

THE Onsite Journal

NOWRA
National Onsite Wastewater Recycling Association

Fall 2023

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**Conference
Preview Issue**

Onsite | **2023**
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**Wastewater
Mega-Conference**

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Hampton Roads Convention Center
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MESSAGE FROM THE EXECUTIVE DIRECTOR



Welcome to the Fall issue of NOWRA's *Onsite Journal* for 2023 – our conference preview issue. This issue includes many of the traditional recurring features – a technical article, state affiliate updates, legislative updates, etc., but also includes all of the information you need to know about our upcoming Onsite Wastewater Mega-Conference in Hampton, Virginia in late October. This is NOWRA's ninth Mega-Conference and my third as Executive Director. It keeps getting better each time. We have a great program lined up with the conference theme of "Clean Water for Healthy Communities," and an "out of this world" optional social event at the Virginia Air and Space Science Center. We hope that you will be able to attend.

With only two issues of the *Onsite Journal* in 2023, there is a lot of good and timely information to report to our membership. Our Corporate Membership program keeps growing and growing. Check out

our current Corporate members including the twelve companies that joined in 2023 on page 22. That is more than 50% growth from last year! Many of those companies will also be exhibiting at the Mega-Conference so please join me in welcoming them and thanking them for their support.

One of our major initiatives for 2023 was the development of additional training materials for our industry. We are pleased to announce the release of homeowner education materials that were funded by US EPA and produced by NOWRA under an agreement with RCAP. See page 20 inside for more information about these materials and how to access them on the NOWRA website. NOWRA is also excited to be kicking off phase 2 of this project with RCAP so watch for many more materials to be produced in the next few years. In addition to the RCAP project materials, NOWRA is continuing to expand our online training program with the planned addition

of up to 20 modules by the end of the year or early 2024. These materials were developed and presented by our Technical Practices Committee volunteers.

This organization is only as strong as its members and volunteers. Much of the great work that you will read about inside of the publication is due to the dedicated committee members and volunteers. As you read about NOWRA's activities, please consider joining a committee or task force. It's a great opportunity to expand your horizons, network with like professionals, feel good about yourself and the industry that we have chosen, and make friends for life.

Thank you for allowing me to serve as the Executive Director of this organization.

— **Thomas Groves**

NOWRA ANNUAL BUSINESS MEETING

Tuesday, October 24, 2023

5:00 PM – 6:30 PM

Hampton Roads
Convention Center
Hampton, VA

Room 106/107

In accordance with Article III, Section 7 of the NOWRA Bylaws, all NOWRA members are formally notified through this communication of the Annual Membership Meeting, scheduled to occur on October 24, 2023, from 5:00-6:30 pm. The NOWRA 2023 Annual Membership Business Meeting will be held in the Hampton Roads Convention Center, Hampton, Virginia. All Members are encouraged to attend and participate in this meeting. This notice was placed on the [NOWRA website](#).

ANNUAL BUSINESS MEETING AGENDA

1. Roll Call—A master membership list will be available.
2. Reading of the 2023 Annual Meeting Notice
3. President's Report
4. Secretary-Treasurer's Report
5. Executive Director's Report
6. Committee Report
7. Other Business
8. Open Member Discussion

A NOTE FROM THE PRESIDENT

What a great 2023 it has been, and it isn't over yet! There is a lot of good work going on at headquarters and a big shout out to all the volunteers that help push a good part of the work over the finish line. We couldn't do it without you!

Looking back over the year we are seeing an incredible increase in support from our corporate members. We have 12 new corporate members join up from 21 the year before, which is amazing!

Online learning is growing and raising the bar! We recently downloaded four new design modules onto our online learning platform educating you about Pumps and Controls, Mounds, Nitrogen Basics, and the Benefits of Onsite Wastewater Systems. The site is also getting a facelift and some internal operating updates as well and we can't wait to show it off!

Check out our new Emerging Professionals page on the website! This committee is offering the first ever NOWRA Academic Scholarships. Two lucky students will get \$2,000 to help

with their onsite wastewater education. Fundraising is underway to help this scholarship going forward with a silent auction at the upcoming 2023 Mega-Conference and they will also be offering some NOWRA merchandise at the conference. If you would like to donate to their cause, you can do so on your registration form for the conference, or just reach out to the NOWRA office directly.

Some other important news...our lobbying effort took another step closer to getting the "sewer or septic" question added to the U.S. Census American Community Survey in 2025. The information the survey produces will be so valuable for our lobbying efforts. We will use it to show we need more federal funding for our industry. A federal register notice will go out this Fall and again in the spring and will be an excellent way for you to show your support. Stay tuned for updates in your email inbox!

We started a "Rethinking Affiliates" task force to look at our affiliate relationships. This is being headed by Chris LeClair, our Vice President. The



goal is to become a little more user friendly and hopefully provide even more value by being a member of NOWRA! If you are interested in joining in the conversation, let us know.

Finally, I want to take a few sentences to congratulate the Florida Onsite Wastewater Association (FOWA) on their 50th anniversary! They are a successful organization run by their Executive Director, Roxanne Groover, and their board at the helm. Many of you may not know this but FOWA formed NOWRA as they saw the need for a national association to address the industry at that level. Many thanks to FOWA for that and keep up the good work!

