WOSSA Wins in Washington Flow Equalization Opens Small Sites P.12 Meet NOWRA Member, Tom Ashton P.14

Vendor Corner P.16

Mega-Conference's **MEGA IMPACT**

Four associations come together in Virginia Beach where attendees will have the opportunity to see the iconic statue of Neptune. Read more on page 9.



The official publication of the National Onsite Wastewater Recycling Association



SALCOR UV Innovative Ultraviolet Disinfection Leader Since 1978 No Water is "Wasted"

Easy Install/0&M

Preserves The Environment





Inactivates Life-Threatening "Superbugs"



MRSA

Ultimate Health & Environmental Protection

Onsite Residential, Commercial & Municipal Uses, up to 100,000 GPD

Most Third Party Tested & Approved

UL Certified NEMA 6P "Floodproof" (30-Days Underwater)

■ NSF/Washington State 6-Mo Fecal Coliform Tests with 21 ATU Models

PROVEN WASTEWATER REUSE EXAMPLES



Parallel/Series Arrays Gravity Flow Disinfection to 100,000 GPD



Elementary School, MO 3 Salcor 3G UV Units in a Parallel Array



Nursing Home, OH 2 Salcor 3G UV Units in Series with an Activated Sludge Plant Replaces Chlorination



Duke's Restaurant, CA Malibu Oceanfront 4 Salcor 3G UV Units in a Parallel/ Series Array



Sewage Plant, AK Little Diomede Island Salcor 3G UV Unit with Lifewater Engineering Unit



3G UV

9,000 GPD

GRAVITY

FLOW



F: 760.731.2405 jscruver@aol.com

IT'S SIMPLE, OWN THE RESPONSIBILITY.

Learn more at: anuainternational.com/responsibility



PO Bax 77457, Greensborn NC 27417 | T: 336.547.9338

1.44



Residential flows of

250° of 1/16" filtration 360° of filtration

Cartridge fits any 6" tee

Accepts a 1" PVC handle

EFFLUENT FILTERS

6" Effluent Filter & Housing!

Introducing Polylok's newest addition to the effluent filter family the PL-250

up to 3,000 GPD





3008-CPA

24" PIPE RING

Polylok's new 24" Pipe Ring for 24" corrugated, 24" ribbed & 24" smooth wall pipe. The 24" Pipe Ring can be directly cast into a concrete slab (3" - 6") or retrofitted to a variety of 24" Polylok products.





EFFLUENT FILTERS

HEAVY DUTY GRATES ARE ALSO AVAILABLE!



HEAVY DUTY COVERS (12", 15", 18", 24" & 30")





Universal Safety Screen 3008-RSSCONC / 3008-RSSPIPE



Riser Safety Screen 3017-SS / 3009-SS / 3008-SS



20" & 24" Riser Safety Pan 3009-RP / 3008-RP



Dual Safety Screen 3009-KYDC / 3009-JD



20" & 24" Lid-Lok 3009-LOK / 3008-LOK



Polylok, Zabel & Best filters accept the SmartFilter® switch & alarm



The Onsite Journal is published for The National Onsite Wastewater Recycling

Association 1199 N. Fairfax St., Suite 410 Alexandria, VA 22314 Office: 800-966-2942 Fax: 703-997-5609 executivedirector@nowra.org www.nowra.org

Printed by:

Matrix Group Publishing Inc. Please return undeliverable addresses to: 5605 Riggins Court, Second Floor PO Box 41270, Reno, Nevada 89504 Toll free: 866-999-1299 Toll free fax: 866-244-2544 www.matrixgroupinc.net Canada Post Mail Publications Agreement Number: 40609661

President & CEO Jack Andress

Publishers Peter Schulz Jessica Potter

Editor-in-Chief Shannon Savory ssavory@matrixgroupinc.net

Editor Alexandra Walld

Finance/Accounting & Administration Shoshana Weinberg, Pat Andress, Nathan Redekop, Lloyd Weinberg accounting@matrixgroupinc.net

Director of Marketing & Circulation Shoshana Weinberg

Sales Manager-Winnipeg Neil Gottfred

Sales Manager-Hamilton Jeff Cash

Account Executives

Alex Incretolli, Angie Carroll, Bonnie Petrovsky, Brian MacIntyre, Chad Morris, Colleen Bell, Emily Norsworthy, Frank Kenyeres, Jim Hamilton, Miles Meagher, Rachel Purvis, Rick Kuzie, Rob Allan, Rob Gibson, Ryan Livingstone, Shalynn Ramsden

Advertising Design James Robinson

Layout & Design Kayti Taylor

©2015 Matrix Group Publishing Inc. All rights reserved. Contents may not be reproduced by any means, in whole or in part, without prior written permission of the publisher. The opinions expressed in this publication are not necessarily those of Matrix Group Publishing Inc.

Want to Advertise?

Don't miss out on your chance to advertise in this great industry resource! For more information or rates, call 866-999-1299 or email sales@matrixgroupinc.net.

