



# VOWRA NEWS

March , 2012  
Volume 6, Issue 1

“Elevating Professionalism of the Onsite Wastewater Industry in Virginia”

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Membership Application

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## President's Message

As I sit at my desk and another legislative season is coming to a close, I am reminded of how dynamic our industry is. Not so long ago, a sewage system was a just a septic tank system. In the early 90's, the only types of sewage treatment available were sand filters and handful aerobic treatment units. BOD<sub>5</sub> and suspended solids were reserved for discharging systems. These terms certainly weren't something we thought much about when issuing permits for in ground sewage systems. Back then, we were soils consultants, sanitarians, engineers, or contractors.

The advent of the AOSE program brought sweeping changes to the industry and how we did our jobs. Some of us became AOSE's and others Environmental Health Specialists. The July 2000 Regulations were introduced and we realized expanded options for use of shallow soils due to the value of sewage treatment to sewage disposal.

Then one day, I realized we had 150+ GMP's!

Today we are designers, soil scientists, Environmental Health Specialists, installers, and operators. We have become licensed professionals. There are 40+ aerobic treatment units approved for various levels of sewage treatment. The adoption of the new Alternative On Site Regulations has brought both new opportunities and new challenges.

Looking forward, no one can say what tomorrow will hold, but of this I am quite sure: The changes in our industry aren't likely to stop any time soon.

Given that, I am prepared to hold on, and at least try to enjoy the ride. How 'bout you?

Pam Pruett  
VOWRA, President

### The Lost Minister

As a young minister, I was asked by a funeral director to hold a grave-side service for a homeless man, with no family or friends, who had died while traveling through the area. The funeral was to be held at a cemetery way back in the country, and this man would be the first to be laid to rest there. As I was not familiar with the backwoods area, I became lost; and being a typical man did not stop for directions. I finally arrived an hour late. I saw the backhoe and the crew, who was eating lunch, but the hearse was nowhere in sight. I apologized to the workers for my tardiness, and stepped to the side of the open grave, where I saw the vault lid already in place. I assured the workers I would not hold them long, but this was the proper thing to do. The workers gathered around, still eating their lunch! I poured out my heart and soul. As I preached the workers began to say "Amen," "Praise the Lord," and "Glory." I preached, and I preached, like I'd never preached before: from Genesis all the way to Revelation. I closed the lengthy service with a prayer and walked to my car. I felt I had done my duty for the homeless man and that the crew would leave with a renewed sense of purpose and dedication, in spite of my tardiness. As I was opening the door and taking off my coat, I overheard one of the workers saying to another, "I ain't never seen anything like this before, and I've been putting in septic tanks for over twenty years."

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### Welcome New Members

David J. (Jimmy) Hodnett	Hodnett Septic Tank Cleaning, Inc.	Ringgold, Virginia
Robert L. Leonard	All Star Septic	Marshall, Virginia
Gary L. Myers		Gloucester, Virginia
Richard Hagaman	Milby Company	Colonial Heights, Virginia

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## VOWRA Web Site

VOWRA has entered into an agreement with Timberlake Publishing, LLC of Fairfax, Virginia for a new website with many new capabilities including:

- Redesign of the website
- Improved user friendliness
- On Line registrations and payments for Classes, Conferences, Member Renewals, and New Member Applications
- Ability for members to maintain their information
- Improved email capabilities to maintain contact and share information.
- Links to Suppliers and Manufacturers in On Site Industry.

The process of converting to the new site has begun and hopefully results will be forthcoming in the next few months.

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## SUPPORT VOWRA

***BY BECOMING A MEMBER OR RENEWING YOUR MEMBERSHIP!!!***

***FOR INFORMATION CONTACT VOWRA AT  
USPS: P. O. BOX 155, STAR TANNERY, VIRGINIA 22654***

***EMAIL: VOWRA@SHENTEL.NET***

***WEB: WWW.VOWRA.ORG***

***PH: (540) 465-9623***

***FAX: (540) 465-9627***

***(SEE PAGE 9 FOR A RENEWAL/NEW MEMBER APPLICATION)***

Designers of alternative onsite systems have a very real challenge in most states and especially in those states that don't mandate operation and maintenance. As a manufacturer of different onsite systems that clearly need periodic O&M, how do I design a system that works in a jurisdiction without the necessary mandate? For lack of a better term, I would call a system designed in a jurisdiction with no mandate would have a "Owner/Operator", while mandated areas would have "Professional Operators".