I hope you all are having a great 2023 too and I hope to see you in Hampton, Virginia, for the Mega-Conference!

— Allison Blodig

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STATE AFFILIATE NEWS

FLORIDA ONSITE WASTEWATER ASSOCIATION (FOWA)

The Florida Onsite Wastewater Association (FOWA) celebrated its 50th Anniversary at their Annual Convention and Trade Show this year in Daytona Beach. Typically, a 3-day event, the schedule was changed to 2 days followed by a cruise to Bimini. The convention exceeded last year's showing both in attendees and exhibitors. Additionally, close to 100 people joined FOWA for the cruise on the Carnival Liberty.

With the passing of HB 1379, Florida's Onsite Industry will continue to see the requirement of nutrient-reducing technologies when building on small lots. The Fall 2023 Interim Committee Meetings will begin in late September with the 2024 Session beginning on January 9, 2024. FOWA is gearing up for a busy legislative session in 2024 as more areas of the state could possibly seek requirements similar to the Indian River Protection Program found in the bill.

FOWA's legislative agenda for the upcoming session will include reopening the discussion/rulemaking on

disposal of OSTDS Industry Wastes (Biosolids, Septage, Grease, and Portable Toilet) and the implementation of the TAC Committee Recommendations.

GEORGIA ONSITE WASTEWATER ASSOCIATION (GOWA)

GOWA has a new Executive Director— Cathé Baker. This is GOWA's educational year, so we are gearing up for our upcoming 10 classes starting in September and going through December with an additional 5 classes scheduled in the new year through the end of February. GOWA also has our annual Field Day on the books for Nov 7th, located in Griffin. And of course, the GOWA Annual Conference is scheduled for January 11-12, 2024, located at King and Prince in Saint Simons Island.

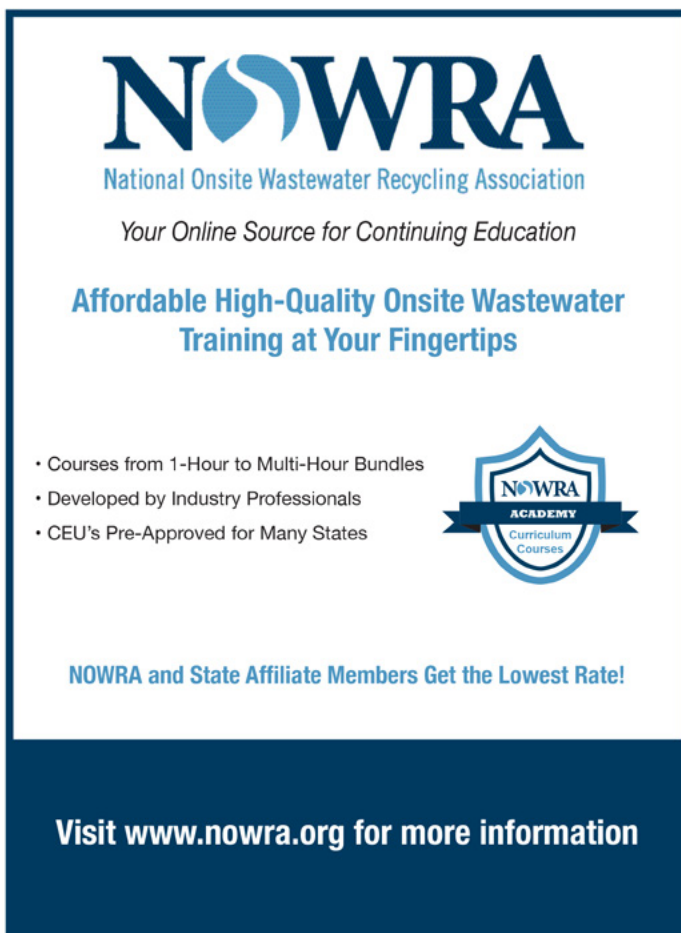
MISSOURI SMALLFLOWS ORGANIZATION (MSO)

Missouri Smallflows Organization appreciates Governor Mike Parson for declaring September 10-16 Water and Wastewater Professionals Week. We support our wastewater professionals in all their work to improve public health and protect the environment. MSO is also planning a Career Day during Septic Smart Week for a group of high school students at the Onsite Wastewater Training Facility in Springfield. Students will explore the trades of onsite wastewater treatment through various activities. They will work through the challenges of pumping water uphill; looking at land contours and mapping out lateral lines; and examining soils for wastewater treatment. MSO is working towards bringing more awareness to our industry through education of students and showing the opportunities available to them.

OHIO ONSITE WASTEWATER ASSOCIATION (OOWA)

Greetings from the Buckeye State! The Ohio Onsite Wastewater Association Board is busy planning for their Service Provider training once again this year. It will be taking place on November 8-9, 2023 at the Columbus Airport Marriott located in Columbus, OH. More information can be found on the OOWA website. We are excited to have Sara Heger and Nicholas Dykes join us for the event and be the main speakers!


We are also planning for the 2024 OOWA Annual Conference. The event will take place on January 10-11, 2024, at Cherry Valley Hotel in Newark, OH. More information will be available soon! We are also excited to be hosting the 2025 Onsite Wastewater Mega-Conference in Sandusky, OH.