The King Neptune Statue

is an iconic image that dominates the Virginia Beach boardwalk. If participants of the Mega-Conference can tear themselves away from the incredible learning and networking opportunities, they will be able to check it, and other Virginia Beach attractions, out.



NOWRA Cheers for Washington's Win The

Washington On-Site Sewage Association fought its local government and came out on top when Bill 5871 was passed this spring.



Mega-Conference for Mega-Success NOWRA has

partnered with three other associations to create a mega-conference in Virginia Beach, VA this November 3 to 6, 2015. Photo provided by Virginia Beach Convention and Visitors Bureau.



Flow Equalization for Smaller

Sites Using flow equalization can be the difference between an onsite wastewater recycling system not being viable on a site and it running smoothly.

DEPARTMENTS:

- 5 A Message from the NOWRA President, Gregory Graves
- 7 NOWRA's Executive Committee / Board of Directors
- **13** Lobbying Update
- 14 NOWRA Member Profile Tom Ashton: Living Onsite
- **15** MILEstones
- 16 Vendor Corner
- 17 Join NOWRA: Reap the Benefits
- **18** State Affiliate News
- **18** Buyers' Guide





The Growing Effort

THANK you for your interest and involvement with the National Onsite Wastewater Recycling Association (NOWRA)!

As we prepare for our 24th annual conference, we would like to welcome our partners, the Virginia Onsite Wastewater Recycling Association, the State Onsite Regulators Alliance and the National Association of Wastewater Technicians, for what has been dubbed the Onsite Wastewater Mega-Conference. We all look forward to an enjoyable, informative and valuable collaboration.

This has been a great year for NOWRA, as we welcome back into the fold the Washington On-Site Sewage Association and the Arizona Onsite Wastewater Recycling Association. We also look forward to the Florida Onsite Wastewater Association returning as a full affiliate in 2016 and welcome our new affiliate, the Utah Onsite Wastewater Association. It is great that these groups recognize the positive momentum we have.

And thank you to those affiliates who stuck with us during the lean times. We continue to work hard to bring you the most value possible.

One of the most positive initiatives we have is our lobbying effort. We held our second annual Government Action Day in Washington, DC on July 14 and the response was terrific. As one who is new to the business of politics, I really did not know what to expect. It is one thing to go there as a tourist, but to navigate among the big office buildings and try to represent our diverse industry seemed intimidating to me, at first.

The day turned out great and was not at all problematic. Our lobbyist, Thomas Cassidy, did a great job of arranging the meetings, selecting NOWRA members to attend, and giving us key points to mention. Our government relations chair, Bob Himschoot, and executive director, Eric Casey, were diligent in their attention to detail and kept us organized.

This effort, even though it is only slightly over one year old, is starting to have an effect. Our senators and representatives are interested in what we have to say, how we protect natural resources, and how we create jobs. With a sustained effort, over time, we can really make a positive difference in our country.

Thank you for your support of NOWRA. The future is bright and we look forward to working together! $\textcircled{\sc l}$



NOWRA's Board of Directors

Executive Committee

President Greg Graves General Manager NORWECO, Inc. P.O. Box 410 Norwalk, Ohio 44857

Vice-President Jim Bell Executive Vice-President Bio-Microbics, Inc. 8450 Cole Parkway Shawnee, Kan. 66227

Secretary/Treasurer Robert Mayer President & CEO American Manufacturing Co., Inc. P.O. Box 97 Elkwood, Va. 22718

Past President Tom Fritts Vice President Residential Sewage Treatment Co. 12800 Second St., P.O. Box 248 Grandview, Mo. 64030 Board of Directors Eugene Bassett President E.C. Bassett Construction, Inc. P.O. Box 100 Edgewood, N.M. 87015-0100

John R. Buchanan, Ph.D, P. E. Associate Professor Biosystems Engineering & Soil Science University of Tennessee 2506 E. J. Chapman Drive Knoxville. Tenn. 37996-4531

Karen Ferguson President Geoflow, Inc. 506 Tamal Plaza Corte, Madera, Cal. 94925

Paul R. Ganey, P.E. President King Septic Service, Inc. 8739 Byrnesville Road Cedar Hill, Mo. 63016

Robert (Bob) Himschoot President Crews Environmental P.O. Box 27 Fort Myers, Fla. 33902 Mike Hines Founding Partner Southeast Environmental Engineering, LLC 1920 Breezy Ridge Trail Knoxville, Tenn. 37922

Joyce Hudson Retired U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, N.W. Washington, D.C. 20460

David Ritchie President Zaring Septic & Drain Service, Inc. 5912 W. Hwy 146 Crestwood, Ky. 40014

Carl Thompson Infiltrator Systems, Inc. 4 Business Park Road P.O. Box 768 Old Saybrook, Conn. 06475 Hilary Valentine Department Chair Environmental Training Center Delaware Technical Community College Owens Campus

James (Jim) Vincent Liquid Waste Program Manager New Mexico Environment Department 2540 Camino Edward Ortiz Santa Fe, N.M. 87507

Denise Wright Training Officer Indiana State Department of Health Environmental Public Health Division 2 North Meridian Street, #5-E Indianapolis, Ind. 46204 Thank You to Our 2015 Business Benefit Program Partner Companies

Gold

Admirals Bank Bio-Microbics, Inc. Infiltrator Systems, Inc. Norweco, Inc. Polylok, Inc. Presby Environmental, Inc.

