President’s Pen

Hello TOWA members and friends in the onsite wastewater community! I hope all of you are having a productive summer. By the time you read this, only half of my term as president will be left. Time has flown!

First off, I would like to thank our advertisers for making this edition of the Onsite Advocate possible. TOWA members, these businesses faithfully support TOWA, some year after year, through purchasing Newsletter advertisements. Some also support our annual conference and product expo as well. Please show your support and thanks when choosing your products.

Speaking of the annual TOWA conference, if you missed the conference in February, you missed a great opportunity to network with TOWA members and friends, great presentations and training, and a chance to view the newest and best products in the industry at the product expo.

The 9th Annual Conference and Product Expo was held February 22-23, 2005 at the United Auto Workers Union Hall in Spring Hill, Tennessee. A definite contrast to last year, the weather was excellent. The conference theme was subsurface drip dispersal systems. The conference featured Jerry Tyler, a nationally recognized soil scientist, as a speaker on Tuesday. He is a professor at the University of Wisconsin-Madison, and he is President of Tyler and Associates. TOWA was very fortunate to have this national speaker at our conference. We were also very privileged to have our own Dr. John Buchanan, P.E. University of Tennessee, and Jim Watson, P.E. Tennessee Valley Authority (retired), conduct an all-day onsite wastewater design workshop on subsurface drip dispersal on Wednesday. These topics and others, including recirculating sand filter design by Mike Hines, P.E., Southeast Environmental Engineering, attracted more regulators to the conference than ever and also a good number of engineers and soil scientists.

A special presentation was made to the outgoing president, Louan Tillman, ADS, and the outgoing secretary, Leanne Whitehead, Tennessee Valley Authority, for their faithful service and commitment to TOWA.

Several other TOWA members completed their terms at the annual conference as well. Those include:

- **Brian Corwin**, Williamson Co. Dept of Sewage Disposal Management - Outgoing Past President
- **Bill Pickney**, ONSITE - Outgoing Director Representing Installers
- **Larry Vaden**, Music City Septic/Grease Pumping - Outgoing Director Representing Pumpers
- **Gary Ferguson**, Blount County Department of Environmental Health - Outgoing Director Representing Regulators

The following newly elected TOWA board members were announced at the conference:

- **Jennifer Brogdon**, President of TOWA
Gregg Clingerman, Alley & Associates, Inc. - President-Elect
Darrell Collard, W.M. McClain Co. Inc. - Secretary
Jerry Nash, Nash Excavating, Inc. - Director Representing Installers
Bill Foxworth, Roto Rooter Chattanooga - Director Representing Pumpers
Brian Corwin, Williamson Co. Dept of Sewage Disposal Management - Director Representing Regulators

Each of these Board positions is a 3 year member-elected appointment.

At the May 2005 TOWA Board meeting, the Board voted in Charlie McEntyre, Tennessee Valley Authority, to fulfill the remaining year in Gregg Clingerman’s term as Director Representing Engineers.

Gregg Clingerman’s charge as President-Elect includes coordinating the 10th Annual Conference and Product Expo, which will probably be held mid-February, 2006. If you have any ideas regarding the conference venue or potential speakers, please contact Gregg.

If you were unable to attend the February conference, chances are you haven’t paid your TOWA dues yet. Please send in the membership renewal form today. Joining TOWA automatically registers you as a member of our National affiliate, the National Onsite Wastewater Recycling Association (NOWRA).

Several of our TOWA members attend the NOWRA annual conference each year. If you haven’t attended in the past, this conference offers a great chance to network with national experts in the onsite wastewater field. This year’s NOWRA conference will be held October 10-13 in Cleveland, Ohio. The conference theme is “Onsite is Here to Stay!” You can sign up online now for the conference on the NOWRA website, www.nowra.org.