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LEGISLATIVE UPDATE

Decentralized Wastewater Funding in the Mix as Congress Faces Funding Debate

By Tim Perrin, Polsinelli

With the annual summer recess and Labor Day behind us, Congress returns to Washington, D.C. and faces a lengthy to-do list and a short amount of time to get it done. Lawmakers must act by Sept. 30 to pass legislation that will fund all federal programs for the new fiscal year and reauthorize federal farm, nutrition, and rural development programs for five years. Both tasks impact funding for decentralized wastewater programs. The condensed Congressional calendar combined with narrow margins of power in both the U.S. House of Representatives and Senate

promise to make for an interesting final four months of the year.

Let's start with the Fiscal Year (FY) 2024 appropriations process, which includes two of NOWRA's top legislative priorities which provide federal monies for decentralized systems. Each year Congress must pass 12 appropriations bills that provide funding for every federal program before the new fiscal year begins Oct. 1. However, only one appropriations bill has been passed by the House of Representatives. The Senate has not considered any funding bills on the floor yet. With FY 2023 ending with the

close of September, Congress must either pass all 12 funding bills or enact a continuing resolution (CR) that extends existing funding levels to avoid a budget shutdown. Congressional leaders are floating the prospects of a short-term CR, but political tensions and policy disagreements portend a challenging environment in which to secure enough votes to pass a CR.

One of NOWRA's priorities is securing funding for the Environmental Protection Agency's (EPA) Decentralized Wastewater Grant program, which was created through the

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LEGISLATIVE UPDATE *continued*

passage of the Investment in Infrastructure & Jobs Act (IIJA) in late 2021. NOWRA was instrumental in the enactment of this program, but Congress has yet to allocate funding for this new program. As a result, the EPA has been unable to begin work on promulgating the regulations to stand up the program. However, for the first time since the program was created, the House has included \$5 million in their version of the FY 2024 EPA funding bill. This is a significant step forward and would allow the EPA to begin the work necessary to set up the new program and dispense grants. Unfortunately, the Senate did not include funding for this program in their version of the legislation, presenting NOWRA members with an advocacy challenge and a charge to weigh in with your Members of Congress. More on that shortly.

NOWRA's other top appropriations priority is the funding of the U.S. Department of Agriculture's (USDA) Decentralized Water Systems Grant & Loan program. This program provides loans for rural residents to purchase, repair and replace decentralized wastewater systems and private water wells. For FY 2024 the House has appropriated \$4 million for this program in their Agriculture funding bill and the Senate has

provided \$5 million. This is consistent with previous years' funding and a "win" in such a difficult budgetary environment.

Many in Washington fear that Congress will be unable to even pass a CR, which will result in a shutdown of all government programs. While a shutdown is certainly a possibility, and perhaps a likelihood, the political toll will eventually force both parties to the negotiating table which will yield an agreement that will lead to the government being funded. As lawmakers wrestle with the appropriations process, please reach out to your elected officials and urge them to fund both programs mentioned above at the highest levels possible.

Another urgent priority for lawmakers in September is the passage of the "Farm Bill," which reauthorizes for five years all programs under the USDA, as well as rural development support programs and federal nutritional support programs for those in need. Congress last passed the Farm Bill in 2018 by a bipartisan vote. This year's Farm Bill faces some political headwinds, particularly regarding the federal nutrition programs, which may force Congress to pass a short-term extension expected to run to the end of the calendar year. Most major programs within the Department of Agriculture do not expire until

January, but a longer-term extension will be needed if floor time runs out before the Farm Bill can clear both chambers.

NOWRA, alongside likeminded allies in Washington, are pushing for Congress to include in the Farm Bill a provision that reauthorizes the USDA Rural Decentralized Water Systems program. NOWRA is also advocating for the inclusion of new language that will allow for some of the program's funds to go to technical assistance for the non-profits, including NOWRA, that distribute the funds. NOWRA has secured bipartisan support for this change and has been told by policymakers that our policy proposal and program reauthorization should be included in the Farm Bill. Many expect the Farm Bill package and legislative text to be released in September, but if lawmakers sense more time is needed to forge a compromise agreement, that timeline could slip.

While Congress works to pass a government funding package and the Farm Bill, now is the time for NOWRA members to weigh in with their Representative and Senators and urge them to include funding for the programs mentioned above. Remind your elected officials of the vital role decentralized systems play in wastewater treatment and urge them to prioritize these dedicated sources of federal funding, which are so critical for NOWRA members and the customers they serve.

Tim Perrin is a Policy Advisor with Polsinelli PC. Tim worked with NOWRA when the organization first became a firm client in 2016 along with Tracy Hammond, who directed Polsinelli's representation of NOWRA until his departure from Polsinelli in August. As Tracy assumes an in-house policy role for American Electric Power, Tim will direct NOWRA's advocacy strategy by drawing on more than 20 years of policy expertise in the energy, environment, and outdoor recreation spaces to advance NOWRA's advocacy agenda. Tim is originally from Pittsburgh, loves the Steelers and Primanti Brothers, and is a long-suffering University of South Carolina Gamecock.