Silver

Advanced Drainage Systems, Inc. Delta Environmental Jet, Inc. Salcor, Inc.

Bronze

American Manufacturing Co., Inc. Consolidated Treatment Systems, Inc. Geoflow

Loyal Supporters

Hiblow USA, Inc. NSF International Netafim USA Residential Sewage Treatment Co. Roth Global Plastics SJE Rhombus



NOWRA Cheers for Washington's Win

By Meg Crane

THE Washington On-Site Sewage Association (WOSSA) really takes care of its members.

Feature.....

In 2013, a WOSSA member came to the association for help with an issue he was having getting a design approved for a client with a failing septic system. The client's property was within 300 feet of an existing sewer line and he was being told he had to have 282 feet of pipe built to connect to the city sewer system.

Despite having an approvable design submitted to local health, the engineer for the City of Olympia said that under city rules for the *Growth Management Act* and Urban Growth Area, the property owner had to connect to the sewer, pay for the extension in the public right of way and would not be given an avenue for appeal.

"The association investigated and realized that it did not make sense for private property owners to fund public works projects in the public right of way, 300 feet at a time," says John Thomas, WOSSA's executive director.

At approximately \$500 per foot, the bids for his sewer extension were going to cost \$115,000 to \$190,000—more than his property's value. The estimated cost of the proposed system was \$12,500 to \$15,000.

Thomas says the state code has mandated that property owners with failed septic systems may have to connect to the public sewer if available within 200 feet. If certain other conditions exist, an exemption is allowed if it is cost-prohibitive for the homeowner and a conforming OSS system can be approved by the local health jurisdiction. The problem was, the term "cost-prohibitive" is undefined in the code.

Thomas says cities throughout Washington thought letting private property owners fund projects was a good idea and many extended to 300 feet. System owners would have to pay to connect to the public utility when their system failed. There was no provision for those who paid for the extension to recapture the cost from subsequent property owners who would connect to the new pipe in the future.

"The property owner has no recourse to recover any of that money," says Thomas. "When we have a conforming OSS solution that costs \$12,500, we felt the homeowner should get to decide what he does with his money."

WOSSA decided to take action and, with the local health department, the association found a window in the rule. There was a gap relating to the appeal process between the city and the local health rules. This gave the property owner an opportunity to appeal, based on the inconsistency in the rule.

There was no way for those who paid to recapture the cost from subsequent property owners along the new pipe.

"WOSSA attended the hearing, prepared to testify on behalf of the WOSSA member and his client, but the City of Olympia never even showed up to defend their position," says Thomas.

The hearings examiner ruled in favor of property owners being able to opt for a less expensive solution to managing their wastewater needs. "WOSSA saw this as a state-wide issue, and the WOSSA board decided to take it legislature to change the rule, rather

to the legislature to change the rule, rather than having members fight these battles, one client and one city at a time," says Thomas.

"After a three-year legislative effort, our bill was signed by the governor and passed with 100 percent support of both Republicans and Democrats voting in our legislature on both sides of the aisle. The new law went into effect on July 24," says Thomas, referring to Bill 5871 with prime sponsorship by Sen. Jan Angel.

The law requires all cities and towns to have an appeal process that allows property owners with failing septic systems to appeal to a hearings examiner to be allowed to replace their system instead of connecting to the sewer system.

"It was extremely important to the people of Washington State," says Sen. Angel. She has already had residents contacting her about how thrilled they are to see the change.

It is not quite time to celebrate, though; the battle might not be over.

"It was a contentious issue with a number of outside interest groups that were initially opposed to the proposed changes, coming back to the table with a compromise. If we don't see the results of commonsense decisions for individual property owners, we're prepared to go back to the legislation with stronger words," says Thomas.

Find the bill at http://lawfilesext.leg.wa.gov/biennium/2015-16/Pdf/Bills/ Senate%20Passed%20Legislature/5871.PL.pdf. Cover Story.....

Mega-Conference for for Mega-Success

By Meg Crane

THIS year, the National Onsite Wastewater Recycling Association (NOWRA) invited three associations to join in on its annual conference. The event's tagline, "Uniting for Progress: One conference, four organizations, lots of solutions," reflects its goal to increase attendee benefits and strengthen associations fighting for the industry.

The State Onsite Regulators Alliance (SORA), the Virginia Onsite Wastewater Recycling Association (VOWRA) and the National Association of Wastewater Technicians (NAWT) are all hard at work planning the 2015 Onsite Wastewater Mega-Conference with NOWRA, which takes place November 3 to 6, 2015, in Virginia Beach, Va.

