Gregory H. Clark, 1999. This article went on to say that Clark's primary goal was to quantify the impact of bacterial additives in septic tanks. Clark concluded his thesis by stating that, "more research is needed before definitive conclusions can be drawn about the practical benefits of using bacterial additives in septic tanks."

By curious happenstance I also recently received my copy of *Small Flows*, Winter 2002 – Vol. 3, No.1, and it contained an article – *Septic Tank Additives*. The article concluded with, "the debate on the issue of using septic tank additives can be resolved only through a cooperative research effort from independent/ unbiased researchers (such as universities and research centres) and additive manufacturers to determine their true effectiveness and reveal their limitations."

Perhaps the questions, is it false, is it far too general, were answered in a current US Environmental Protection Agency (EPA) fact sheet regarding the use of septic system additives reprinted in part below.

EPA Special Issues Fact Sheet 1 — Septic Tank Additives

Description

Because of the presence of significant numbers and types of bacteria, enzymes, yeasts, and other fungi and micro organisms in typical residential and commercial wastewaters, the use of septic system additives containing these or any other ingredients is not recommended. The benefits of consumer products sold as septic system cleaners, degraders, decomposers, deodorizers, organic digesters, or enhancers are not significant or have not been demonstrated conclusively, depending on the product. Some of these products can actually interfere with treatment processes, affect biological decomposition of wastes, contribute to system clogging, and contaminate ground water. The septic tank/soil absorption field system is the most commonly used on-site wastewater treatment system in the United States. It is relatively low in cost, has no moving parts, and requires little maintenance. Septic tanks have a number of important functions, including:

- **Remove oils, grease and settleable solids.** The septic tank is designed to provide quiescent conditions over a sufficient time period to allow settleable solids to sink to the bottom of the

. . . continued on page 3

Letter to the Editor

Grow Up

It has recently come to my attention that many in the installer community share the belief that they are not responsible for mistakes noted by an inspector during an inspection. More specifically, some installers perceive the fault to be that of the regulator when substandard aggregate is installed and subsequently failed. This seems to be consistent with the general thinking of society today, that people are not responsible for their own actions. Such thinking defies logic, yet more and more people use the empathetic nature of Canadians to avoid responsibility. To these people and specifically to these installers I say, "grow up"!

Installers licensed under the Ministry of Municipal Affairs and Housing have an ethical and legal responsibility to install an onsite sewage system to at least the minimum specifications of the *Ontario Building Code* (OBC). If, during an inspection, it is determined by the regulator that the aggregate or building materials do not meet the minimum OBC requirements, the installer is accountable. According to the OBC, the installer is responsible for ensuring that the materials used in an installation meet the standards of the code. The regulator, by enforcing the OBC standards, is protecting the homeowner and installer. The regulator is protecting the installer from 1) being potentially held liable in tort if the sewage system fails prematurely because of substandard materials and 2) from being ripped off by a supplier that knowingly delivered substandard, cheaper aggregate or materials at the cost of the better ones.

Let us not forget the homeowner in all of this. Deliberate installation of substandard aggregate or materials is deceptive and undermines the reputation of the industry. If the contractor argues with a regulator who has been unable to pass an installation as a result of substandard aggregate or materials, the installers competence or honesty is dubious. If the homeowner was made aware of such behavior by their installer, they would most certainly seek legal action.

Mistakes inevitably happen to all of us. However, as an installer, if you are unwilling to install an on-site system in accordance with the OBC, then do the responsible thing and let more competent installers do the work.

Robert A. Passmore B.Eng.
Part 8 Inspector

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tank and floatable solids, oils, and grease to rise to the surface. The result is a middle layer of partially clarified effluent that exists the tank to the soil absorption field.

- Store settleable and floatable material. Tanks are generously sized according to projected wastewater flow and composition to accumulate sludge and scum at the bottom and top of the tank, respectively. Tanks require pumping at infrequent intervals (e.g., 1 to 7 years), depending on sludge and scum accumulation rates.
- Digest/decompose organic matter. In an anaerobic environment, facultative and anaerobic bacteria can reduce retained organic molecules to soluble compounds and gases, including H_2, CO_2, NH_3, H_2S, and CH_4. This digestion can significantly reduce sludge volume in warm climates.