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PRE-CONFERENCE WORKSHOP

Subsurface Drip for Decentralized Wastewater Dispersal: Installation, Operation and Maintenance; Best Practices Workshop

By Dr. Kevin Sherman, P.E., D.WRE, and Steven Berkowitz, P.E.

Sunday, October 22, 2023, from 12:00 PM to 5:00 PM. Separate registration required.

Subsurface drip has become an increasingly popular treatment and dispersal system for wastewater effluent in land-based decentralized wastewater systems throughout the United States. Drip was originally developed in Israel to enhance agricultural production while greatly reducing water consumption. These benefits are made possible by allowing water to drip slowly near plant roots while minimizing evaporation. Delivered beneath the soil surface through subsurface drip emitters, water released to the environment flows in response to soil capillarity. In capillary flow, the smallest pores in the soil transport the most flow, while larger pores remain air-filled. The additional development of pressure-compensating emitters combined with these flow properties make for an optimal delivery system for wastewater effluent in a ground absorption system. Instead of meeting the agronomic requirements of

a crop, wastewater drip systems are designed to maximize infiltration of water into the soil throughout the year.

Advantages of subsurface drip include highly uniform distribution of effluent over the entire dispersal area (Photo 1); shallow installation maximizing aeration and separation to soil/site limitations; reduction or elimination of the need for temporary storage or ponding within a trench for absorption through a trench/soil interface; and enhanced nutrient attenuation both through root uptake and biological removal within subsoil micro-zones surrounding the drip distribution network. Subsurface drip's use with wastewater systems has been developing since the early 1990s, based upon its ability to optimally utilize the receiving landscape under a variety of topographic and soil conditions, its relative ease of installation, and its ability to minimize

effluent impacts to groundwater and surface waters.

NOWRA has played a major role in the development and dissemination of information about subsurface drip systems. A full day "Drip Forum" was conducted at the NOWRA 1999 conference at Jekyll Island, Georgia, and drip dispersal has been a technical presentation topic of interest at virtually all NOWRA Conferences since. A Drip Forum outcome was the formation of a NOWRA ad-hoc subcommittee to continue discussion and to plan NOWRA's education outreach. In 2001 NOWRA developed the "Subsurface Drip Dispersal Systems Workshop Manual" for use with a Drip Distribution workshop developed by the Technical Practices Committee, with workshops subsequently conducted in multiple states. NOWRA adopted ["Recommended Guidance for the Design of Wastewater Drip Dispersal Systems"](#) in 2006.

About the Authors

Dr. Kevin Sherman, P.E., D.WRE, is the President of On-Site Management Consultants and the director of Engineering and Regulatory Affairs for SeptiTech, Inc., a wholly owned subsidiary of BioMicrobics, Inc.

Steven Berkowitz, P.E., is a Technical Assistance Provider for Southeast Rural Community Assistance Project (SERCAP), and recently retired after 40+ years as Senior Engineer in North Carolina's On-Site Wastewater Program.



Photo 1. Uniform distribution of effluent over the entire dispersal area.

This consensual guidance document developed by a broad range of professionals outlines the technology by way of extensive definitions, comprehensive discussion of the summary of practice, significance of use, and process description. Included is a detailed summary regarding the basics of design, installation, operation, monitoring, and maintenance. On-site drip dispersal of wastewater is applied nearly nationwide, addressed in regulation and/or policy. The NOWRA Guidance is used extensively, with the core criteria of the guidance usually included.

This year, NOWRA's Technical Practices Committee is sponsoring a Pre-Conference Best Practice Workshop: "**Subsurface Drip for Decentralized Wastewater Dispersal, Siting, Design, Installation and Management**", scheduled for Sunday, October 22, Noon to 5:00 PM. The event is designed to bring participants up to date on the State-of-the-Art of

Drip System applications in the USA. Speakers include individuals intimately involved with the development and implementation of this technology as manufacturers, soil scientists, installers, regulators and researchers over the past 30 years. The Workshop focus will be on decentralized systems (multi-family, small community, commercial) beyond "single-family", although topics covered would also have relevancy to smaller residential systems.

The half-day workshop will cover eight discussion topics, and the details of each discussion topic and the presenters' backgrounds are as follows:

1. History of the development of drip from the 1950s to 1990s and beyond, from Israel to the US. Simcha Blass and Kibbutz Hatzetim developed and patented the first practical drip emitter in

1959. This was the precursor of the development of subsurface drip systems by two major manufacturers of drip emitters and tubing in use today (Netafim and Geoflow). **Jim Prochaska** will present the first portion of the talk and **Steven Berkowitz** will present a brief case study of the evolution of wastewater drip systems in North Carolina.

2. Soil/Site Assessment for Subsurface Drip Systems. **Tom Ashton** will present an overview of the soil receiving environment and critical elements and limitations for its assessment as necessary to site and size drip systems. The presentation will review hydraulic mass loadings and boundary design methodology; evaluation of instantaneous, infiltrative surface, linear and areal loading rates specific

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to the application of drip dispersal; and the unique soil treatment potential as a Best Management Practice of drip systems for removing organic and nitrogen wastewater constituents.