When NOWRA reached out to SORA, the alliance jumped at the opportunity to work collaboratively.

"Our missions are very similar," says Gerald Iwan, executive director of SORA. However, each organization has slightly different audiences, so the conference is bringing everyone together to learn from, and work with, one another.

With the federal government paying little attention to decentralized wastewater recycling systems, Iwan says it makes sense for groups to consolidate their efforts, rather than working separately.

It also offers a great opportunity for industry professionals.

"One registration; four venues," says Mary Bonasso, a SORA staff member. Each group will be running its own conference with different educational opportunities, but attendees will be able to take advantage of all four, making it an economical opportunity.

"There will be one exhibit for all the vendors, all the manufacturers who will come together in one location," says Bonasso. There will also be three field trips and many networking opportunities. Participants may find time to check out the King Neptune Statue in Virginia Beach, VA. Photo provided by Virginia Beach Convention and Visitors Bureau.



Inside the Virginia Beach Convention Centre.

If you leave without learning something, Powell says with a laugh, it will be because you were not paying attention.



Roth Global Plastics

www.rothmultitank.com 866-943-7256



Mega-Conference for Mega-Success CONTINUED

Jim Anderson, NAWT education committee chairperson, says NAWT puts on a waste treatment symposium every year for business owners who manage their own wastewater.

"This gives them an opportunity to learn about those different technologies and see the technologies in actual operation with waste," says Anderson.

This year, attendees will also be able to take a look at what others in the industry—with different focuses—are up to.

"It's a way to increase interest and attendance from another segment of the industry," says Anderson. "How can any of our organizations lose on this?"

NAWT will be organizing one of the field trips, which will give people a chance to see what they learned in the classroom during the first two days of the conference.

John Powell, president of VOWRA, says there will be multiple field trips to different sites and various speakers on many topics. There will also be several training tracks that participants will receive continuing education credits for.

"In a nutshell, the conference is a place all can attend and go away with something," says Powell. "If you leave without learning something," Powell says with a laugh, "it will be because you were not paying attention."

While the conference is only three days, Iwan says he can see the partnerships being long-term and is excited by the possibilities.

Although, Anderson stresses that no one can say if or when it will happen again, so people in the industry should make the extra effort to make it to this unique learning and networking event.





Engineering the future of water and wastewater treatment

HIGH QUALITY EFFECTIVE PRODUCTS AT COMPETITIVE PRICES...

Singulair Green[®] was the solution when septic tanks on a Great Lakes sandbar failed. Easily installed at the most difficult job site (including boat only access) makes Singulair Green[®] Today's Answer for the Protection of Tomorrow's Environment.

Through innovation and design, Norweco's state-of-the-art, cost-effective solutions protect and restore water quality. We strive to create better places to live, work and play.



- Easy delivery, installation & maintenance
- Durable, watertight, HDPE tank
- Quiet, energy efficient operation
- Superior effluent quality
- Industry leading warranty
- Single tank convenience
- NSF/ANSI Standards 40 and 245 certified

Flow Equalization for Smaller Sites

IN many areas where onsite wastewater systems are commonly used, many of the better sites have been developed. This leaves more limiting soil treatment areas a relative ability to accommodate the volume or strength of the wastewater flow. Additionally, more business and commercial developments with inconsistent flow patterns are using onsite wastewater treatment systems.

Feature

Planners and regulators get the impression, based on regulations and large irregular flows, that these systems are not allowed to or cannot be successfully operated on smaller sites. However, flow equalization can provide a viable option for many smaller, limited sites.

"Flow equalization is basically using tankage to hold flow surges and slowly or intermittently discharging the tank contents to downstream components using timers and pumps or hydraulic fixtures. Flow equalization levels the load to downstream components," says Mark Gross, senior engineer for Mickle Wagner Coleman, Inc.

These systems carefully take into account storage, transport, preliminary treatment, final treatment components, hydraulic factors and biochemical factors. It also takes into consideration time, space and financial aspects of the system.

"Using flow equalization, the soil treatment component can be hydraulically loaded evenly over time, eliminating flooding followed by no or low-flow hydraulic loadings," says Gross.

The problem created by not using flow equalization is that repeated cycles of overfeeding, and then starving, microorganisms does not promote uniform microbial activity and consistent treatment, while regular, even feeding and hydration does.

An example Gross gives is of a church. Its flow pattern may be:

- Sunday: 3,000 gallons
- Monday: 150 gallons
- Tuesday: 150 gallons

- Wednesday: 1,500 gallons
- Thursday: 150 gallons
- Friday: 150 gallons
- Saturday: O gallons "Sizing the soil treatment

component for 3,000 gallons per day would result in a grosslyoversized soil dispersal area and poor treatment. Sizing the treatment components for average daily flow results in a less expensive system and the use of much less area for soil dispersal," says Gross.

Dennis Sievers, a P.E. in Missouri who designs onsite wastewater systems, says flow equalization can alleviate some of the issues created by having onsite wastewater systems on small sites, where there is often not enough area for absorption.

