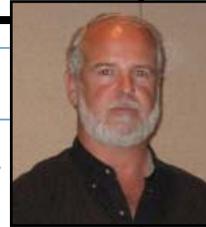


Volume I, Issue I – February

Delaware On-Site Wastewater Recycling Association

DOWRA
P.O. Box 1696
Dover, DE 19903

DOWRA NEWS
February 2009



Message from the President—Ken Walsh

The hard economic times are everywhere you look. In the onsite industry many or should I say all of us are feeling the crunch of tighter wallets.

Many of us have gone to cutting staff, spending, costs, and even some of our programs. Some have even tried picking up odd jobs here and there. But, is placing ourselves in this position so soon the correct thing to do?

Drastic times call for drastic measures only after a self or business evaluation has been conducted. It is important before you start changing the **ways of your business you need to identify the way you do your business.**

Every business should

focus on who they impact, and what opportunities do they have because of these parties. Once you identify these you can then move onto identifying what problems may be preventing you from providing the impact you want.

By answering some of these basic questions, you will be able to identify obstacles that can be fixed immediate and opportunities that will still allow your business to flourish.

Staff involvement is also important in creating goals for the future. If you talk about the current economic times and demonstrate a plan for the future you will generate “ a reason to come to work” so to speak. Attitudes will improve as

will the quality of work. You may also receive positive feedback resulting in a better way of conducting business, or another opportunity to generate business.

Being proactive instead of reactive may be a key to staying alive during these times.

DOWRA in an effort to assist its members during these times is going to host free CET workshops along with DNREC to licensees. Currently there are four manufacturers that have also expressed an interest in providing workshops to Class E, Class C and possibly Class D licensees.

Be on the look out more information to follow!

Inside this issue:

[System Location](#) 2

[What's Going On In DNREC](#) 3

[Regulation Amendment](#) 3

[AeroCell and Bio-Coir](#) 4

[EcoPure Peat](#) 6

[Board of Directors](#) 7

[DOWRA Calendar](#) 8

Service Provider Tips

As many of us are entering the service provider arena, there are many tips to ensure your business runs smoothly:

- Have a tracking system that enables you to tract installation dates, operation and maintenance INSPECTION DUE DATES, problems, follow up , paperwork completed, homeowner orientation, etc.
- Follow up on your staffs performance. Have a checks and balances routine.
- Have complete copies of the permits in your file. This allows you to know every aspect of the system.
- Ensure you are inspecting the entire system, and are competent in performing those types of inspections. Always try to further your knowledge.
- Follow up with DNREC and homeowner when problems are found.
- Make sure your certifications are up to date.
- Utilize approved inspection reports. Fill out inspection reports thoroughly. Note, different systems require different reports.
- Communicate with the owners, manufacture representatives and DNREC. Have a way of communicating with the homeowner if they are not available.
- Be able to communicate effectively about the system, and the need for operation and maintenance.
- Have spare parts available.
- Know what you can repair.

System Location TIP Trick , by Ben Miller

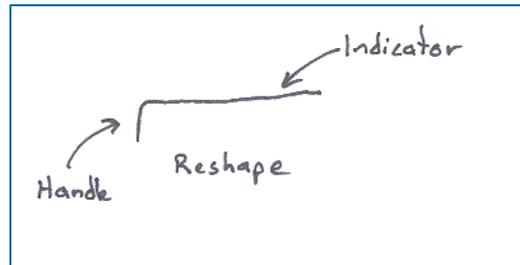
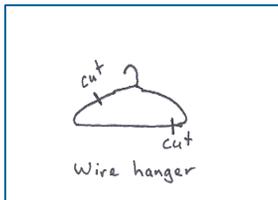
One of the most time consuming and difficult things within the onsite wastewater business can be finding existing disposal systems and components. Divining rods can be useful when there is no permit information available and the only source you have to find a system is the pipe leaving the underside of the house. Divining rods are helpful in locating the septic tank, d-box, the limits of the disposal field, as well as trench locations. The following is a cheap easy way to make your own with an example of how to practice:

Materials:

- Wire Cutters
- 2-Wire Coat Hanger
- 2-Empty cups
- 1-Cup of water

Process:

Cut the coat hanger approximately as shown and straighten the handle to a ninety degree angle. (You want to cut two coat hangers approximately the same length)



How to use:

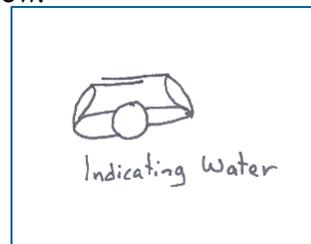
Place 3 cups in a row, two cups empty and one cut with water in it, spaced about six foot apart.

Hold rods in front of you about shoulder width. Rods should be perpendicular to your body.

Slowly walk forward holding the rods loosely in your hands.

As you get closer and walk over the cups the rods will start to swing and move. This may happen some even over the empty cups.

As you move over the cup with water the rods should come together and as you move away they should open back up indicating that there is water below.



Practicing with the cups can even be a fun party trick for entertainment. I would also practice out in the field when you know where the system is to get a better feeling on locating system components. Other things such as tree roots, pipes, wiring, and other underground objects can indicate a location as well, so it will take some time and practice to get a good system location.



What's Going On In DNREC?

Class H System Inspector, by Scott Eicholtz

Throughout the past couple of months we have all been hearing the buzz in the air all centered on the word “change”. I’m not talking about the coins that jingle and collect lint in our pant pockets or automobile console; I’m talking about the concept and idea of change. We have heard about it from politicians, we hear about it nightly while watching the news on television, and we read about it daily in the newspapers. Some people are a little apprehensive about it but I believe most of us hope for it and will cling to it during these difficult times of uncertainty.

With all of that said, the Class H Inspection Program is currently experiencing changes of its own. One of the most prevalent changes that will be taking place starts February 1, 2009. This important date will institute the required use of the new class H inspection form and guidance document. These two new documents are just one more step forward towards helping the State of Delaware to protect its two most valuable resources -- its citizens and the environment. The roll out of these two new documents has been the culmination of numerous public meetings, input from outside resources and the endless effort from the staff of the Department. I would specifically like to recognize the members of DOWRA who served as a peer review committee for their countless hours of time and effort in helping to bring these two new documents to fruition.

On the 14th & 15th of January this year two meetings were conducted in Georgetown at the Cheer Center and in Dover at the R & R auditorium. These two public meetings were to introduce the class H inspection form and guidance document and to inform licensees and any other interested individuals about the numerous new requirements that will now be in effect when performing a class H inspection and filling out the new class H inspection form. Some of the more notable changes include the mandatory pumping during an inspection, scaled drawings and a more detailed guidance document.

Another important change for those class H licensees that will be performing inspections within the Inland Bays Watershed is the passing of the new Pollution Control Strategies (PCS) that were signed into law on October 15, 2008. Some may remember Hilary and Jim’s impromptu presentation at the DOWRA conference. This means all cesspools and seepage pits are now prohibited within the watershed and shall be replaced. That means that these systems are now an automatic unsatisfactory on the inspection form. There are also new requirements concerning inspections and pump outs for all property transfers within the watershed which, goes into effect April 30, 2009. Please take the time to consult the PCS in regards to all the pertinent dates and regulations.

Regulation Amendment Process Underway for the On-Site and Spray Regulations

The Start Action Notice was signed by the Secretary on December 18, 2008 and now it’s time to get busy with amending the on-site and spray regulations. In case you haven’t heard the Ground Water Discharges Section (GWDS) is amending the Regulations Governing the Design, Installation and Operation of On-Site Wastewater Treatment and Disposal Systems to include expanding the large system requirements to include spray irrigation. This will establish one set of regulations for all of our on-site programs except Underground Injection Control.