3. Field Layout and Hydraulic Design Considerations. *Steven Berkowitz*

will present an overview of drip system terminology and options being commonly used (e.g., “Fields”, “Zones”, “Runs”, “Laterals”, “Manifolds”, “Dripline” and “Emitters”). Drip Field/Zone Layout options, considerations and trade-offs will be discussed with examples. Hydraulic considerations during system design will be discussed to establish system flow and head requirements, pump selection, and pump operating regime during dosing and field flushing cycles. Also presented will be the recommended hydraulic performance measures to make at system start-up and to verify ongoing effective on-going system performance.

4. Drip System Components and Integrated Packages. *Jim Prochaska* and *David Morgan* will take

a deep dive into the nuts and bolts of drip systems with emphasis on systems in use for larger flows. Filter and Control options (Photo 2) and their idiosyncrasies and needs for sustainable performance will be discussed. Factors found to be most important based upon lessons learned from many years of experience will be presented, including the considerations and importance of integration of drip system components.

5. Installation, Operation and Maintenance.

Installation techniques and equipment for drip systems under varying soil and site conditions will be presented by *Dwayne Jones*. Equipment used and best practices procedures vary depending on soil conditions, site topography, and system size. System on-boarding and routine operation and maintenance steps are reviewed and troubleshooting techniques described.

6. Life-Cycle Management of Decentralized Drip Systems. *Dr. Bob Rubin*, with input from *Mike Hines*, will discuss the business management aspects required of

a sustainable management entity to be responsible to implement an effective program to inspect, monitor and maintain a functioning drip dispersal system. Management programs suggested for decentralized drip systems following the US EPA Voluntary Management Guidelines for Level 3, 4 or 5 management entities, with the higher levels recommended for larger systems or systems in particularly sensitive environments.

7. Research Update: Texas AMU's Project to Improve Performance of Drip Systems in Texas. *Dr. Anish Jantrania* and *Dr. Gabriele Bonaiti* will present an overview of their research efforts supported by the Texas On-Site Sewage Facility Grant Program related to identifying drip system performance problems and bench-scale projects related to evaluation of filter and drip clogging. Their presentation will also include the results from a survey done in Texas during the past two years and the current findings from their bench-scale research project related to drip filter and tubing clogging assessment.

8. Panel Discussion, Questions, and Feedback from the Audience. All speakers will participate in a final panel, to answer questions from the audience gathered during the presentations. Workshop participants will have the opportunity to provide written questions during the talks, which will be organized by the moderator (*Pam Pruett*) to serve as the basis for this discussion.

Workshop attendees will be provided with a compendium of literature that the team has assembled (including electronic links to publicly available documents), to supplement information delivered and future reference.



Photo 2. Filter and control options for a large drip system

WORKSHOP PRESENTERS' BACKGROUNDS

James Prochaska, P.E., President, JNM Technologies, Inc. Since 1994, Jim has devoted most of his time towards the development of on-site wastewater treatment and disposal using subsurface drip irrigation, responsible for the design and development of projects ranging from 300 gpd to over 1 million gpd. He has worked as a principal designer, reviewer and trainer of engineers and sanitarians on how to design on-site systems. As President of JNM Technologies, Inc he along with his staff have developed and refined innovative methods, equipment and design aids used for wastewater effluent dispersal using subsurface drip dispersal.

David Morgan is the Technical Manager for Geoflow, Inc. David worked 18 years in the on-site program of the Mississippi State Department of Health, and for over 25 years in industry primarily involved with the development, promotion, and proper use of subsurface drip dispersal systems. David worked 10 years for Delta Environmental Products, Inc., assisting in the development of the White-water® Pre-Engineered Subsurface Drip Disposal System. Since 2008 he has worked in sales and as technical manager for Geoflow.

Tom Ashton is the Market Development Manager for American Manufacturing Company (AMC). Tom worked in Virginia as a Sanitarian and as a private consulting soil scientist and onsite system designer. For the past 25 years, Tom has served in many capacities for AMC, securing/supporting state approvals for AMC Perc-Rite® Drip Dispersal systems; teaching; and many project-specific sales and design assistance functions. Tom helped create NOWRA's Advanced Onsite Wastewater System Design course and has been an active participant in multiple onsite research projects.

Dwayne Jones is president of Jones Pump Service/Bay Area Environmental with over 30 years of experience providing consulting, conventional/alternative onsite system design, installation, operation and inspection. Dwayne is a National Environmental Health Association (NEHA) certified contractor, past president of the Maryland Onsite Wastewater Professional Association (MOWPA), past member of the NOWRA Board, and past developer and deliverer of on-site wastewater system training materials, including for NOWRA.

Dr. Albert Robert (Bob) Rubin is an Emeritus Professor in the Biological and Agricultural Engineering Department at North Carolina State University and Senior Environmental Consultant and principal with A. R. Rubin and Associates. He previously served as a visiting scientist with EPA, assisting with development of model onsite and decentralized wastewater management programs and served on North Carolina's Environmental Management Commission. He has been active in development of training and certification efforts for wastewater operators in North Carolina and throughout the country.