"If you go to flow equalization, it means you're storing some water and you're putting it out over, say a week," says Sievers. "Sometimes, that can help account for small areas."

However, many codes have requirements that tanks be a minimum distance from wells, streams, ponds and other features in the landscape. As flow equalization would not change physical spacing issues, it would not make a difference in these cases.

"Flow equalization certainly can help, but it's not the silver bullet," says Sievers.

Gross agrees. "It doesn't solve every problem."

Clay soil, seasonable high water table and super, high-strength water (with high biochemical oxygen demand) are all factors that could stop flow equalization from being the solution to putting a system on a small site.

While flow equalization could mean an effective soil treatment area—one that could accommodate the average daily flow instead of daily maximum—many states have regulations that make it look like every system component must be designed for the daily maximum, says Gross.

0

"This clause is many times applied to the soil treatment component, so the design must use the maximum daily design flow for sizing the soil treatment component, resulting in an oversized, poorly-utilized treatment component that provides inferior treatment," he says.

However, this is often a misinterpretation of the regulations. "It's certainly not a good thing to do," he says. "You want to apply a system approach, not a component-bycomponent approach."

If each individual component is structured to deal with the daily maximum flow, it will be set-up to accommodate a larger volume of wastewater than necessary, which is not technically or economically viable.

A holistic system approach, such as flow equalization, would have the system functioning consistently without being stressed by overloading and under-loading the system from a hydraulical or treatment viewpoint.

Flow equalization is a design principle that should be considered for renovation of current systems and new ones on smaller or marginal sites, where inconsistent flow patterns can be problematic.

Lobbying Update Working with the Environmental Protection

By Thomas Cassidy

Agency

H has been an interesting year so far in Washington with the appropriations process. Our industry was successful, once again, in getting an acknowledgement in both House and Senate bills.

Our efforts, to date, have resulted in getting great support from both House and Senate offices. During our Washington fly-in, we had many successful meetings with each government body's appropriators, who are getting behind the importance of the decentralized industry.

We took a great step forward, presenting ourselves with Cornell University to the Environmental Protection Agency (EPA). Our industry convened a meeting in July with the highest ranking people at the EPA in the area of the Clean Water State Revolving Fund and the Water Infrastructure Finance and Innovation Act.

We heard in the meeting that the EPA is now thinking more aggressively about small communities, which could mean a boon to many in our industry. As we all know and lived through, the focus for the past dozen years has been on the large pipe solution with the consent decrees. Our efforts, along with others, have now convinced the EPA to consider our industry as a partner in solving the wastewater issues.

As the team is aware, there is tremendous pressure being generated at EPA on moving forward with larger scale septic-to-sewer conversions of existing municipal service territories in the years ahead. This will have the potential to raise the public's awareness of decentralized solutions (either positively or negatively), and it could serve as an opportunity to get the group's message out in advance, to drive solutions instead of reacting to them.

As we finish this calendar year, we will continue to communicate with those on the Hill and the EPA about the need for a strong decentralized funding solution. EPA's national office has now granted the states the power to finance new septic systems, so we will have to make sure they are living up to the intent of Congress.

Suez 🔊

ready for the resource revolution

→ find out more at WEFTEC booth #931

all SUEZ brands are now one

Degremont, Ozonia, United Water, Utility Service Group and 40 other water and waste experts have joined forces to become SUEZ. On five continents, SUEZ supports towns and industries in the circular economy to maintain, optimize and secure the resources essential for our future.



NOWRA Member Profile

Tom Ashton: Living Onsite

THE industry has learned a lot from Tom Ashton, who owes many of his opportunities to American Manufacturing Company Inc. (AMC).

Ashton graduated from Old Dominion University in Norfolk, Va. in 1978, with a bachelor's of science degree in environmental health.

Straight out of university, he got his feet wet as a Sanitarian III senior sanitarian with the Virginia Department of Health in Loudoun County. He stayed there until 1985, when he set out on his own.

At that time, as a full-time private sector consulting soil scientist and designer, Ashton performed soil and site evaluations and pressure distribution system designs in northern Virginia and the Shenandoah Valley.

A few years after graduating from Shenandoah University in Winchester, Va., with his master's degree in business administration, Ashton became the onsite system

Simple • High-Performance • Wastewater System



ALITA[®] Linear Air Pump



- Efficient and reliable linear diaphragm pump for Aerobic Treatment Units.
- Wide range of models available, from 1 to 18 CFM or 30 to 500 LPM.
- Selected models include integrated audible alarm and warning light.
- Off-grid solar power package available.
- Easy maintenance.
- RoHS compliant.



ALITA INDUSTRIES, INC. 626-962-2116 sales@alita.com www.alita.com



specialist, designer and market development manager for AMC.

Now, Ashton is a registered environmental health specialist, licensed professional soil scientist, licensed alternative onsite evaluator and licensed alternative onsite system operator, who is deeply involved in the industry.