In order to help facilitate less meetings and mailings the GWDS has set up a website to follow the changes. These changes will be discussed and shown during the workshops and work groups but it is hoped that we get written feedback throughout the time periods between the meetings and workshops. The entire current regulation is included in what you will see on the website – there have been no deletions or additions in the small system sections but they have been re-arranged to provide a better flow. Here is the link to the amended regulation:

<http://www.wr.dnrec.delaware.gov/Information/GWDInfo/Pages/GWDSDesignInstallOperateInfoForProposedWWTreatmentRegs.aspx>

A working committee has been formed and we would like representation from all licensee groups but have only a few volunteers so far. The volunteer groups include; soil scientists, designers, spray irrigation designers, system contractors and hydrologists. We still need another Class B designer, waste haulers and system inspectors. We want to keep the committee to around 20 people. All of us in the GWDS look forward to working with you to change the regulations.

AeroCell® & Bio-COIR® Advanced Treatment Systems by Quanics®

Today more than ever homeowners and business owners alike are presented with numerous options for alternative treatment systems in the field of onsite wastewater disposal. With greater awareness and increasing regulatory restrictions being placed on the development of properties within environmentally sensitive areas, alternative treatment systems are increasingly becoming in demand to meet both the development needs of property owners as well as offer viable solutions for environmental protection of groundwater and fragile eco-systems. Alternative treatment systems can also provide a workable solution for failing septic systems that pose a health hazard to people and their environment as well as an enforcement nightmare for the regulatory community.

While many manufacturers market a variety of alternative treatment products from aerobic treatment units (ATU's) to fixed media filters, Quanics, Inc. of Crestwood, Kentucky, offers a turn key approach that customizes the treatment system to the individual project by offering the designing engineer assistance with design and providing the technology best suited for the project at hand. Quanics' AeroCell® and Bio-COIR® fixed film media filters offer both the designing engineer and homeowner greater flexibility in system design while being able to treat residential flows from 500 – 1,500 gpd to better than secondary treatment levels.



Bio-COIR® Self-Contained Advanced Treatment (SCAT) Module

The AeroCell® Advanced Treatment System utilizes a patented open cell foam media for treatment. The media's high porosity, large surface area, and ease of microbial attachment allows for loading rates of up to ten times that of other fixed film systems. The open cell foam media has a 15-year track record for effectively treating wastewater to the highest of standards:

CBOD: 2 mg/l TSS: 2 mg/l TN: 9 mg/l

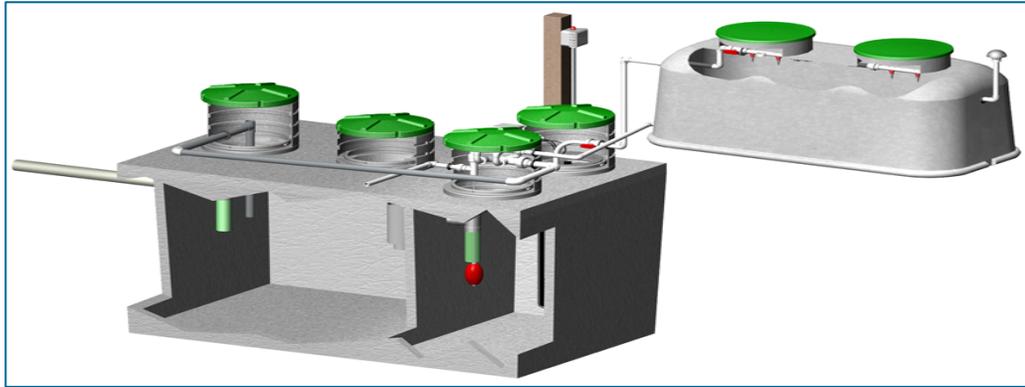
The Bio-COIR® utilizes a patented natural recycled media consisting of fibers from the coconut husk that is proving to be very resilient to deterioration in the septic environment and assures that excellent water/air ratio is maintained over a long period of time. The coir media is a 100% renewable, natural resource and has been proven to treat wastewater to high treatment levels:

CBOD: 9 mg/l TSS: 12 mg/l TN: 17 mg/l

Both the AeroCell and Bio-COIR Advanced Treatment Systems offer the added benefit of nitrate removal by recirculating 80% of the treated effluent back through the anaerobic environment of the septic tank for denitrification. The remaining 20% of treated effluent is directed to the dispersal field. The AeroCell has been shown through NSF and third party testing to achieve less than 10 mg/l TN.

Quanics has built a reputation for being able to provide the onsite wastewater community with complete wastewater solutions. Whether designing a system to serve a single-family, two-bedroom dwelling or a decentralized wastewater system to serve an entire community, by utilizing either the AeroCell or Bio-COIR technology, Quanics can offer a treatment system design to meet the specific needs of the project at hand. Both fixed film media filters are offered in a variety of treatment sizes using patented fiberglass

modules that are capable of treating from 200 gpd up to a single module capable of treating 5,000 gpd for larger commercial and community applications. Additional wastewater flows can be accommodated by adding additional modules in series.



Quanics' Residential Treatment System with 100/80/20 Gravity Recirculation Device

For the system installer, the AeroCell and Bio-COIR fixed film media filters offer ease of installation. The treatment modules are delivered preassembled with the internal media and piping already in place. Quanics' STEP systems also offer convenient and easily installed timed pump vaults for dosing the media filters. A typical system installation includes a septic tank with a Quanics' approved effluent filter, a dosing tank with STEP system, the AeroCell or Bio-COIR treatment module, the dispersal dosing tank or pump basin, and the disposal field. For most residential applications, the second compartment of a two-compartment septic tank can serve as the dosing tank to the treatment module thus eliminating the need for a second concrete tank. Utilizing a patented 4/1 pressure splitter device in conjunction with the dispersal pump tank/basin, the AeroCell/Bio-COIR treatment modules can also be buried with only the access lids and air vent above grade thus eliminating the need for an above ground "mound" installation as is often common with other natural fixed film media filters. Both treatment systems typically utilize an "Installer Friendly" simplex timed control panel (NEMA 4X rated) with easy-to-use touch pad for programming and monitoring pump and float operation.

In addition to the AeroCell and Bio-COIR advanced treatment systems, Quanics offers the designer and installer a variety of wastewater products including drip irrigation, LPP, sand mound packages, filtered pump vaults and preassembled pump stations, and a complete line of effluent and turbine pumps just to name a few. Quanics' is continuously pursuing new and innovative technologies in the onsite wastewater field. Their newest product offering is the SYNERGY™ Mobile Wastewater Treatment System. Utilizing AeroCell open cell foam technology, this mobile system fits inside a 53' insulated/heated trailer and is rated to treat 2,500 gpd of wastewater with larger flows accommodated by combining multiple SYNERGY units. This system has been proven to be as much as 5 times more energy efficient than any activated sludge treatment system. Applications for this new product include remote camps, arctic environments, disaster relief, temporary events, and military operations. The SYNERGY system is just the latest advancement in Quanics' continual pursuit of becoming the leading provider of complete wastewater treatment solutions!

Affordable Septic Solutions, Inc., located on Virginia's Eastern Shore in Melfa, Virginia, is proud to have been chosen as Quanics' Advanced Treatment Systems Certified Dealer for Delaware as well as Maryland and the Eastern Shore of Virginia, and is committed to providing designers and installers with the highest level of service and assistance in meeting all of their design and installation needs. They can be contacted toll free at 1-866-802-3455 or on the web at www.affordablesepticssolutions.com. Also, for additional information feel free to visit them online at www.quanics.net.