Types of additives and effects on treatment processes

There are three general types of commonly marketed septic system additives:

- **Inorganic compounds, usually strong acids or alkalis are promoted for their ability to open clogged drains.** Product ingredients (e.g., sulfuric acid, lye) are similar to those used in popular commercial drain cleaners. These products can adversely affect biological decomposition processes in the treatment system and cause structural damage to pipes, septic tanks, and other treatment system components. Hydrogen peroxide, once promoted as an infiltration field reconditioner, has been found to actually degrade soil structure and compromise long-term viability of soil treatment potential. Its use to unclog failed infiltration fields is no longer recommended.
- **Organic solvents, often chlorinated hydrocarbons** (e.g., methylene chloride, trichloroethylene) commonly used as degreasers and marketed for their ability to break down oils and grease. Organic solvents represent significant risks to ground water and wastewater treatment processes. These products can destroy resident populations of decomposer and other helpful microorganisms in the treatment system. Use of products containing organic solvents in on-site treatment systems is banned in many states. Introduction of organic solvents into on-site systems located in states that ban the use of these products may trigger liability issues if ground water becomes contaminated.
- **Biological additives, like bacteria and extracellular enzymes mixed with surfactants or nutrient solutions,** which mirror but do not appear to significantly enhance normal biological decomposition processes in the septic tank. Some biological additives have been found to degrade or dissipate septic tank scum and sludge. However, whether this relatively minor benefit is derived without compromising long-term viability of the soil infiltration system has not been demonstrated conclusively. Some studies suggest that material degraded by additives in the tank contributes to increased loadings of BOD, TSS, and other contaminants in the otherwise clarified septic tank effluent.
- **Other products** containing formaldehyde, paraformaldehyde, quaternary ammonia and zinc sulfate are advertised to control septic odors by killing bacteria. This objective, however, runs counter to the purpose and function of septic tanks (promoting anaerobic bacterial growth). If odor is a problem the source should be investigated because sewage may be surfacing, a line might have ruptured, or another system problem might be present.

Another variety of consumer products is marketed for their ability to remove phosphorus from wastewater. These products are targeted at watershed residents who are experiencing eutrophication problems in nearby lakes and streams. Phosphorus is an essential nutrient for aquatic plant growth and limiting its input to inland surface waters can help curtail nuisance algae blooms. Aluminum (as alum, sodium aluminate, aluminum chloride and activated alumna), ferric iron (as ferric chloride and ferric sulfate), ferrous iron (as ferrous sulfate and ferrous chloride), and calcium (as lime) have been proven to be effective in stripping phosphorus from effluent and settling it to the bottom of the tank. An important side effect of this form of treatment, however, can be the destruction of the microbial population in the septic tank due to loss of buffering capacity and a subsequent drop in pH. Treatment processes can be severely compromised under this scenario.

Finally, baking soda and other flocculants are marketed as products that lower the concentration of suspended solids in septic tank effluent. Theoretically, flocculation and settling of suspended solids would result in cleaner effluent discharges to the subsurface wastewater infiltration system. However, research has not conclusively demonstrated significant success in this regard.

The EPA, USDA or Environment Canada approval of additives means the product contains no hazardous materials and/or it is biodegradable. Approval doesn't mean the product is effective at what the manufacturer claims it will do. The EcoLogo certification is a type of "approval" used by an agent of Environment Canada. One Canadian manufacturer of these products mentioned in the March 15, 2002 letter to OOWA, "the EcoLogo certification ensures that no hazardous materials are used in

The Saga of Septic System Additives continued fom page 3

products (LC 50), ensures quick biodegradation according to test method (OECD 310E) and performance testing."

LC 50 Test = An LC50 value is the concentration of a material in air that will kill 50% of the test subjects when administered as a single exposure (typically 1 or 4 hours). This value gives you an idea of the relative toxicity of the material.

OECD 310E = products have been tested, by the rapid biodegradability method, to ensure that they biodegrade quickly in the environment, without harmful residues.

The following was taken from the TerraChoice website. "The Environmental Choice Program (ECP) is a Program of Environment Canada. ECP is operated by TerraChoice Environmental Services Inc. under a license agreement with Environment Canada. The EcoLogo is a registered mark of Environment Canada. Use of the name Environmental Choice or the EcoLogo symbol is prohibited without permission by TerraChoice Environmental Services Inc."

One might think "performance testing" is a testing method used by Environment Canada to determine the effectiveness of a product. I asked Kevin Gallagher of TerraChoice Environmental Services Inc. the question, "do you test the effectiveness of products?" He replied, "Yes. We use plate counts to look at performance effectiveness. Given that there is no industry standard for performance of these products, we came up with this methodology."