Even though Virginia has mandated Professional Operators for alternative systems, there still is an owner/operator component plus designs need to include the facility to sample. Most designers and manufacturers in Virginia have ignored access or at least guidance on where and how to sample treatment systems. The owner/operator still has some responsibility, for example to answer an alarm. What does it mean, what does he do? This should be designated in design.

There is also an economic component to design. The system for a particular site not only needs to be affordable on the front end but the owner must be able to pay for its O&M for the long term. The regulatory impact on this is critical especially in repairs. Strict prescriptive requirements for older sites, which may not meet current regulation, may need to be waived to prevent potential long-term expensive O&M costs.

A conventional system has two modes of failure. The wastewater either surfaces or backs up into the house. These are the alarms the owner operator uses to initiate maintenance. If the system contains a pump, a high level alarm will indicate a possible pump failure. This would be owner operator compatible. Now comes alternative systems that are intended to produce a treatment quality efficiently and cost effectively. How do we know when the system is not working?

Sometimes the alternative system is designed to reduce the size of a dispersal system on those sites with limited area. Sometimes the alternative system is designed to protect shallow ground water to prevent transport of contaminates. Sometimes there are shallow soils and the designer needs to use the little soil that is available. In each case what are the indicators of non-compliance? What is a failure? Can an owner truly operate the system or does it take a professional.

The starting place for me was to try and make the alternative system act like a conventional system with a pump. If there were a failure then there would be either a backup into the house or a wet spot in the field or a high level alarm. The owner would then be expected to call someone who cares to fix the problem. A better conventional system design protocol would be to put a time dosed pump in every system. Design the pump to discharge the design flow only so excess flow (leaky toilets) would cause a high level alarm not a failed drain-field. The designer can then control one more non-compliant event, excess water use. The owner/operator then would still, upon a high level alarm, call someone who cares to solve his problem without serious damage (prior to backup that is).

This design premise is based on a system that can be designed around these parameters and failure indicators. Designs should be around systems that you can fix after they break. When they break they should not cause irreparable system damage or environmental harm.

A low pressure distribution system can be designed with this philosophy. Once the hydraulic layout has been designed, deliver the wastewater to the network on a time dosed basis. In the event of a leaky toilet, high level alarm. In the event of a broke pump, high level alarm. In the event of clogging of the distribution network, the capacity will be reduce over time and therefore when capacity has been lost to service the facility, high level alarm. In the case of an LPD a competent operator would see the loose in capacity and do the necessary maintenance to maintain operation. The owner operator just waits for the high level alarm and sees a much larger repair bill. Clogging of the gravel-soil interface should not occur since we prevent overloading with the timed dosing.

A drip system can be designed with this philosophy. A drip system needs more management than a low-pressure distribution system and care must be taken in design to take advantage of its enhanced benefits. A drip system with solenoids, filters, emitters in addition to a pump and control should be designed to manage the notice to the owner operator of a problem with the same indicators as a conventional system.

For example, in addition to as backup, a wet spot and a high level alarm for a pump fail we can design the system to save the drip tubing and the soil treatment with similar alarming. A wet spot may indicate clogging in the soil or a broken pipe. A high level alarm can be designed to indicate a clogged filter or a bad solenoid. A flow meter can document usage and emitter capacity. If too much water is used, you get a high level alarm. If emitters clog, you get a high level alarm. The system can be owner/operated to the extent a convention can be. If you get a wet spot, a backup or a high level alarm, call somebody who can fix the problem.

Unfortunately, gravity flow through treatment units cannot be ignored by the owner/operator until he gets a backup or wet spot without considerable harm to the system or possible environmental damage. Time dosing to treatment is a considerable enhancement but until we can affordably monitor and alarm low treatment quality, an owner operator is not a good solution for many treatment system designs. Treatment system designers should only propose designs for owner operators were treatment quality non-compliance is low risk and manageable after a long period of non-compliance.

There are treatment systems that are owner operator friendly. For example a recirculating sand filter can be designed to be owner operator friendly. The maintenance event is to rejuvenate the sand surface, which can be alarmed with a level alarm indicating ponding. If ponding occurs, as long as the effluent goes through the sand, treatment will occur. A high level alarm can indicate excess water use and pump failure.