Ashton says AMC introduced him to the national perspective of the onsite industry. His current position consists of a multitude of varied functions, but is primarily focused on securing and supporting proprietary state approvals for AMC PercRite® Drip Dispersal systems; participation in regulation writing; teaching; and many project-specific sales functions, including supporting designers in helping to develop design approaches for a specific project.

Through AMC, he has become involved in many associations; currently, Ashton is a member of eight. As a member of the curriculum development team for the National Onsite Wastewater Association, Ashton helped create the Advanced Onsite Wastewater System Design course. As a Virginia Onsite Wastewater Association board member, he is involved in organizing field trips for the upcoming Mega-Conference.

By way of AMC's position in the on-site industry, he has been an active participant in published onsite research specific to drip dispersal at Delaware Valley College, Colorado School of Mines, the Massachusetts Alternative Septic System Test Center, the University of Missouri, and the University of Wisconsin.

"Through my activities with AMC over the last 20 years, I have been exposed to a vast amount of scientific and engineering knowledge specific to on-site systems from presentations, participation in research, and the many acquaintances developed. I am very fortunate," says Ashton.

He has shared this knowledge through presentations to associations across the country on topics such as soil and site evaluation, and soil component loading rates.

"A lot of my accomplishments are directly a result of American Manufacturing," says Ashton, who plans to keep working for them as he works to better the industry.

We've Come a Long Way By Randall J. Miles

INCREASINGLY, I have noted comments that we, the onsite industry, have not been very progressive. I have heard we have not changed from the construction of the first septic tank, we are not environmentally minded, as the standards are not that tight and we need to get with it.

Being one who is embarking on senior citizen status, I have noted many of these comments have arisen from younger or newer members of our profession. My first reaction is, "That's great. I knew we were lucky to get those first standards accepted in the code and we knew they should have been more restrictive."

I usually follow up with a comment to that individual that we should be doing a better job. However, when I further reflect on the comments from the newer members, I think of that old advertising cliché: "We've come a long way, baby."

In one of the recent Milestones articles, I relayed the statement made in the mid-1980s by a regulatory official; if one worked in the onsite industry in Missouri, it made one qualified to do one other thing in life: work in an undeveloped country. (Now, do not comment. Missouri is no more backward than some other states I have visited).

In the 1990s and early 2000s, I observed the formation and maturation of many onsite organizations. First, many state onsite organizations lead the charge of actively participating in writing state and local codes that addressed not only fundamental wastewater treatment and dispersal issues, but local soil and climatic concerns for proper siting, sizing and designing of onsite systems. From there, education, training and certification of onsite professionals gained momentum.

Training, education and certification were greatly enhanced by many sources of training materials developed by a variety of groups. The Consortium of Institutes of Decentralized Wastewater Treatment developed an extensive array of training packages from technology for various phases of onsite systems, installer's modules, operations and maintenance, and high strength waste.

These materials were extensively developed by educators at many land grant universities and other institutions of higher learning in concert with state and federal agencies and industry professionals in a defined, peerreviewed manner followed with train-the-trainer workshops for those professionals who would be using the materials.

One major impact was the Glossary of Decentralized Terms, which has been used as the foundation for definitions in many current onsite codes or recent code updates. This product has provided a consistent definition and terminology to many components and technologies across many states and regions. Many states, through land-grant institutions and state associations, in concert with the industry, developed handson training centers.

The central focus of many of these training centers provided many of the technologies and system components partially emplaced or laid out in the field, so that each component could be viewed, serviced and tweaked for a wide variety of installation, maintenance or inspection functions based on the course objective.

NOWRA has been intensively involved in developing and conducting training programs, from the NOWRA A to Z course, to specific design courses. In addition, NOWRA's Installers Academy offers a wide range of training programs, which we are able to provide at low cost to industry groups.

With many of the aforementioned programs by state associations, NOWRA and land-grant institutions, in concert with the industry and various state and federal agencies, the onsite wastewater industry has, indeed, come a long way from days of few—if any—industry



standards. Do we need to improve and do more? The answer is definitely yes.

One of the trends I have noticed as I participate in various state, regional and national onsite wastewater meetings and trade shows, is a younger crowd in attendance. This younger crowd comes with enthusiasm, questions, comments and new ideas, and is a major source of the questions and concerns I get relative to the perceived lack of progressive change in the industry. I strongly believe that in order to have a vision for the future, we need to understand our history and development and our challenges and problems.

In future columns, I will share what current and future needs of our industry are necessary in order to step forward and meet the increasing demands put on us by regulation and the ever-increasing wastewater demand. I invite your thoughts!



Vendor Corner

Staying Clean & Safe By Pat Mulhall, Polylok, Inc.

IMAGINE using your toilet as a trash can, disposing your household waste through the septic system. Believe it or not, many people tax their septic systems by throwing trash in their toilets or grinding food through their kitchen disposal systems. Both of those are no-nos if you rely on a septic system.

Now, imagine your septic system without a filter. All of the waste has the potential to end up in the leaching fields, somewhere in your yard. That could be disastrous.