Plate count = number of colonies formed on a culture medium when uniformly inoculated with a known amount of dilute suspension. The technique estimates the number of certain organisms present in the sample.

But in fact, a disclaimer on the TerraChoice website reads, "responsibility of the advertised products and services lies solely with the companies indicated. TerraChoice Environmental Services Inc. is not responsible for claims regarding a product or service outside of those supported within the relevant Environmental Choice Program guideline."

Confusing?

I e-mailed Mr. Gallagher of TerraChoice, "What else do you test for? I understand plate counts for LC50 and OECD 310E, do you do plate counts for anything else? How do plate counts allow you to evaluate the effectiveness of the products?"

These e-mail questions were not replied to. I asked Mr. Gallagher, "so you are saying that TerraChoice tested for the effectiveness of the products and support their claims that their products are, 'a complete blend of bacteria and enzymes which digest waste in the septic tank helping to prevent solids from entering the tile field. Eliminates odours, reduces solids buildup and pumpouts. Effective. Used to rejuvenate tile beds'." To which Mr. Gallaghar replied, "no, I didn't say that. I said we typically include performance testing in our criteria."

So back to the questions, is the on-site pamphlet statement false and/or far too general? Notwithstanding, some of the products can do some of what they claim, some of the time; i.e, reduce the solids being digested in the septic tank. This results in a greater BOD and TSS load which may affect the leaching bed. Most products make no claims about the leaching bed. This dispute seems to be centered not on whether the product works in a septic tank, but is there third-party verifiable data to show that it is of benefit to a septic system, i.e., the leaching bed? We have discussed this topic with many, many colleagues and none have indicated that there is data currently available.

To Be Continued . . .

(Al Brown is continuing his quest and hopes to submit part two in the next issue.)

Review of the Annual Ontario On-Site Wastewater Conference & Exhibition

by Helena Draper of Draper Backhoe Services Inc.

I attended the recent On-Site Conference and wanted to share my enthusiasm for the experience. The speakers were fantastic, the food was great, the social time during the evening was memorable, the lodging luxurious, and the facilities very accommodating. Next year I encourage you to join us at the annual conference. Bring your wives or husbands, whether they are involved in the industry or not. If they are, they will be amazed at the information that they glean from the workshops and sessions. The sharing of knowledge and ideas at coffee breaks and meals is very stimulating. If they are not involved in the industry, there is a pool and exercise facilities to take advantage of, as well as wonderful shopping close by. In the evenings we were able to congregate for a few laughs and more brain swapping. Try and plan the conference as a get away and if you can, take an extra day or two to enjoy the facilities.

We hope to see everyone there next year!

Electrical Safety Authority

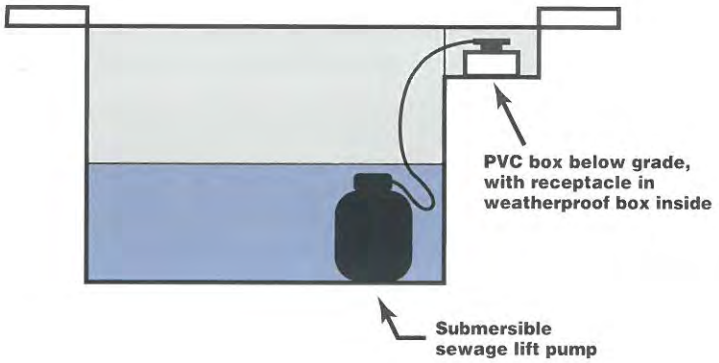
Extracted from the Ontario Electrical Safety Authority Fact Sheets

Residential Sewage Lift Pumps

Questions have been raised on what the preferred method is for wiring of residential sewage lift pumps. Because of the wet corrosive atmosphere found within most tanks housing lift pumps and similar equipment (e.g., aerobic systems), only electrical equipment essential for the process may be installed within such enclosures.

Code requirements to completely deal with this situation are yet to be developed. Until code requirements are prepared, the following wiring method should be used to supply equipment in residential sewage lift pump and similar tanks.

This bulletin applies only to a single dwelling installation. All other larger more complex installations shall be installed in accordance with the requirements of section 18.