Treatment system manufacturers need provide information to their designers to support O&M either by owners or professional operators. I would assume that systems designed for the owner operator would be more costly in most cases to provide the appropriate level of operator interface. Each manufacturer would need to make their own case for this utility but the industry needs to have this discussion.

In all cases the designer needs to estimate the long-term O&M costs. The designer should present owners information so they can make the appropriate decision for their budget. Hiding these costs or just ignoring them is not a good approach because these costs do exist and will show up. Manufacturers are not currently thought of as having the most O&M friendly system yet. Some areas were O&M is mandated the conversation is starting but in many areas all alternative systems are viewed the same.

It is possible to design for long term O&M so the costs are in line with sewer bills in urban areas. Time should show which systems or manufactured systems are the most manageable either for the owner/operator or the professional. We need to have a better understanding of the typical expectation of the owner operator for long-term sustainability. The only way to determine this expectation in my view is to first educate them more about what an alternative system is. The challenge continues.

**Robert B. Mayer, MSPE**

President American Manufacturing Company, Inc.  
Manufacturer of the Perc-Rite® Drip Dispersal System

## **VOWRA Announces New Venue for it's 2012 Conference**

The 2012 VOWRA Conference & Trade Show will be moving to Williamsburg, Virginia. We have had great Conferences in Richmond for the past three years and hope the response will be as good in this great location. Watch [www.vowra.org](http://www.vowra.org) for more information as it becomes available

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# **VOWRA FALL CONFERENCE & TRADE SHOW OCTOBER 7, 8 AND 9, 2012**

## **SAVE THE DATE**

**The 2012 VOWRA Conference & Trade Show will be at the Williamsburg  
Hotel and Conference Center (Formerly the Williamsburg Marriott)  
50 Kingsmill Road  
Williamsburg, Virginia  
For Reservations call (757) 220-2500**

**VOWRA Contact Information:  
Phone: 540-465-9623 – Fax: 540-465-9627**

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### **REGULATOR SCHOLARSHIP PROGRAM 2012**

To award scholarships to local VDH regulators to attend and participate in the annual VOWRA conference and trade show exhibition. Three scholarships will be awarded this year.

The award includes: Full registration to the VOWRA conference and trade show exhibition on October 8<sup>th</sup> and 9<sup>th</sup>, 2012 in Williamsburg, VA; 2 nights hotel at the Williamsburg Hotel and Conference Center (Formerly the Williamsburg Marriott), and one year of VOWRA membership. The approximate value of each scholarship is \$500.

Nominations for the scholarships will be received at the VOWRA office between April 1<sup>st</sup>, 2012 and June 20<sup>th</sup>, 2012. Nominations may be submitted by any VOWRA member in good standing or any VDH district manager. Nominations must be received in writing via mail, e-mail, or FAX and contain the following: (1) The Name and work location of the nominee; (2) the Name and phone number of the person making the nomination; and (3) A statement of why the nominee is outstanding in their position and is an important stake holder in the field of Onsite Wastewater in Virginia.

Scholarship winners will be selected by a committee of VOWRA board members whose decisions are final. Winners will be contacted by August 9<sup>th</sup>, 1012.

Scholarship winners **will not** be eligible to be selected for this award again for 2 additional years after this conference.

## Making Onsite Systems Work with USDA, Rural Development Funding

The US Department of Agriculture works to enhance the livability of rural communities. The Department provides a broad range of services to enhance the quality of life for rural residents. Services that should be of interest to our industry includes helping communities in investing in strategic green-infrastructure planning, protection of critical natural resources, and ensuring rural residents have decent housing, clean water, and safe and adequate wastewater treatment facilities. The following article by Benjamin Shuman, PE and Senior Environmental Engineer, USDA, Rural Utilities Service provides details of some of these programs

Rural Development is a Mission Area within the U.S. Department of Agriculture that includes three agencies: Rural Housing Service (RHS), Rural Business – Cooperative Service (RBS), and Rural Utilities Service (RUS). Altogether Rural Development provided about \$42.5 billion in financial assistance in Fiscal Year 2010 (ending September 30, 2010), including funds authorized under regular programs and the American Recovery and Reinvestment Act.

Although this article primarily describes the Water and Waste Disposal program administered by RUS, other RD programs are also mentioned. The majority of projects funded are for centralized or public systems, but each of these agencies can potentially provide funds for various entities to construct onsite wastewater systems, including individual and cluster systems.