In 1959, the first effluent filter was invented. Bob Zabel introduced his filter, which created an industry! The purpose of the filter was to prevent solids from leaving the septic tank and harming leaching fields. Improvements have been made in filter technology, but the principle that started it has not changed; leaching fields need protection.

As waste moves through the septic system, the effluent filter acts as a barrier for non-liquid waste. These solids are forced to remain in the tank, while the filter allows grey water to flow to the leaching fields. The effluent reaches the leaching fields, where it is cleaned and reabsorbed into the groundwater.

The solids remain in the tank and should be periodically pumped out by a licensed pumper. When solids leave the tank, they can cause significant damage to the entire septic system. The most costly is the destruction of the leaching fields.

Once this happens, the fields need to excavated and repaired, or new fields need to be dug and connected to the existing system. Effluent filters, when installed and used properly, prevent costly repairs by protecting the leaching fields.

Believe it or not, fewer than 20 states in the U.S. require effluent filters. Many of the remaining states are considering legislation to mandate their use. Not only do these filters protect a homeowner's leaching fields, they also protect the environment.

Solids that leave the tank can contaminate groundwater. Typically, septic systems are located in rural areas that also rely on



Here an effluent filter is being cleaned and is getting ready to be installed back in the tank.



A safety screen is being installed on an existing tank.

wells for drinking water. When groundwater is contaminated, well water is at risk for contamination. Although your state may not mandate the use of effluent filters, every home- or business-owner with a septic system should demand an effluent filter.

As land has become scarce in populated areas, the septic system and effluent filter design has become more sophisticated. Today, companies offer pressure filters that enable unique filtration designs in complex applications. More than one-million filters are in use and the results prove that effluent filters prevent solids from leaving the septic tank and wreaking havoc on the system.

Filter installation is easy. Any pumper or installer can properly size the filter based on the septic tank size and the application. Key factors in sizing the filter include the tank size and gallons per day usage. Laundromats and dog kennels need special consideration, as do engineered systems. Regardless of the effluent filter type, installation involves opening the tank and connecting a filter to the outlet side. Once the tank is pumped, the pumper or installer can access the exit seal and professionally install the appropriate filter.

While the tank is open, use this opportunity to install a safety device on the tank. There are two types: one to protect pets and children and the other to protect the tank.

First, and most important, is family safety. In many states, septic systems must have a secondary layer of protection. This could include a safety screen below the tank cover or a lock around the cover, preventing unwanted entry.

Regardless of the method, while the tank is being serviced or a filter is being installed, take this time to install a safety device.

Second, many filters are designed to work with an alarm, which is typically located inside the place of business or residence. When the tank requires servicing, the alarm will sound and notify the occupant that it is time to call the pumper. This ensures that the filter and tank are serviced before the leaching field is impacted.

Many advances have been made since the first filter was introduced in 1959, and states are beginning to recognize the importance of effluent filters and secondary safety devices. If the last 56 years are any indication, there will be many more advances in the decades to come!

Patrick Mulhall is the vice-president of sales at Polylok, Inc. He has been with the company for over 15 years. In addition to overseeing sales for Polylok, Mulhall has served two terms on the National Precast Concrete Association's septic tank product committee, helped author the Best Practices Manual for On-Site Wastewater Systems, and has spoken at many onsite wastewater conferences.

16 www.nowra.org • Fall 2015

Join NOWRA: Reap the Benefits

WHY NOWRA?

- NOWRA is the largest organization within the U.S. dedicated to educating and representing members within the onsite and decentralized industry.
- All segments of the industry are represented on NOWRA's Board of Directors that provide broad perspectives to promote and sustain our industry and service to the public.
- NOWRA provides a national forum to address the challenges facing our industry.
- As the national educational resource and clearinghouse for onsite and decentralized systems and promoter of best management practices, NOWRA plays a lead role in state and federal legislative initiatives to protect water sources, human health, and the environment.
- NOWRA creates new market and business opportunities for its members through conferences and networking events, while increasing the awareness about how onsite systems protect public health and the environment.

WHY JOIN?

Septic Locator: Every NOWRA member receives a free listing on the Septic Locator, the only national, searchable directory of providers of onsite wastewater management services.



Installer Academy: NOWRA has established the Installer Academy as the national educational entity for the decentralized wastewater industry to ensure that quality training programs are available for all industry practitioners.

Resource Library: NOWRA's Resource Library is intended to be a one-stop portal to help you identify critical information online, which can help you manage your business. It consists of published industry research, how-to manuals, regulations, archived training materials...and more.

Annual Conference: NOWRA's Annual Conference & Expo brings together industry leaders from around the country.

Newsletter: NOWRA E-News is delivered directly to your email inbox and consists of the latest news on national and regional developments affecting our industry.

Leadership: NOWRA provides all members with opportunities to have a voice in its affairs. Whether you express that by voting in NOWRA's Board of Directors elections, participating in the Annual Meeting, commenting on proposals, volunteering your time on a committee or task force, or simply sharing your views with a board member, NOWRA welcomes and encourages your involvement in our activities.