Direction

Only electrical equipment essential for the process may be installed in a lift pump tank, and the factory installed pump cord and attachment plug (if supplied) should be run directly from the pump to a receptacle outside the tank. This receptacle should be mounted at least 300mm above grade on the side of the tank (if above grade), or on a suitable treated post, or below grade in a suitably sized PVC box rated 6P, or 4x with a bead of RTV (silicone) around the lid, adjacent to the tank, sealed at the entry to the tank. All openings in the box should be sealed with RTV or equivalent.

GFCI Protection

GFCI protection is not required for this receptacle provided it is solely for sewage pump use and it is not readily accessible for general use. It is recommended that the cord cap be secured to the receptacle to prevent accidental removal. An example of an acceptable installation using a receptacle is shown in the sketch above.

Disconnecting Means

28-604 (page 146) requires either a lockable disconnecting means; or a disconnecting means within sight of and within 9m of the motor. A circuit breaker in a panel is not acceptable as a lockable disconnecting means unless fitted with an approved permanently mounted lockout device, or it is within 9m and within sight of motor. If this is not practicable then a separate disconnecting means complying with 28-604 is required. A pump connected to a receptacle with an attachment plug at the tank does

. . . continued on page 6

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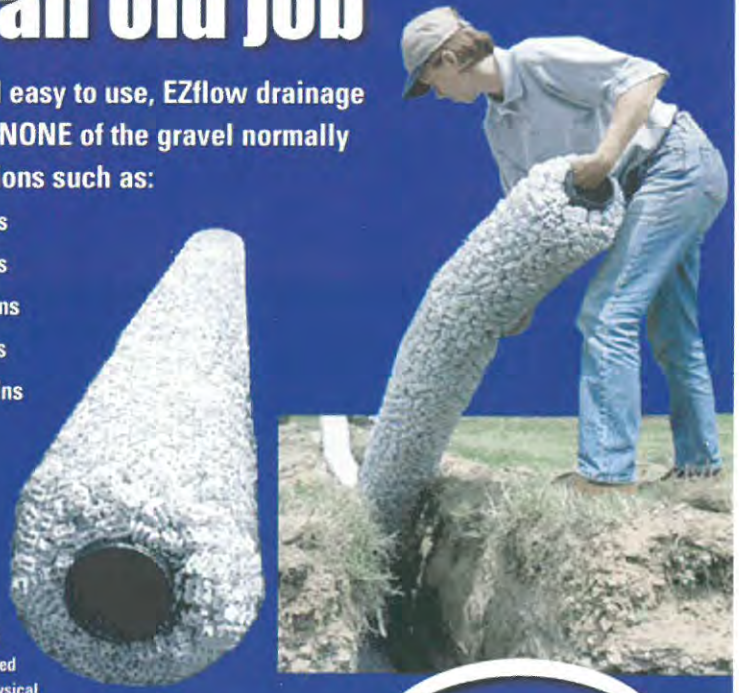

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3rd Annual Conference and Exhibition

by Doug Joy, OOWA Vice-president

The 3rd Annual Ontario On-site Conference and exhibition was held on March 24, 25 and 26 again this year at the Delta Meadowvale in Mississauga. Co-sponsored by the Ontario Rural Wastewater Centre and the Ontario On-Site Wastewater Association, the conference attracted over 200 participants from not only all parts of Ontario but as far away as Florida.

The conference began with a tour of some interesting installations near the conference centre on Sunday. These included of a communal system serviced by a sand filter, a very large shallow buried trench system servicing an RBC unit at a trailer park, a Waterloo Biolfilter with water reuse for irrigation at a golf course and a large Norweco system servicing a multiuse facility in Erin. Thanks to Paulette Hache of Sand Filtration Inc, Hal Lewis of Stantec Engineering, John Doner of Sanitech and Craig Jowett of Waterloo Biofilter for coming out on such a cold day and providing us with the tour stops.

A key theme of this year's conference was Management of On-site Systems. Rick Novickis gave some excellent and entertaining insight into the successful management program he heads up in Cuyahoga County, Ohio. Terry Davidson of the Rideau Valley Conservation Authority/Ottawa Septic System Office, related their experience in Ottawa and perhaps most important on the management side was Karen Mancl's keynote address in which she covered the key components of successful on-site management programs across the U.S. Finally, the keynote address by Don Waller on the experiences of Nova Scotia and their lessons learned was full of similar areas of concern that we have in Ottawa, as well as lessons we have yet to learn.