Dr. Gabriele Bonaiti and **Dr. Anish Jantrania** are with the Texas A&M AgriLife On-Site Sewage Facility (OSSF) team working on various research, extension and education programs focused on improving the delivery of OSSF services to Texans. For details on their program and their background information, read the article "The Texas Model – A State Managed OSSF Research Funding Program" [published in Spring 2023 Onsite Journal](#).

Mike Hines, P.E., Founding Principal at Southeast Environmental Engineering, LLC. Mike has been involved with the design, construction supervision and management of, decentralized wastewater collection, treatment, and reuse systems for over 50 years, beginning with work for 14 years as a sanitary engineer for the Illinois Department of Public Health in 1966, and work for over 14 years as Environmental Compliance Manager for TVA, before forming his own firm in eastern Tennessee. He has developed many innovative technologies, including perhaps most notably the recirculating sand filter advanced pretreatment system.

Steven Berkowitz, P.E., is a Technical Assistance Provider for Southeast Rural Community Assistance Project (SERCAP), assisting with programs to facilitate septic system repairs for low-income residents and communities. He recently retired after 40+ years as Senior Engineer in North Carolina's On-Site Wastewater Program. Steven has worked closely with industry and researchers to bring subsurface drip technology to North Carolina, developing manufacturer-specific and generic approvals, devising a hydraulic design and evaluation computer program, and presenting long-term system performance findings to audiences in North Carolina and at national on-site wastewater conferences.



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Hampton, Virginia

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Now in its ninth year, the Onsite Wastewater Mega Conference is a collaboration between several national and state onsite wastewater organizations:

- NOWRA** – National Onsite Wastewater Recycling Association
- NAWT** – National Association of Wastewater Technicians
- SORA** – State Onsite Regulators Association
- VOWRA** – Virginia Onsite Wastewater Recycling Association

WHY YOU SHOULD ATTEND

So what does that mean for you?

Installers... pumpers... service providers... regulators... engineers... soil scientists... designers... educators... Regardless of your role in the onsite wastewater profession, you will find lots of useful learning opportunities.

Ideas to grow or improve your business.

Through education sessions, conversations with colleagues, and meetings with many of the industry's most progressive and innovative companies in the exhibit hall, you can get new ideas for building your existing business.

You can identify new ways to expand your business.

Increasing water shortages, skyrocketing costs to build and maintain central sewer infrastructure, and a wide range of applications are creating new markets for onsite wastewater. The Mega-Conference is an ideal place for you to identify new opportunities for your company to grow and expand.

Bigger really is better.

While size doesn't always matter, having lots of choices does. A wide range of options for meeting your education needs is another reason to attend the Mega-Conference.

You can meet your continuing education requirements.

In most states, the conference curriculum will qualify for credit hours in licensing or professional certification programs. We are working to secure approval for continuing education credit from states which license or certify installers, service providers, inspectors and designers.

It's an investment in you and your organization.

If you get one good idea which translates into more business or a better way to do things, you will more than justify your cost of attending. Invest in yourself and your organization.



CONFERENCE HIGHLIGHTS

TECHNICAL EDUCATION & TRAINING. Choose from more than 60 sessions in six tracks across a variety of topics, including policy, regulations, environmental justice, nutrients, education, problem solving, wastewater characterization, inspections, installations, and more.

EXPANDED POSTER SESSION. Again, for 2023 will be an expanded poster session and contest for Emerging Professionals. Come and discuss the technical presentations one on one with the author all in an informal setting of the exhibit hall.

OUTSTANDING FIELD TRIPS. Two great, OPTIONAL full-day field trips are planned for the day of October 25: One field trip will explore the Virginia Tidewater and Lower Coastal Plain. The other field trip will visit concentrate on repaired systems in the Virginia Western Coastal Plain within the James watershed area. Both field trips will be eligible for continuing education credits.

EMERGING PROFESSIONALS SILENT AUCTION. Participate in the first silent auction/raffle of NOWRA's new Emerging Professionals Committee. All proceeds go towards the NOWRA Emerging Professionals Scholarship fund. The Emerging Professionals Committee is a newly formed NOWRA subcommittee dedicated to bringing awareness and opportunities to young and emerging professionals looking to continue their onsite wastewater careers. The first scholarships will be announced at this year's Mega-Conference.

OPENING GENERAL SESSION. The theme of this year's conference is "Clean Water for Healthy Communities." Our keynote speaker, Sherry Bradley from the Black Belt Unincorporated Wastewater Program will present on "Building Wastewater Infrastructure That Will Last Because People Matter." In addition to our keynote, attendees will get a high-level view of key issues facing our industry, including an update on NOWRA's successful lobbying effort, a report from US EPA on implementing legislation supported by NOWRA that will benefit the onsite wastewater industry, and an update from USDA and their decentralized water systems program.



SOCIAL EVENT. Virginia Air and Space Science Center (VASC): Join us for fun, "out of this world" evening of good food, drink, and relaxation after the first day of the Mega-Conference. Your peers and co-workers will surely be joining us at this special event.



NOWRA/NAWT/VOWRA EXPO. Dozens of leading national and local companies will be displaying their latest products and services in the exhibit hall. There will be plenty of opportunity for attendees to visit with exhibitors and learn more about their products.

2023 MEGA-CONFERENCE REGISTRATION & INFORMATION

Attendee registration is ongoing for the **2023 Onsite Wastewater Mega-Conference**.