RBS administers a number of programs, not all of which are pertinent to onsite wastewater treatment. However, the Business and Industry Loan Guarantee program enables business owners to receive guaranteed loans through banks to build or improve their assets, including commercial or industrial facilities which could include onsite wastewater treatment. The Rural Business Enterprise Grant program finances construction of facilities which can attract business development, such as industrial parks, including utilities, which could include onsite systems.

RHS is able to provide assistance to individuals for construction and improvements to single family homes and multi-family structures through loans and grants to individuals and developers. So, for example, an individual homeowner could apply for funding through the program to construct an onsite wastewater treatment system for their residence through the single family loan, grant, or loan guarantee programs. A developer could include onsite wastewater treatment as part of the cost of construction or improvements to a multi-family structure. Finally RHS also includes the Community Facilities (CF) program which can finance the development of schools, hospitals, community centers, and other facilities. Recipients of CF funds must be either public bodies, tribes, or not-for-profit corporations.

The RUS provides funding for Electric, Telecom and Water infrastructure in rural areas. The program within RUS that is likely of greatest interest to the onsite wastewater community is the Water and Waste Disposal program. Through this program loans, grants, and loan guarantees for development or improvements to water and wastewater systems are available to public bodies, tribes, and not-for-profit corporations. Installation or improvement of individual or cluster onsite wastewater systems is allowed as an eligible cost as long as they are centrally managed per 7 CFR 1780.9 (g).

Benjamin Shuman, PE  
Senior Environmental Engineer  
USDA, Rural Utilities Service  
ben.shuman@wdc.usda.gov

### 2012 General Assembly Legislation Update

This has been a very busy legislative season for our industry. VOWRA is very fortunate to have a board member who is willing to dedicate time to following bills through the house and senate and to sit in on the committee meetings and actively engage on industry input. Below is a synopsis of this years bills that affect the on site wastewater industry.

**HB 942; Patron: Lingamfelter**

Provides that “a locality shall not require the owner of an alternative onsite sewage system to enter into a performance agreement with the locality or otherwise require the owner of an alternative onsite sewage system to post with the locality a sum of cash, a letter of credit, or a bond”.

Status: **Left in Committee.**

**HB 1071; Patron: Hugo**

Provides that “the owner of an alternative onsite sewage system installed prior to January 1, 2010, with flows of less than 1,000 gallons per day serving a church or an individual single-family dwelling occupied by such owner shall be exempt from the requirements for the operation and maintenance of the alternative onsite sewage system contained in State Board of Health regulations. The provisions of this act shall expire on July 1, 2014.”

Status: **Left in Committee**

**HB 1231; Patron: Orrock**

Clarifies that “Whenever a construction permit has been issued pursuant to an evaluation and design certified by a licensed professional engineer or onsite soil evaluator, the certifying licensed professional engineer or onsite soil evaluator shall inspect that system at the time of installation and provide an inspection report to the Department. The Department may, but is not required to, inspect the installation of such onsite sewage system. In the event that the certifying licensed professional engineer or onsite soil evaluator does not inspect the system in a timely manner or declines to certify that the installation was completed substantially in accordance with the evaluation and design, the owner may petition the Department to inspect the installation and render a final case decision approving or disapproving the installation. The Department shall not be required to convene an informal fact finding proceeding prior to rendering such decision.”

Status: **Passed, Signed by Governor.**

**HB 1262; Patron: Poindexter**

**SB 662; Patron: Smith**

Originally, these bills removed conventional sewage system installers from the requirement to be licensed by the Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals.

These bills were amended to provide that regulations of the Board of Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals shall include requirements for the division of sewage system installers into classes, one of which shall be restricted to the installation of conventional onsite sewage systems, and that the Board shall not require applications for initial licensure as a conventional onsite sewage system installer to pass an examination prior to the issuance of such license provided that the applicant satisfactorily demonstrates to the Board that he has been actively engaged in the performance of duties of a conventional onsite sewage system installer for at least 10 years within the 15-year period immediately preceding the date of application for licensure. These bills sunset on July 1, 2014.

Status: **Passed as amended.**

**Continued on Page 6**

**Legislative Update Continued****SB2; Patron: Martin.**

Provides relief to Melissa Scianna to repair the failed sewage system for her property. The amount of the relief shall be paid from the Onsite Sewage Indemnification Fund.