Overall the conference was a tremendous success because of the insight of the speakers, enthusiasm of the delegates and the presence of the many exhibitors. A highlight of the conference was the draw prizes provided by the exhibitors and awarded to the winning delegates at Tuesday's lunch. Thanks to all those exhibitors who contributed.

Finally, planning is already underway for next year's conference. If you want to get involved or have ideas (themes, topics, location, etc.) for the planning committee to consider, let me know. (519) 824-4120 ext. 3024.

John Donner of Sanitech presents a shirt to Elmer Covill of Elmer's Construction

Al Brown of Sand Filtration Inc. and Rosario Lindia of Innovative Water and Sewer System Inc.

Gail Musgrove from Northern Purification Systems presents to Mike Eisses of Eisses Brothers Excavation

Electrical Safety Committee

continued fom page 5

with an approved permanently mounted lockout device, or it is within 9m and within sight of motor. If this is not practicable then a separate disconnecting means complying with 28-604 is required. A pump connected to a receptacle with an attachment plug at the tank does not require additional disconnecting means.

Other

In cases where the pump cord is not provided with a pre-molded cord cap, it shall be acceptable to connect the pump cord directly to the supply cable in an approved weather proof junction box, mounted either above or below grade as outlined above. Cutting off a pre-molded cap is not acceptable.

Mechanical protection is required for a cord or supply cable above grade level. The tank may be completely buried, and no permanent means of ready access to the tank is required.

Site Section *(New Column!)*

Identifying Soil Mottling

It is important to recognize mottling in test pits in order to determine the high mark of the groundwater table and to infer the state of compaction or consistency of the soil. This allows the design of the system to account for soil permeability and adjust for the highest level of the water table. Mottling is the oxidation of mineral deposits in soils (primarily of a fluvial origin). It occurs when water levels fluctuate, alternating between saturating an area, and then receding away from it. When the water saturates the soil, it dissolves minerals like iron and calcium. Once the water recedes, the dissolved minerals are oxidized by the air, changing colour and are visible against the soil. In some cases mottling is characterized by an orange colour (rust) or white deposits (calcium streaks in silts and clay). These deposits appear as shapes and streaks in horizontal or vertical lines or swirls. Cutting a flat face in the test pit with a hand shovel or gardening tool will allow the assessment of these characteristics.

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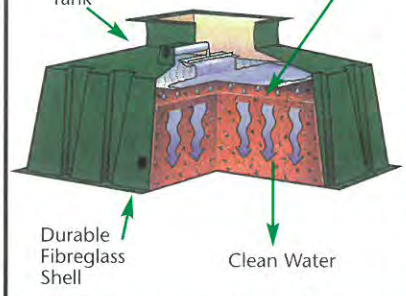

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Ontario Objective Based Code Development

Since 1995, federal and provincial agencies have been working towards replacing the current model building and fire codes with objective based codes. This includes the OBC, which is currently being subjected to a parallel review. In October 2001, technical code advisory committees were set up, one of which is focused on OBC Part 8; Sewage Systems. This committee has been reviewing the code and providing advice on technical issues in the development of the new objective based code, as it relates to sewage systems. The Part 8 Technical Committee is comprised of 10 members, four of whom are OOWA membership: David Cooke, Alex Campbell, Jim Aitkin and Doug Joy (Committee Chair). The objective based analysis being performed evaluates each sentence of the code for its type of objective, provision, intent, history and application. (why, what, where, when and how). These proposed changes to the Ontario Building Code should improve its effectiveness, understandability and potentially its flexibility. This should be better for those working in the industry. Rather than being based on minimums as in the past, the objective based code will: Use a fixed list of terms, describe the fundamental goal of a requirements' presence in the code, will have objectives for the requirements, and have multiple objectives for some sentences, each with separate record.

Records of the Technical Review Committees meetings are available on the web at:
www.objectivecodes.gov.on.ca/obca/technical_review_committees.html.

Once the Committees finish their evaluation, a public consultation will take place. This is your chance to look at the proposed changes and give comments on the content, appearance and format of the objective based code. In 2003, the technical committee will reconvene to review the public input.