In April, I attended the NOWRA State Leaders Semi-Annual meeting in Kansas City, Kansas. State leaders from across the Nation were invited to attend this meeting to discuss, among other items, improving our State and National member programs. NOWRA has implemented several new cost saving measures including switching to a new web host whose specialty is non-profit organizations. NOWRA will no longer be sending out hard copy Membership, Products & Services Directories. This information will be available online. Also, the NOWRA Onsite Journal will now be published quarterly rather than bi-monthly. Still, with all the changes, NOWRA is expecting a budget shortfall, and discussions are being held about raising NOWRA dues. Until we know the results of the discussions and how the NOWRA Board votes, we will not know the exact impact on our TOWA dues.

As President of TOWA this year, I would appreciate your input to strengthen our State program. I would like to know what you value about TOWA and what type of benefits, programs, or services TOWA could add to benefit you. Please feel free to contact me anytime.

Jennifer Brogdon,
Tennessee Valley Authority - TOWA President
Tennessee
Onsite
Wastewater
Association

Formed in 1997, The Tennessee Onsite Wastewater Association (TOWA) is a professional organization open to those working to advance and promote the onsite wastewater industry in Tennessee.

TOWA serves all members of the industry, including installers, manufacturers, field practitioners, suppliers, engineers, soil scientists, distributors, research professionals, educators, consultants and governmental regulatory personnel. We want you to be part of this Association!

Each year, TOWA sponsors an Annual Conference to bring onsite professionals in Tennessee together to discuss issues relevant to the onsite industry in our state. Combining classroom presentations with an Exhibit Hall gives onsite professionals a chance to see and hear about the latest in onsite technologies and products.

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For more information, please call (615) 585-1157.

TOWA
Working together through the Onsite Wastewater Industry to protect our natural resources in Tennessee
TOWA’s 9th Annual Conference & Product Expo

Brian Corwin with exhibitors

Ed Freedman & Sam Weiland

Jerry Tyler

Jim Watson

Leanne Whitehead receiving award

Louan Tillman receiving award

The outdoor classroom

John’s trailer
A Special “Thank You” from the 2005 Conference Coordinator

Thanks to the following individuals, many of whom arrived early Tuesday morning at the 2005 conference to help set up, stayed late Wednesday to break down and clean-up, and asked frequently what they could do to help.

The conference would not have been possible without you….

Mike Browman, John Buchanan, Tim Burden, Gregg Clingerman, Carl Cooper, Brian Corwin, Scott Fellwock, Tara Garrett, Mike Hines, Mike McClain, Charlie McEntyre, Bob Pickney, Louan Tillman, Paul Troutt, Leanne Whitehead, Jim Watson, Jennifer Yocum

Thanks also to all who attended the conference and anyone that I may have inadvertently not mentioned.

Sincerely, Jennifer Brogdon

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Tennessee Onsite Wastewater Association

2005/2006 TOWA Newsletter Annual Advertising Rates and Schedule

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Deadlines:

Winter issue - Ads submitted by 11-30-2005

Summer issue - Ads submitted by 5-30-2006

** All Ads are printed in Black and White. Preference is to receive ads via e-mail in pdf files.

Please send to: Mike McClain  
mike@wmmclain.com 
P.O. Box 292983 
Nashville, TN 37229
Voluntary Management of Onsite and Decentralized Wastewater Treatment Systems

The performance of onsite and decentralized wastewater treatment systems is a national issue of great concern to the Environmental Protection Agency (EPA). Decentralized systems are used in 25 percent of the homes in the United States and 33 percent of new development, and they are permanent components of our nation’s wastewater infrastructure. Decentralized wastewater treatment systems are defined as managed individual onsite or clustered wastewater systems, commonly referred to as septic systems, private sewage systems, individual sewage treatment systems, onsite disposal systems or packaged plants, which collect, treat and disperse or reclaim wastewater from individual dwellings, businesses, or small communities or service areas. Unfortunately many of the systems in use are improperly managed and do not provide the level of treatment necessary to adequately protect public health and surface and ground water quality. Proper management of decentralized systems involves implementation of a comprehensive, life cycle series of elements and activities that address public education and participation, planning, performance, site evaluation, design, construction, operation and maintenance, residuals management, training and certification/licensing, inspections and monitoring, corrective actions, record keeping/inventory/reporting, and financial assistance and funding.