Status: **Passed.**

**SB 356; Patron: Deeds.**

Provides that *"Notwithstanding any other provision of law, general or special, the owner of an alternative onsite sewage system installed prior to January 1, 2012, in any county with a population density of 50 persons per square mile or less, that serves an individual single-family dwelling shall be exempt from the requirements for the operation and maintenance of the alternative onsite sewage system. This subsection shall not be applicable upon a determination by the Virginia Department of Health that the alternative onsite sewage system has failed."*

Status: **Defeated in Committee**

**SB 442; Patron: Obenshain.**

The original bill allowed engineers to establish minimum required inspection frequencies for alternative onsite systems and gave greater leeway to professional engineers to design without limitations.

Status: **Defeated in Committee**

**HJR 49E and SJR 66E; Governor's Executive Reorganization Plan.**

These bills eliminate the Sewage Handling and Disposal Appeal Review Board.

Status: **Elimination of Appeals Board has been struck**

# Introducing the V WRA 2012 Education Schedule

**If you have your Interim or Permanent license you will need CPEs to maintain the license. If you do not have a license you will need to pass the exam. The 2012 VOWRA education program offers**

- **CPE Credits to maintain your Permanent or Interim License.**
- **Affordable costs.**
- **Convenient locations across the Commonwealth.**
- **Excellent instructors.**
- **Review classes for setting for the exam.**
- **New Technology.**

**Check out the Class Schedule Today!!!**

**Get the member rate  
for the Classes by joining VOWRA  
or renewing your membership!!!!!!**

**(SEE PAGE 9 FOR A RENEWAL/NEW MEMBER APPLICATION)**

Web: [www.vowra.org](http://www.vowra.org) Phone: 540-465-9623 Fax: 540-465-9627 Email: [vowra@shentel.net](mailto:vowra@shentel.net)

"Elevating Professionalism of the Onsite Wastewater Industry in Virginia"



## VIRGINIA ONSITE WASTEWATER RECYCLING ASSOCIATION

### 2012 EDUCATION REGISTRATION FORM

Name: \_\_\_\_\_ Company: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Town : \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Business Phone: \_\_\_\_\_ Cell Phone : \_\_\_\_\_

Fax: \_\_\_\_\_ E-Mail Address: \_\_\_\_\_

**Register Me for the Following Classes:**

Date	Time	Class	Location	CPE's	VOWRA Member	Non-Member	Fee
April 10	1pm - 5pm	Installer Math	American Mfg., Elkwood	4.0	\$40	\$60	_____
April 11	1pm - 5pm	Installer Math	May Supply, Harrisonburg	4.0	\$40	\$60	_____
April 12	1pm - 5pm	Installer Math (Bring Calculator, Pencil, and Pad)	VAMAC, Lynchburg	4.0	\$40	\$60	_____
April 17	1pm - 5pm	Treatment System Operator	VAMAC, Winchester	4.0	\$40	\$60	_____
April 18	1pm - 5pm	Treatment System Operator	May Supply, Harrisonburg	4.0	\$40	\$60	_____
April 19	1pm - 5pm	Treatment System Operator	VAMAC, Fredericksburg	4.0	\$40	\$60	_____
April 24	1pm - 5pm	Packed Bed Filters	VAMAC, Winchester	4.0	\$40	\$60	_____
April 25	1pm - 5pm	Packed Bed Filters	VAMAC, Fredericksburg	4.0	\$40	\$60	_____
April 26	1pm - 5pm	Packed Bed Filters	Gloucester Fire Department	4.0	\$40	\$60	_____
May 3	8am-5pm	Installation of Wastewater Systems	Training Center, Blackstone	15, 2 Days	\$350	\$450	_____
May 4	8am-5pm			20, 3 Days			
August 5	8am-5pm						
May 24	8am-5pm	Opetation & Maintenance of Wastewater Systems	Training Center, Blackstone	15, 2 Days	\$350	\$450	_____
May 25	8am-5pm			20, 3 Days			
August 6	8am-5pm						
May 8	1pm - 5pm	Drainfield Standard/Drip	Gloucester Fire Department	4.0	\$40	\$60	_____
May 9	1pm - 5pm	Drainfield Standard/Drip	VAMAC, Richmond	4.0	\$40	\$60	_____
May 10	1pm - 5pm	Drainfield Standard/Drip	VAMAC, Lynchburg	4.0	\$40	\$60	_____
May 15	1pm - 5pm	License Exam Review/ATU	VAMAC, Winchester	4.0	\$40	\$60	_____
May 16	1pm - 5pm	License Exam Review/ATU	VAMAC, Fredericksburg	4.0	\$40	\$60	_____
May 17	1pm - 5pm	License Exam Review/ATU	VAMAC, Richmond	4.0	\$40	\$60	_____
May 22	1pm - 5pm	Presby/Platinum	VAMAC, Fredericksburg	4.0	\$40	\$60	_____
May 23	1pm - 5pm	Presby/Platinum	Gloucester Fire Department	4.0	\$40	\$60	_____
May 24	1pm - 5pm	Presby/Platinum	VAMAC, Lynchburg	4.0	\$40	\$60	_____
June 5	1pm - 5pm	UV Treatmentst	VAMAC, Lynchburg	4.0	\$40	\$60	_____
June 6	1pm - 5pm	UV Treatmentst	VAMAC, Richmond	4.0	\$40	\$60	_____
June 7	1pm - 5pm	UV Treatmentst	Gloucester Fire Department	4.0	\$40	\$60	_____
June 12	1pm - 5pm	Pumps and Controls	American Mfg., Elkwood	4.0	\$40	\$60	_____
June 13	1pm - 5pm	Pumps and Controls	May Supply, Harrisonburg	4.0	\$40	\$60	_____
June 14	1pm - 5pm	Pumps and Controls	VAMAC, Lynchburg	4.0	\$40	\$60	_____
June 19	1pm - 5pm	Commercial High Strength	VAMAC, Lynchburg	4.0	\$40	\$60	_____
June 20	1pm - 5pm	Commercial High Strength	May Supply, Harrisonburg	4.0	\$40	\$60	_____
June 21	1pm - 5pm	Commercial High Strength	VAMAC, Richmond	4.0	\$40	\$60	_____