Component Focus *(New Column)*

Contributors: Boucher PreCast Concrete Limited and the CPA

Precast Concrete Septic Tanks

Precast concrete tanks are commonly used as the first stage of treatment in onsite sewage systems. One-piece residential tanks up to 9,000 litres generally come with the centre partition integral to the tank, whereas larger capacity tanks are frequently cast as two sections. Both have plastic or concrete inlet and outlet baffles attached. Proper sizing and installation results in a simple, safe and cost effective anaerobic treatment unit. Septic tank design is still evolving, and manufacturers alter and add features to improve their product's manageability and safety. Some of these new features include watertight gaskets on both the inlet and outlet to ensure a good seal at the connection. Access hatch covers formerly inset in the tank lid, are now raised up, fitting over the risers. This allows for easier lid manipulation, better protection against material falling into the tank and improved access for pumping and effluent filter maintenance.

Some companies will provide installation guidelines with their tanks at the installers request. To increase the speed and effectiveness of your concrete tank installation, the following guidelines are suggested by Paul Boucher, president of Boucher PreCast Concrete Limited. Consider access for the truck delivering the tank. A boom truck requires a firm, flat and level area of sufficient size, with no overhead obstructions. For sections weighing over 10,000 lbs, the placement location must be centered behind the truck, within 20 feet. The excavation should have 6 inches of sand, gravel or crushed stone at the base, and allow at least 18 inches of clearance on all sides of the tank. To obtain a good watertight seal in the joint, allow the tank to stand at least two days. This allows the weight of the top section to compress the mastic seal and come to rest in its final position. Ensure that no water comes in contact with the joint until this time has passed. Parge or grout 6 inches above and below the joint with good hydraulic cement or an epoxy paste. This should be done around the complete inside perimeter of the tank. Parging the outside as well will further improve the seal. When backfilling around the tank, machines should not place their weight beyond the edges of the excavation. Take care that large stones do not roll against the tank as material is moved against it. Keep in mind that although the tanks are very heavy, they will float if water is allowed to accumulate in the excavation. To prevent this, partially backfill or fill the tank with water to 1 foot below the joint.

Owners of the onsite system should be shown where the access lids are located and reminded of the importance of tank maintenance.

The Concrete Precasters Association of Ontario has recently established a certification program, to assure a uniform standard of quality of precast tanks across Ontario.

In cooperation with the Ministries of the Environment, and Municipal Affairs and Housing, the program will ensure that manufacturers test their products for leakage and structural integrity. CPA certification will eventually encompass many of the precast concrete products used in water and wastewater systems. Currently, the CPA certification of precast concrete septic tanks and sewage holding tanks, entails proof of conformance with CAN/CSA-B66-00. The program includes: annual compliance reporting, product testing, product drawings and certification report, proper marking and display of the CPA certification seal. A registry has been established that lists certified manufacturers and their products. Public access to the registry is through (613) 472-6039 and soon to be available at www.cpaontario.com.

Care & Feeding
(recognize this guy?)

The publication *Care and Feeding of Your Septic System,* published by the Concrete Precasters Association of Ontario, the Canadian Institute of Public Health Inspectors and the Ministry of the Environment was an excellent manual for homeowners with on-site sewage systems. Over 100,000 copies of this publication were printed and distributed across Ontario. There is a demand for more, so in cooperation with the CPA and OASIS, OOWA will be applying this fall for a Trillium Fund grant of up to $25,000 to review, update and republish this excellent manual in order to continue to provide them for homeowners in un-serviced areas.

Feature Installation *(New Column!)*

Replacement beds can require special consideration, especially when a newer building code is combined with an older property. At this location, a tertiary treatment system allowed the small waterfront property to accommodate a new system under the current building code. All separation distances were met and the design flow was accommodated.

Site: 120 x 80 ft, clay soils, waterfront, floodplain.
Parametres: 280m^2 finished floor area, 2800 L/day.
Design: Two above grade Ecoflo pods on an in-ground single area bed of 174m^2. 17m sand mantle cut out of clay towards the water, ending in topsoil 3m from the water. Backfilled and seeded for vegetation coverage.

Have you designed or installed a system in an uncommon or tricky site? Take a picture before it is covered and send it to us with a description of the system and what made it unique! In the future we will credit the designer and installer of the feature site.

Installers Comment *(New Column!)*

Are you an installer with a concern or issue you would like to share with others? Please contact us and we will be happy to put your comments into print. We will even do the writing for you!

Submitted by Eric Draper of Draper Backhoe Services Inc., Osgoode, Ontario.