Therefore, EPA has issued Voluntary National Guidelines for Management of Onsite and Decentralized Wastewater Treatment Systems, or Management Guidelines to enhance the performance and reliability of decentralized wastewater treatment systems through improved management programs. Management Guidelines will help improve system performance by encouraging institutionalizing the concept of management; raising the quality of state and local management programs; and suggesting minimum levels of activity. Adequately managed decentralized systems that protect the environment and public health can provide an alternative to centralized wastewater treatment systems.

The EPA has developed five management models which are conceptual approaches with progressively increasing management controls as sensitivity of the environment and/or treatment system complexity increases. The five models that have been developed by the EPA are as follows:

- **Management Model 1** - Homeowner Awareness
- **Management Model 2** - Maintenance Contracts
- **Management Model 3** - Operating Permits
- **Management Model 4** - Responsible Management Entity Operation and Maintenance
- **Management Model 5** - Responsible Management Entity Ownership

In future Onsite Advocate issues, the five management models will be discussed in more detail which will hopefully help the homeowner, installer, regulator, designer and general public operate and maintain onsite and decentralized wastewater treatment systems.

Submitted by Gregg Clingerman

Information obtained from EPA Voluntary National Guidelines for Management of Onsite and Clustered (Decentralized) Wastewater Treatment Systems, EPA 832-B-03-001, March 2003.
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The Center for Decentralized Wastewater Management (CDWM) is proud to announce the completion of the subsurface wastewater drip irrigation research facility in southern Rutherford County. Located in a 100-home subdivision, the researchable drip system utilizes both septic tank effluent (from the STEP system) and secondary quality effluent (from the recirculating sand filter) to experiment with various application rates using two different strengths of wastewater. Installation of this project was funded by the Tennessee Valley Authority, Consolidated Utilities of Rutherford County, and by donations of equipment (and expertise) from the TOWA membership. Two research-grade drip fields are receiving effluent four times each day. Observations are being made on how the flow characteristics of the drip tubing changes with time and with wastewater strength. Likewise, observations are being made as to how the soil properties (adjacent to the tubing) changes with time and wastewater strength. A duplicate research facility is being constructed in Blount County. This site will provide a means of replicating the results from the Rutherford County location. Construction of this facility was funded by a grant from the Tennessee Water Resources Research Center. Southeastern Environmental Engineers, C. R. Barger and Sons, Inc., and other TOWA members have greatly contributed to the construction of this second research site.

With the tremendous growth of decentralized systems in Tennessee, most of the CDWM’s training activities have focused on educating engineers and designers about recirculating sand filters and about subsurface wastewater drip dispersal systems. In cooperation with Effluent Collection Supply, the Tennessee Valley Authority, and Tennessee Onsite, workshops have been conducted in Tennessee, Alabama, and Mississippi. A new “Pumps and Controls” workshop is being developed. Later this summer, I hope to offer this workshop in three locations across the State. On a national basis, the CDWM is a member of the Consortium of Institutes for Decentralized Wastewater Treatment. This organization has developed an Operation & Maintenance Service Provider Program. This program will be used to conduct continuing education to onsite wastewater service providers. I will be attending a train-the-trainer workshop that is being hosted by the Consortium in Puyallup, Washington during July 27 – 29.

The CDWM has a new graduate student, Brian Marsh. Brian is from Marshall County, Tennessee and recently graduated with a B.S. Degree from the University of Tennessee Biosystems Engineering program. A new “Pumps and Controls” workshop is being developed. Later this summer, I hope to offer this workshop in three locations across the State. On a national basis, the CDWM is a member of the Consortium of Institutes for Decentralized Wastewater Treatment. This organization has developed an Operation & Maintenance Service Provider Program. This program will be used to conduct continuing education to onsite wastewater service providers. I will be attending a train-the-trainer workshop that is being hosted by the Consortium in Puyallup, Washington during July 27 – 29.

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The Young Preacher...