Payment: Return Registration form to : VOWRA, P. O. Box 155,  
Star Tannery, VA 22654

Complete if paying by credit card and return to the above address or fax  
To (540) 465-9627.

Check One:  MC  VISA

Card Number \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Code # \_\_\_\_\_

Expiration Date \_\_\_\_\_

Name on Card \_\_\_\_\_

Member Renewal \$85 \_\_\_\_\_

New Member \$85 \_\_\_\_\_

Total Remittance \_\_\_\_\_

**Class Locations:**

May Supply Company, 1775 Erikson Avenue, Harrisonburg, VA 540-433-2611

American Manufacturing Company, 22011 Greenhouse Road, Elkwood, VA 800-345-3132

VAMAC Richmond, 4201 Jacque Street, Richmond, VA 800-768-2622

VAMAC Lynchburg, 3109 Oddfellows Road, Lynchburg, VA 434-528-5626

VAMAC Winchester, 601 McGhee Road, Winchester, VA 540-535-1983

VAMAC Fredericksburg, 3501 Jefferson Davis Highway, Fredericksburg, VA 540-898-2096

Gloucester, Gloucester Volunteer Fire and Rescue, Station 1, 6595 Main Street, Gloucester, VA 23061 804-693-2148

VCOWT, Blackstone, 1041 West 10<sup>th</sup> Street, Blackstone, VA 434-292-310 ( The Center is at Fort Pickett. You will need to show your Driver's License and Vehicle Registration to enter the Base.

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**Class Content:****Installer Math Class**

Calculators are necessary! Bring a pad and pencils. The class reviews basic linear, area and volume calculations as used in onsite wastewater. Definitions, unit conversions percentages as used in capacity analysis helps operators communicate the sustainability of systems. Pipe volumes, flow velocities and gpm are reviewed and a series of practical practice problems are presented. The math class will also include contractor math examples from installer training. Include shooting grades, elevations, interpolate bench marks.

**Treatment System Operator**

This class will be geared toward the operator that works on a variety of systems. This will cover everything from ATU's to Packedbed filters. Will also be discussing pump draw downs and functionality of a variety of systems.

**Packed Bed Filters**

This class will discuss the different types of filters that are approved in the state. This class will also cover installation and service of these systems.

**Installation of Wastewater Systems**

This class will be a best practices class. The basic do's and don't for installation of certain systems. Some systems require certain things that others do not and that will be covered in this class. This class also has an in the field training at the training center in Blackstone.

**Operation and Maintenance of Wastewater Systems**

This class will be a best practices class. The basic do's and don't for operation and maintenance of certain systems. Some systems require certain things that others do not and that will be covered in this class. This class also has an in the field training at the training center in Blackstone.