Affiliate Support: NOWRA works to support its state organizations in a variety of ways: training discounts, Roe-D-Hoe® support, meetings with state leaders, data/web services and much more.

Roe-D-Hoe®: Held annually, this competition is intended to showcase the skills of contractors and the equipment they operate through a series of timed exercises contestants must perform on a backhoe. NOWRA also sanctions a number of state Roe-D-Hoe® competitions around the country; the state winners are automatically grandfathered into the national finals where they compete against the winner of the open competition held during the Onsite Wastewater Mega-Conference.

Errors and Omissions Insurance for Designers and Inspectors: NOWRA has endorsed Alteris' SeptiCover Errors & Omissions coverage for designers and inspectors of septic systems. Alteris has been involved in the septic system industry for more than a decade and their SeptiCover E&O package offers extremely affordable premiums for members providing design and or inspection services.

Equipment Loan Discounts: NOWRA has partnered with Wells Fargo to provide members with discounts on interest rates and document fees for equipment purchases in excess of \$50,000. This membership benefit is unique for NOWRA members—no other onsite association is able to offer this discount to its members.

Office Supplies Discounts: NOWRA has teamed with Office Depot to bring your business a better office supply solution.

If you are a NOWRA state affiliate, you can contribute to this section of the magazine FREE OF CHARGE! Email ssavory@matrixgroupinc.net for deadlines for the next issue.

Colorado

The Colorado Professionals in Onsite Wastewater (CPOW) is hosting its 2016 Annual CPOW Education Conference in the Denver area, January 21 to 22, 2016. More details will be available on the CPOW website soon.

www.cpow.net

Maryland

Membership renewal for 2015/2016 for the Maryland Onsite Wastewater Professionals Association is underway.

www.mowpa.org

Pennsylvania

The Pennsylvania Onsite Wastewater Recycling Association (POWRA) held a technical field session in eastern Pennsylvania. Attendees visited several sites that had alternate wastewater systems installed. It was well attended by regulators, installers and designers.

POWRA plans to have its annual fall meeting in Harrisburg on October 2, 2015, during which a variety of distributors will provide an update on the technologies that are listed as alternate systems in Pennsylvania.

www.powra.org

Wisconsin

Earlier this year, the Wisconsin Onsite Water Recycling Association (WOWRA) fought against two budget proposals included in Wisconsin Governor Scott Walker's 2015-2017 biennial budget proposal. First, the association defeated Walker's proposal to move staffing, oversight and responsibility of the Private Onsite Wastewater Treatment System program from the Department of Safety and Professional Services to the Department of Natural Resources. The second proposal was to eliminate funding for the Wisconsin Fund (a program that provides grants to homeowners and small commercial businesses to help offset some of the cost for the repair, rehabilitation, or replacement of existing failing septic systems). WOWRA won on both accounts.

www.wowra.com

National

The Washington On-Site Sewage Association, the Arizona Onsite Wastewater Recycling Association, the Florida Onsite Wastewater Association and the Utah Onsite Wastewater Association have all become affiliate members of the National Onsite Wastewater Recycling Association.

www.nowra.org 🌑

WHY WORK SO HARD TREATING WASTEWATER AND THEN JUST DUMP IT IN A TRENCH?

Answer - don't! Disperse the effluent through the soil. It's where everything you worked to do gets even better - where the magic takes place. Stop disposing, start dispersing.





Buyers' Guide

ADVANCED TREATMENT UNITS ANUA
ADVANCING ULTRAVIOLET DISINFECTION Salcor IncIFC
ATV AND SEPTIC SYSTEMS / DRAINFIELD MEDIA Flien Corporation 14
HIGH PERFORMANCE WATER TREATMENT SPECIALISTS Infilco-Degremont Technologies
IRRIGATION SYSTEMS Netafim USA18
LINEAR AIR AND VACUUM PUMPS Alita Industries Inc
ODOR CONTROL SOLUTIONS Simple Solutions Distributing LLC
ONSITE WASTEWATER CONTROLS SJE Rhombus10
ONSITE WASTEWATER TREATMENT SYSTEMS AND CHEMICALS Norweco
SEPTIC SYSTEMS COMPONENTS BrenLin Company Inc10
SEPTIC/WASTEWATER SYSTEMS AK Industries, Inc7
STORAGE, SEPTIC AND PLASTIC TANKS Roth Global Plastics & Roth Industries
WASTE WATER PRODUCTS Polylok Inc. (Zabel Environmental)4
WASTEWATER TREATMENT SYSTEMS AND SOLUTIONS
Infiltrator Water Technologies

We're here to serve you! For more information, contact us at **800-966-2942** or check out what we're all about at **www.nowra.org**!





Protecting the Environment with Innovative Wastewater Treatment Solutions

Installations made simple.

(internet in







EZflow





800-221-4436 • www.infiltratorwater.com