EcoPure Peat Systems

Developed by Ed Festa, the premier installation contractor on Florida's West Coast and Dr. Joan Brooks, PhD., the nation's leading authority on peat moss based wastewater treatment throughout 1998-1999, the 300 Series Peat Moss Filter was designed to provide a "user friendly that would provide outstanding wastewater treatment, low cost, and simple installation and maintenance." The system was designed for extreme site conditions and to meet the most stringent performance requirements.

The system was designed based on the research conducted at the University of Maine during the 1980's and 1990's and especially the research conducted by Dr. Brooks. Throughout her professional career, Dr. Brooks dedicated herself to study the use of sphagnum peat moss as a wastewater treatment media. In addition, Dr. Brooks researched the influence of fungus on the process of wastewater treatment. In her paper *Pollution Abatement with Peat Onsite Wastewater Treatment Systems*, Dr. Brooks concludes:

"On adverse sites, where the use of conventional subsurface soil adsorption systems does not provide acceptable levels of treatment, sphagnum peat moss may be used as an economical method of onsite wastewater treatment. The peat system, when properly designed and constructed, is relatively simple to install, requires minimal energy and maintenance, and provides a high quality effluent without additional disinfection".

The Eco-Pure 300 Series Peat Moss Filter is an advanced secondary wastewater treatment system that utilizes a specially cultivated and harvested sphagnum peat moss for the treatment of septic tank effluent. Sphagnum peat moss provides an excellent environment for micro and macro organisms that provide a high level of wastewater treatment. The treatment occurs by a combination of physical, biological and chemical processes. Due to its unique process, The 300 Series Peat Moss Filter is patented. The raw wastewater first enters a septic tank where pre-treatment of the wastewater occurs. Please note that a septic tank effluent filter is required for every Eco-Pure system. From the septic tank, the effluent enters the Eco-Pure 300 Series Peat Moss Filter either by gravity or through the use of pump tank containing a small incremental horsepower effluent dosing pump, typically 1/3 to 1/4 HP.

The dimensions of the high density polyethylene (HDPE) module are 7 feet wide x 10 feet long x 4 feet high. Eco-Pure, Inc. manufactures the module at its Fort Myers, Florida facility, using the rotational molding process. Eco-Pure uses only virgin HDPE resin for the module. This assures uniformity and structural integrity of the module. In addition, the resin contains the highest form of protection against harmful ultra-violet (UV) light. Each module is capable of treating peak flows of up to 600 gallons of wastewater per day from a four bedroom home up to 3,200 square feet in size. This is based on typical, residential strength wastewater. Properly installed, operated and maintained, test results have shown the effluent discharged from the 300 Series Peat Moss Filter to meet the following USEPA Advanced Secondary Wastewater Standards:

The wastewater enters the 300 Series Peat Moss Filter at the top of the module and is evenly distributed over the sphagnum peat moss bed through a high density polyethylene distribution plate, placed directly on top of the peat moss. The retention time of the septic tank effluent within the sphagnum peat moss is critical to the performance of the 300 Series Peat Moss Filter. This allows time for each organism within the peat moss to do its role in treating the septic tank effluent and allows for proper filtration of the wastewater. Depending on daily flows, detention time can range from 8 to 24 hours.

2009 BOARD of DIRECTORS

DOWRA Board Welcomes New Director!

Mike Bostic was elected to the Board of the Directors as the new Operator. Mike brings over 20 years of experience to the board in the wastewater industry. Mike currently is the manager of wastewater operations for Artesian Wastewater. His responsibilities include overseeing all wastewater operations, maintenance, and collection systems for the company.

A Big DOWRA Thanks!

The DOWRA board would like to thank Sam Schlegel of Tidewater Utilities for his service as a operator representative on the Board of Directors. Sam's passion for the industry will be missed, but we all know he will not be able to stay away from the meetings.

Thanks Sam!