**Drainfield Standard Drip**

This class will go through a standard drainfield installation with pipe and gravel and will also cover chambers. The class will then cover basic design and installation of drip technologies.

**License Exam Review/ATU**

Now that you have your CPE credits what are the requirements for taking the test. This will be taught by someone from DPOR letting you know what the next step is to getting your license. Then with the time remaining, we will do a basic ATU design, installation and O&M training.

**Newly Approved Presby/Platinum**

The recently approved products will be giving a design, installation and O&M requirements for their products.

**UV Treatment**

Orengo systems will be showing their UV system along with a basic knowledge training on the technology. We will then discuss the requirements in the state that will require this treatment.

**Pumps and Controls**

Basic pumps and controls class showing different manufacturers of each. Training will show the reason behind why some panels are designed differently then others. Will show the difference between low head and high head pumps and when each is required.

**Commercial High Strength**

This class will discuss the design concerns when dealing with non residential waste. The class will cover a variety of topics from restaurants, dog kennels, breweries and wineries.





### VIRGINIA ONSITE WASTEWATER RECYCLING ASSOCIATION

#### 2012 MEMBERSHIP APPLICATION

New Member: \_\_\_\_\_ Renewing Member: \_\_\_\_\_ Date: \_\_\_\_\_

If you are renewing your membership, please make changes to insure our information correct.

Name: \_\_\_\_\_ Business Phone: \_\_\_\_\_  
 Company: \_\_\_\_\_ Cell Phone: \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_ Fax: \_\_\_\_\_  
 \_\_\_\_\_ Email: \_\_\_\_\_  
 City: \_\_\_\_\_ Operator License # \_\_\_\_\_  
 State: \_\_\_\_\_ Installer License #: \_\_\_\_\_  
 Zip: \_\_\_\_\_ OSE License #: \_\_\_\_\_

**Type of Work/Areas of interest;** Indicate primary area with #1; circle up to 5 (five) that apply.

- |                                 |                             |                            |
|---------------------------------|-----------------------------|----------------------------|
| Academic/Educator               | Installer                   | Soil Scientist             |
| Builder/Developer               | Laboratory Service Provider | System Designer            |
| Compliance Monitor              | Maintenance Provider        | System Inspector           |
| Consulting Engineer             | Operator                    | Tank Manufacturer/Supplier |
| Contractor                      | Pumper                      | Vendor/Product Supplier    |
| Environmentalist                | Realty/Mortgage Service     | Other (Specify)            |
| Equipment Manufacturer          | Researcher                  |                            |
| Government /Regulatory Official | Service Provider            |                            |
|                                 | Site Evaluator              |                            |

**Products/Services** List products and services that you provide:

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_  
 4. \_\_\_\_\_ 5. \_\_\_\_\_ 6. \_\_\_\_\_

**Volunteer Interests** Circle all that apply:

- |                              |                           |                                |
|------------------------------|---------------------------|--------------------------------|
| Annual Conference            | Finance                   | Legislative Affairs            |
| Bylaws and Election          | Communications & Outreach | VOWRA Onsite Management System |
| Board of Directors//Officers | Membership                | Contractor Certification       |
| Education & Training         | Maintenance Certification | Technical Practices            |

2012 Dues are \$85 and include membership in the National Onsite Wastewater Recycling Association (NOWRA)

Return application with payment to: VOWRA P.O. Box 155, Star Tannery, VA 22654 (There is a \$35.00 Charge for Returned Checks and refund requests for dues will not be honored).

Credit Card Payment: MC \_\_\_\_\_ VISA \_\_\_\_\_ # \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Code# \_\_\_\_\_ Expires \_\_\_\_\_ Name on Card \_\_\_\_\_

Office use Only

VOWRA # _____	Amount Received: _____
VOWRA Update: _____	Check/CC: _____
NOWRA # _____	Date Entered: _____
NOWRA Update: _____	Date Joined: _____
Date Received: _____	Renewal Date: _____



P. O. Box 155  
Star Tannery, VA 22654

**Contact VOWRA:**

**Phone: 540-465-9623**

**Fax: 540-465-9627**

**E-mail: [vowra@shentel.net](mailto:vowra@shentel.net)**

**We're on the Web!**

**Find us at [www.vowra.org](http://www.vowra.org)**

***“ELEVATING PROFESSIONALISM IN THE ONSITE WASTE WATER INDUSTRY  
IN VIRGINIA”***