Don't miss out on the largest national onsite/decentralized wastewater event of its kind that offers industry professionals the highest quality education and training available. The 2023 Mega-Conference is being held October 22–25 at the Hampton Roads Convention Center in Hampton, Virginia.

Whether you are an installer, designer/engineer, pump, service provider, regulator, soil scientist, manufacturer, or educator, you will find lots of useful educational and networking opportunities at this year's Onsite Mega-Conference.

To find out more about the **2023 Mega-Conference** including agenda, list of exhibitors, registration, and hotel information, visit www.nowra.org.

SEE CONFERENCE SCHEDULE ON NEXT PAGE ►



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Onsite Wastewater Mega-Conference | 2023
Hampton, Virginia



CONFERENCE SCHEDULE

Sunday, October 22

8:30 am–11:30 am	NOWRA Board of Directors Meeting
11:00 am–5:30 pm	Registration open
12:00 pm–5:00 pm	Drip Workshop (optional)
1:00 pm–5:00 pm	Exhibitor Move-in to Expo Hall
4:30 pm–6:00 pm	NOWRA Corporate Members/ Government Relations Meeting
6:00 pm–8:00 pm	Welcome Reception

Monday, October 23

7:00 am–5:00 pm	Registration open
7:00 am–6:00 pm	Mega-Conference Expo open
8:00 am–12:00 pm	Opening General Session
12:00 pm–1:30 pm	Lunch in Expo Hall – Poster Sessions
12:00 pm–1:30 pm	State Affiliates Meeting
1:30 pm–4:45 pm	Concurrent Education Sessions
4:45 pm – 6:00 pm	Exhibitors' Reception in Expo Hall
6:30 pm–10:30 pm	Off site Social Event, Virginia Air and Space Science Center (optional)

Tuesday, October 24

7:00 am–4:30 pm	Registration open
7:00 am–1:00 pm	Mega-Conference Expo open
7:00 am–8:00 am	VOWRA Annual Business Meeting
8:00 am–11:45 am	Concurrent Education Sessions
11:45 am–1:00 pm	Lunch in Expo Hall
11:45 am–1:00 pm	Joint Education Committee & Technical Practices Committee Meeting
1:00 pm–4:25 pm	Concurrent Education Sessions
1:00 pm–6:00 pm	Expo Hall breakdown and move out
3:00 pm–3:30 pm	Emerging Professionals Committee Meeting
5:00 pm–6:30 pm	NOWRA Annual Business Meeting
6:30 pm–8:30 pm	SORA Reception (invitation only)

Wednesday, October 25

8:30 am–5:00 pm	Virginia Tidewater/Lower Coastal Plain Field Trip (optional)
8:30 am–5:00 pm	Repairs: Virginia's Western Coastal Plain within the James River Watershed Field Trip (optional)

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NOWRA Releases New Homeowner Training Materials

By Sara Heger, Ph.D. and John Buchanan, Ph.D.

Through a grant from US EPA and in partnership with the Rural Community Assistance Program (RCAP), NOWRA has developed training materials for educating property owners with an onsite wastewater treatment system (OWTS). This project developed an interactive homeowner/public training module for residential owners and the public with best management practices to keep their septic systems functioning properly. These practices focus on recycling water: cleaning wastewater and returning safe water to the water cycle with the goal of protecting human and environmental health in a cost-effective manner.

Concepts covered in this training course include:

- Importance of wastewater treatment
- Overview of treatment in an onsite system
- Typical onsite system features
- Final treatment and dispersal
- Management, maintenance, safety, and system troubleshooting.

While the training's target audience is property owners who have an onsite system, the concepts are also applicable to the public, realtors, local health officials, and septic system professionals. NOWRA piloted these materials at three in-person events this spring across the US and updated the materials based on feedback and evaluations.

The available materials developed include:

- **User Guide** – A national level OWTS manual including newly developed graphics from US EPA. The manual describes the many types of OWTS, management, safety, landscaping and land use, maintenance and troubleshooting common problems.
- **Training Materials** – Four modules were developed for in-person or virtual training events. These materials are designed to be customized for the audience, length of time and regulations. The four modules include:
 1. Module 1 – Overview of Sewage Treatment and Typical OWTS
 2. Module 2 – Overview of Management
 3. Module 3 – Home Management Tips
 4. Module 4 – Troubleshooting

Each module includes slides with speaker notes, activities including a fun “identify the problem” troubleshooting session, pre and post-test and evaluations, a facilitation guide with an agenda, learning objectives and the activity support documentation and photos and videos of common systems across the US that can be used to customize local training events.

These resources are available on NOWRA's website at: www.nowra.org

Thanks to the many NOWRA members who reviewed these documents and provided photos and videos.

In 2024 these materials will be converted to Spanish. An online version of the training is also under development for release in 2024. Questions about these materials should be directed to NOWRA at info@nowra.org.



This national level OWTS manual includes newly developed graphics from US EPA. The manual describes the many types of OWTS, management, safety, landscaping and land use, maintenance and troubleshooting common problems. Available on NOWRA's website: www.nowra.org.