President ~ Ken Walsh

mks1@aol.com

302-436-8822

Vice President ~ Jim Williams

depumpman@aol.com

302-492-3915

Past President ~ Hilary Moore

Hilary.Moore@state.de.us

302-739-9331

Secretary/Class H Inspector ~

Ben Miller

bmiller@ecieng.com

302-226-2844

Treasurer/Academic ~

Brian Carbaugh

Bcc-artesian@comcast.net

302-736-5245

Installer ~ Gusty Voshell

GustyHU@aol.com

302-284-0354

Pumper ~ Hollis Warren

htwarrent430@aol.com

302-284-9130

Soil Scientist ~ Laf Erickson

laf@atlanticresource.net

302-539-2029

Operator ~ Mike Bostic

mbostic@artesianwater.com

Supplier/Wholesaler ~ Kevin Sockriter

kevinncp@verizon.net

302-349-5528

VIP ~ Niki Evans

Firelady49@aol.com

302-359-2210

Designer ~ Carol Evans

caelnetml@aol.com

302-398-4951

Engineer ~ Scott Pinder

SPinder@artesianwater.com

302-453-6900X6209

Regulator ~ Jim Cassidy

James.Cassidy@state.de.us

302-856-4561

Please contact anyone of us to become more involved
in DOWRA!

Check us out on the web at: www.dowra.org

2009 DOWRA Calendar

February 24-26, Delaware Rural Water Association Conference -Delaware State Fairgrounds, Harrington, DE

March 10, DOWRA board/membership meeting—6: 30 pm pizza, 7:00 pm meeting starts
Board Room, Exhibit Hall, Delaware State Fairgrounds

April Clay Shoot, Date To Be Announced, Owens Station Sporting Clays -12612 Hunters Cove Road, Greenwood, DE 19950

April 6-9, 18th Annual NOWRA Conference- Milwaukee, WI

May 7, On-site Professional of the Year Award ,Delaware Technical Community College Owens Campus

June 9, DOWRA board/membership meeting, 6: 30 pm pizza, 7:00 pm meeting starts—Board Room, Exhibit Hall, Delaware State Fairgrounds

July 17-26, Delaware State Fair Exhibit, Grandstand, Delaware State Fair- Harrington, DE

August, Date to be Announced, Dowra Membership Appreciation Crab Feast , Invite only 6:00 pm, Seafood City, Felton

** All those who attend board/membership meetings will be invited.

September 8, DOWRA board/membership meeting, 6: 30 pm pizza, 7:00 pm meeting starts
Board Room, Exhibit Hall, Delaware State Fairgrounds

September, Date to be Determined, DOWRA Annual Golf Tournament, 12:00pm, at Jonathans Landing Golf Course
Magnolia

October 20-21, 13th annual **DOWRA** conference, Dover Downs Hotel and Casino, Dover, DE

The National Onsite Wastewater Recycling Association (NOWRA) will present the NOWRA 18th Annual Technical Education Conference and Expo in Milwaukee, Wisconsin on April 6-9, 2009.

www.nowra.org



What you can Expect at the NOWRA Conference!

The NOWRA annual conference serves as the premier conference for the conveyance of new research, regulations and policy, experience and practices in the decentralized wastewater industry.

Onsite: The Sustainable Wastewater Opportunity

Onsite /decentralized wastewater treatment has always been a “green” solution for water recycling. NOWRA is proud to promote onsite systems as a cost-effective, environmentally safe and long-term alternative for wastewater treatment services.

Valuable Educational Sessions

- The “Greening” of Onsite Wastewater Treatment
- Watershed Management Strategies and Applications
- Wastewater Reuse Case Study
- Recent Trends in Decentralized Wastewater Management
- Small Community Wastewater Treatment
- Nitrogen Treatment, Research and Policy
- Innovative Products, Technologies, and Solutions
- Onsite System Performance, Reliability & Sustainability
- NOWRA’s premier program, “The Basics of Onsite Systems –A to Z”