This year's work is well underway and we hope for a successful and profitable season. As a company involved in all aspects of the on-site sewage system industry, it is important to us to maintain and improve our image for past, present and future clientele. The reputation of on-site systems and those in the industry is based on how we conduct ourselves, and the effectiveness of our product. This being said, there are a few subjects that need more attention.

Effluent filters and risers: As contractors, we do not operate our equipment without air filters or oil filters in place and in good working order. We know the problems and costs that would result from the failure of these comparatively inexpensive items. Effluent filters are the same. Why allow customers to operate their new or repaired septic system without a filter, when you know what the resulting costs will be if the bed malfunctions.

Municipal sewer proponents: A short time ago at our local installers meeting we discussed one problem that affects us all jointly. Our biggest competition in the future could end up being the dreaded sewer system. On-site sewage systems can be proven to be more cost effective, and have environmental advantages when installed and maintained properly. However, a lot of people and politicians feel that "flush and forget" is the best answer. As installers, our best hope for educating decision makers and raising public awareness is to act as a group. I hope that everyone reading this article considers joining OOWA to give us the numbers to be heard and recognized.

Finally, in the interest of correcting the misconceptions about on-site sewage systems and the reputation of the industry, here are some suggestions to consider for your business.

- Be compassionate and understanding with your customers, and combine this with the words of a speaker at the recent On-Site Conference in Mississauga, "you are in this business for more than the fresh air." Strive for a balance.
- Offer your customers the best design possible. Explain the differences between options, the benefits and the disadvantages. Help them make an educated decision.
- Take time to drive by some of the jobs you did last season to make sure no problems developed over the winter. Customers appreciate this and are more likely to recommend you to others in the future.
- Make a commitment to yourself and your company for further education in the field. Stay updated on new technologies and changes to the building code.
- Attend events and conferences focused on the industry. You will make useful contacts and learn about new products and designs. This will improve your business and you will enjoy yourself.

Proposed Overhauls to Part 8 OBC Licensing
(draft position statement)

Contributed by the Government Relations Sub-Committee

The following outlines several options identified by the OOWA government relations sub-committee with regard to training and certification programs. These programs could replace the current standard testing and licensing of installers and regulators under Part 8 of the OBC. OOWA would like to submit a position statement on this subject to the OMMAH before the end of 2002.

Option 1: Do Nothing (Status Quo)

At present the Ontario Ministry of Municipal Affairs and Housing (OMMAH) requires installers to write an exam and pay a $50 fee per company and a $50 fee for each superviser. This license is valid for three (3) years, then you pay $50 again to get additional three (3) years. This process also requires a licensed supervisor to be on site during the construction of the septic system.

Option 2: Re-testing Program

This program would require a test to be written at the renewal of the supervisor's license every three (3) years. Every test would cover new ground and raise the bar from the previous test. The courses might be 5 days plus a new exam (multiple choice) similar to the OMMAH program.

This retesting program will have 2 levels of certification:

- Certification 1: This would consist of conventional and filter media beds only, NO pumps will be included in this exam
- Certification 2: This would consist of alternative technology and systems requiring pumps

The testing will be administered by the Ontario Ministry of Municipal Affairs and Housing (OMMAH).

Option 3: Re-certification Program

- After obtaining initial supervisors license under OMMAH it would require obtaining a certain number of Continuing Education Units (CEU). A committee or stakeholders group would be formed with OOWA, OMMAH, etc. to assess the point system, course material, course time, intensiveness, credits for license, etc.

OOWA would run and maintain the re-certification program for the OMMAH.

Phase in of this option would be initiated after a set calendar year, this would prorate to the rest of the license. This means that you would have until April 1st in the calendar year of the expiration date on your license to obtain your credits.

Option 4 – Graduated License or Apprenticeship Program

This would be similar to the graduated license for new drivers, with several tiers of licensing. It would include milestones of training and experience. In other words through schooling then field experience; then schooling then field experience and so on for three (3) years. After the three (3) years you will gain your basic installers license. People who are already licensed installers would be grandfathered into this license. There would different categories of licensing such as a Soil Evaluator 1 and Soil Evaluator 2. The licenses would be separated into Regulator or Installer.

There would be three (3) levels of licensing:

- Level 1: Installers able to do work
- Level 2: Installers able to do work and design for conventional and filter media beds only
- Level 3: Installers able to install and maintain all treatment technologies and pumps. This level would be broken into two (2) categories 3A and 3B.
  - 3A: Would not allow you to give a maintenance agreement on your work.
  - 3B: Would allow you to give maintenance agreements on your work.