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★ New for Fall 2023

To learn more about or to join NOWRA's Corporate Membership program, please contact us at 978-496-1800, by email at info@nowra.org, or [on our website](#).

CORPORATE MEMBER BENEFITS

Corporate Membership in NOWRA is an investment that enhances your business marketing efforts while showing your support of our mission to advance and grow the Onsite and Decentralized Wastewater Industry.

Corporate Membership Benefits

- Conference booth, sponsorship, & advertising discounts
- *Onsite Journal* advertising discounts
- Individual NOWRA memberships
- Recognition in the industry
- Federal advocacy on your behalf

Advocacy Successes

1. NOWRA worked with Congress on the Infrastructure Investment and Jobs Act (H.R. 3684) that was signed into law by President Biden on November 15, 2021. The water infrastructure bill creates a Decentralized Wastewater Grant Program for the repair or replacement of failing or non-existent septic systems owned by low-income homeowners. The Act authorizes \$50 million of funding for each of the Fiscal Years 2022–2026, for a total of \$250 million.
2. NOWRA is working with EPA on implementation of legislation we sponsored which was passed into law as part of the 2018 Water Bill (America's Water Infrastructure Act of 2018) requiring EPA to create a Decentralized Technology Clearinghouse and to share information about the cost-effectiveness of decentralized systems with local governments and other groups. EPA must regularly report back to Congress about how they are supporting the increased use of decentralized systems.
3. NOWRA is monitoring the U.S. Census Bureau's efforts to include a "sewer or septic" question added to the Annual American Community Survey (ACS). This question was removed from the decennial Census after 1990. NOWRA worked with EPA to get them to submit a request to have this question included on the survey. In October 2018 the U.S. Census Bureau accepted the EPA proposal and the question is moving forward to the next stage of approval. This is on track for addition to 2025 ACS.

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Proclamation

WHEREAS, proper septic system use and routine care are vital to protecting public health, preserving our highly valued groundwater, lakes, streams and waterways, and avoiding costly repairs that can result from neglect; and

WHEREAS, more than one in five households depend on septic systems to treat wastewater from homes and businesses; and

WHEREAS, wastewater professionals of NOWRA use their expertise in the design, installation, maintenance, research, outreach and/or regulation of septic systems in the U.S.; and

WHEREAS, the U.S. Environmental Protection Agency's SepticSmart program used by NOWRA does educate homeowners about the need for proper septic system use and routine maintenance; and

WHEREAS, homeowners and the environment benefit from properly designed, installed, operated, and maintained septic systems;

NOW THEREFORE, we the Board of Directors of the National Onsite Wastewater Recycling Association do hereby proclaim the week of September 18-22, 2023 as *SepticSmart Week* and we urge all people to join us in this special observance.

Signed this 21st day of August 2023.

Allison Blodig, NOWRA President



National Onsite Wastewater Recycling Association – P.O. Box 982, Westford, MA 01886
Ph.: 978.496.1800; Fax: 703.997.5609; email: info@NOWRA.org – Web: www.NOWRA.org



NOWRA's commitment to supporting the US EPA MOU Partnership and SepticSmart Week



SAVE THE DATE!

EPA's Decentralized Wastewater MOU Partnership Renewal Meeting

December 5 & 6, 2023

EPA HQ Conference Center, Washington, DC

The event will renew the commitment of EPA and its MOU partners to encourage proper care of decentralized systems and increase collaboration among EPA, state and local governments and system practitioners and providers.

<https://www.epa.gov/septic>



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ONSITE A TO Z

An overview of onsite wastewater treatment provides a foundation of relevant courses for many professionals. Topics include onsite wastewater basics, O&M, and soil evaluation and treatment. Ideal for new employees, regulatory professionals and students.

INSTALLER TRAINING

Ideal for new installers. This course includes modules on topics such as safety, planning, soil and site concepts, distribution of effluent, dosing and controls, advanced treatment, and soil treatment.

TROUBLESHOOTING

Ideal for designers, installers, regulators, service providers and

more! No matter what our role is in the decentralized industry, we are sometimes faced with systems experiencing problems or out of ordinary situations. This course walks through a typical treatment train starting with the flow coming from the structure and then walks through component troubleshooting including septic tanks, pumps and controls, soils, media filters, aerobic treatment units and finally soil treatment units.

DESIGN COURSE

NOWRA has developed seven courses in the critical area of design of decentralized systems. These courses lay the groundwork for design and will be expanded over the next several years. This

course includes modules on topics such as aerobic treatment units, soil properties, soil water movement, making infiltrative decisions, and pressure distribution.

MEGA MODULES

NOWRA has developed 12 courses from presentations at the 2020 Virtual Onsite Mega-Conference. These courses cover a wide variety of topics and were selected due to their continued relevancy to the decentralized industry. Modules include topics such as planning for sustainability, research updates, reuse, brewery waste treatment, nitrogen balance, urine diversion, and more.

Participants can select class length based on continuing education requirements, the subject matter, or how much time they have to commit to training.



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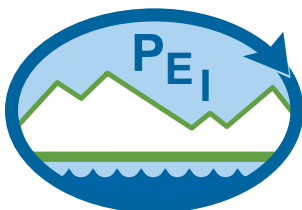


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