A young preacher was asked by the local funeral director to hold a grave-side burial service at a small local cemetery for someone with no family or friends. The preacher started early but quickly got himself lost, making several wrong turns.

Eventually, a half-hour late, he saw a backhoe and its crew, but the hearse was nowhere in sight, and the workmen were eating lunch. The diligent young pastor went to the open grave and found the vault lid already in place.

Taking out his book, he read the service. Feeling guilty because of his tardiness, he preached an impassioned and lengthy service, sending the deceased to the great beyond in style.

As he was returning to his car, he overheard one of the workmen say: “I've been putting in septic tanks for twenty years and I ain't never seen anything like that”.

Submitted by Brian Corwin.
TOWA values your membership. The association is looking for better ways to serve its members. We ask that you take a few minutes to answer the following questions.

You may fax your survey form addressed to Jennifer Brogdon at (423) 751-2293. Or, you may mail your registration form to:

Jennifer Brogdon
1101 Market Street MR 2U
Chattanooga, TN 37402

1. How far from home within Tennessee are you willing to drive to attend an annual conference?

2. What City do you reside in?

3. Are there particular locations that would be better for you and your family?

4. Would you be interested in attending regional luncheon meetings located in East, Middle, and West Tennessee?

5. Are you in favor of continuing education for installers, pumpers, engineers, soil scientists and onsite consultants?

6. What month is best for you to be able to attend a conference?

7. What topics would you like to see presented at the annual conference?

Please consider renewing your membership. Dues for 2005 are now payable.
The UT Center for Decentralized Wastewater Management maintains a website at: http://onsite.tennessee.edu/

The TOWA news link will give you access to past issues of the Onsite Advocate, a list of the TOWA Board of Directors, and coming soon, TOWA board meeting minutes. Please visit often!

TOWA Board meetings normally occur on the second Tuesday of each odd month, from 4:00 to 6:00 central time. The location varies. If you are interested in attending, please call a TOWA Board member for more information.
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Your septic system is designed to treat the wastewater generated by your residence. Treatment means protecting public health and the environment. The size of your septic system is dictated by the amount of wastewater that needs to be treated and dispersed into the environment on a daily basis.

The most important number here is the soil loading rate, which is a property of the soil in your yard. The loading rate, given in terms of gallons per square foot per day, says how much water can be spread out over your yard and be treated without backing up and creating a mess. Once this is determined by a site evaluation (a percolation test or soil assessment) the design flow is determined by the size of your house.

It is an accepted engineering number that people use a certain amount of water each day. Usually this amount is agreed to be around 70 gallons a day. So if three people live in your house, the design flow would be 210 gallons a day. If seven people live there, it would be 490 gallons a day.

Systems are not designed, however, based on who lives there, but on how many could live there, if you were to sell the house. So a four-bedroom house could support eight people or 560 gallons per day. A three-bedroom home could house six people or 420 gallons a day. The number of bathrooms is not that important. Six people using one bathroom, while crowded, would still generate 420 gallons a day. One person living in a home with four bathrooms would still probably only use 70 gallons a day.

Now, if you divide the design flow by the soil loading rate, you arrive at the size your drain field needs to be. Now you want to run additional rainwater into the system. While it may not be contaminated like your sewage, it will still increase the hydraulic load on your drain field and would cause slower acceptance of the water and thus lead to back-ups.

The other issue is that the septic tank is designed to hold the sewage for at least a day to allow solids to settle out. Now, a 1,000-gallon tank is plenty big enough to hold 420 gallons a day (if that’s your design flow) when it is new. But as solids settle out the sludge accumulates, you have less space in the tank to hold water.

Thus the less water you use, the more time it has to sit in the tank and let the solids settle to the bottom. So taking shorter showers would certainly help, but more to the point, keeping unnecessary water out of the tank, like your roof drains, is an important aspect. Along the lines of water use, it is better for your onsite system to spread your laundry out over the week rather than doing five or six loads all on one day.

By Brian Corwin

Note: This article was reprinted with permission from the National Small Flows Clearing House.
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