Now that you have read the options available, do you have any more options you would like to see included or have any comments on the options given? Contact Terry Davidson at at (613) 692-0160 x107.

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Did You Know . . .

You can ask for advise on interpreting the *Ontario Building Code* online at: codeinfo@gov.on.ca

Frequently Asked Questions

Reviewed by Ahmed Sharaf, P-Eng, Building Code Advisor, MMAH

Q ▸ If an existing house is converted to a non-residential use, what mechanism in the *Ontario Building Code* ensures the septic system is adequate?

A ▸ Section 10.3.2.2.(11) of the OBC states, "the performance level of a building or part of a building is reduced where, after a change of major occupancy, (a) the total daily design sewage flow of the new major occupancy, calculated in accordance with Article 8.2.1.3., exceeds the capacity of any component of a sewage system serving the building, or (b) the type or amount of sanitary sewage which will, under the new major occupancy, be discharged to a sewage system serving the building is prohibited." Therefore, the sewage system in this case should be assessed to ensure compliance with the requirements of the OBC.

Q ▸ If a house is destroyed by fire and is less than five years old, can compliance alternatives be used for the sewage system if the sewage system is damaged during the fire, and the design flow of the new house is greater and the septic system has to be replaced?

A ▸ No, Compliance alternative is stipulated under Part 11 of the OBC. This part applies to the design and construction of existing buildings that have been in existence for at least 5 years.
Part 8 of the Code is the applicable part in this case as it stipulates the construction, operation, and maintenance requirements of all sewage systems, and to the construction of buildings in the vicinity of the sewage systems.

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ONTARIO ONSITE WASTEWATER ASSOCIATION

Board of Directors

On Monday March 25, 2002 the Annual General Meeting of the Ontario Onsite Wastewater Association was held in Mississauga. A new board of directors was voted in and is as following:

- **Mark Green** Chief Building Official Leeds, Grenville & Lanark District Health Unit
- **Bob Thompson** representing OASIS, also Valley Sanitation
- **Dennis Dick** (pending membership): D and B Construction
- **Terry Davidson** (2000-02 president): Rideau Valley Conservation Authority, Manager of the Ottawa Septic System Office
- **Craig Jowett**: Waterloo Biofilter Systems Inc.
- **Doug Joy** (2000-02 vice president): University of Guelph, Ontario Rural Wastewater Centre
- **Philippe Masuy** Ecoflo Ontario
- **Doug Robinson** Concrete Precaster Association of Ontario, also of Unit Precast
- **Bill Seabrook** (2000-02 treasurer): Green Valley Environmental
- **George Eastwood** Homestead Inspection and Engineering
- **Andrew Tovell** John D. Paterson & Associates Ltd.
- **Al Brown**: Sand Filtration Inc.
- **Alex Campbell** (2000-02 secretary) R.J. Burnside and Associates Ltd.
- **David Cooke** Public Health Inspector, KFLA Health Unit
- **Tom Musgrove** Northern Purification System

S-Files

Unexplainable or inexplicable septic sightings

OOWA member Jonathan Maybury of Third Eye Technical Service, is assisted on site by his son Jonah and dog Wiley

Membership News

Thanks to the efforts of the membership and public relations committees, OOWA's membership is growing again after a hitting a plateau in 2001. At this time all our members are registered with the National Onsite Wastewater Recycling Association, and should start receiving their newsletter shortly. Two pamphlets were produced by OOWA for 2002, the first is a membership brochure, all about OOWA with a membership application on the back. The other is a *Do's and Don'ts* pamphlet for distribution to homeowners by our members. So far, 2,900 of these have been requested for distribution. If you would like some for your business, contact Jocelyn at (613) 692 3571 x137.

Courses & Training

What would you like to learn about? If we could offer a workshop in your area, what would be the topic? Soils, pumps and controls, alternative technologies etc. Let us know, send a fax to **(613) 692-1507** or call us at **(800) 459-5975 x 137** or **(613) 692-0160 x137**.

From the Editor

In response to feedback from our members, a few new columns have been added to the newsletter to include more information. Your contributions and suggestions are invited. Letters to the editor, component focus, FAQs, feature installation, installer's comment, photos for our gallery etc. are all welcomed and encouraged. Contributors names will be placed in a draw. Every issue, we will pull one name and send them a free ONSITE hat or T-shirt.