

ONSITE *journal*

Fall 2008

NEWS FOR THE DECENTRALIZED WASTEWATER INDUSTRY

Vol. 17 No. 4

Regulations and Environmental Impacts

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NOWRA

National Onsite Wastewater Recycling Association

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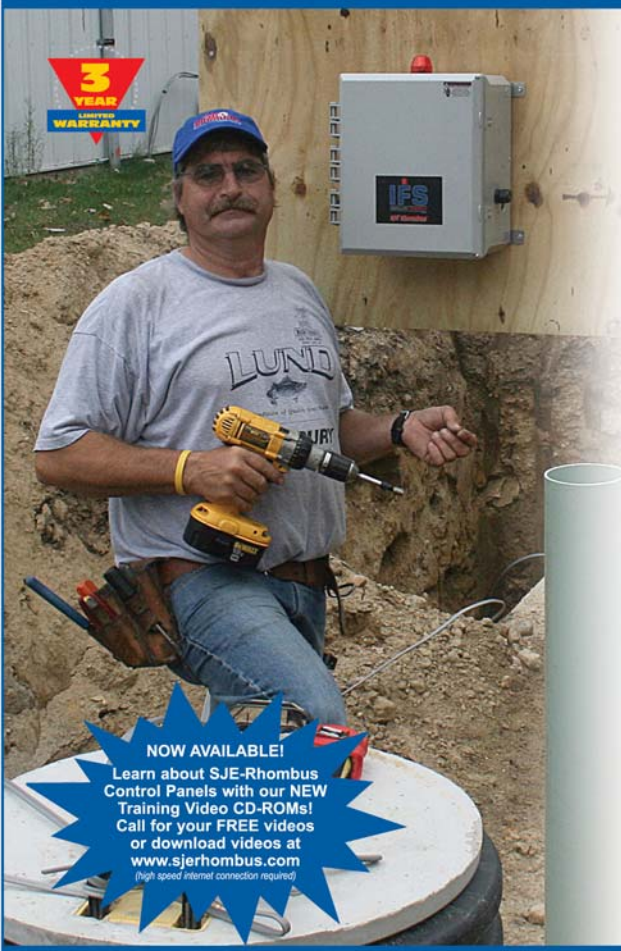
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ONSITE Fall 2008 journal

NEWS FOR THE DECENTRALIZED WASTEWATER INDUSTRY

National Onsite Wastewater Recycling Association, Inc.

Vol. 17, No. 4

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NEWS

from NOWRA HEADQUARTERS

By Jessica Finney, Executive Director

I hope this issue of the *Onsite Journal* reaches you as you are enjoying the spirit of the holiday season!

By the mere fact that of the title change above, you can probably guess there have been some changes at NOWRA Headquarters. At the end of October, Alan Gale made a decision to leave BTF Enterprises for opportunities outside of the association management industry. He enjoyed working with everyone with NOWRA and wishes you all well. His positive energy will be missed.

So, after eight months working side by side with Alan and being deeply entrenched in every aspect of NOWRA, I now fill the role of Executive Director. I am fortunate that Alan was able to bring NOWRA through the management transition, create a foundation of working relationship and mend some bridges with affiliate groups.

After 10 years of experience in nonprofit organization management, project management and event planning, I know that collaboration is the key to success. I am looking forward to building on the relationships I have with the NOWRA Board, state leaders, manufacturers and members and working with new people to help grow the association's leadership base.

The NOWRA Headquarters team will continue to support all of NOWRA's projects and we are ready to move forward without missing a step. Stephanie Munoz is the new NOWRA Account Manager. She is also known to many members from the annual meetings as the expo hall coordinator and has worked on several NOWRA projects already. I

am thrilled to have such a strong, creative team member who has exceptional member service skills.

Shiela Wallace is moving back to California and resuming her place at BTF Enterprises as Operations / Project Manager. She has helped BTF manage associations for the past 12 years. Shiela and Heather Barna are the resident experts of the I4A database system which is being utilized by Headquarters and affiliate state groups to streamline data and communications.

By the time you receive this issue, the Installer Academy in Las Vegas will have wrapped up. We look forward to reporting about this exciting event in the Winter 2009 *Onsite Journal*. The Strategic Plan for 2009–2011 will have been presented to the Board of Directors at the meeting December 7th and we will be able to inform the membership about the adopted plan. During the planning process, there were many viewpoints expressed and I would like to express my appreciation to the members who contributed their time and valuable input.

Heading in to 2009, NOWRA will provide us with both challenges and opportunities to deliver valuable benefits to affiliate state groups and manufacturers while also fulfilling the role of a national voice for the onsite/decentralized industry.

We appreciate your continued support of NOWRA. Every member is important in building the identity of the industry and a shared voice that promotes the importance of your work.

All of us at NOWRA Headquarters extend our best wishes for a wonderful holiday to you and your families.



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Whew! Where did the last two years go? I guess when you are busy and a lot of changes are taking place, time seems to move much more quickly.

There were definitely changes taking place—some of which were orchestrated by NOWRA’s Board, and others in the financial and economic realm that caught everyone holding the short end of the stick.

NOWRA’s transition to a new management firm, BTF, took more time than expected as new items kept cropping up that had to be handled. I might add that BTF, along with the Board, did an excellent job of tackling and finding solutions to these unexpected items.

NOWRA will continue to work within the organization with the Affiliate Groups and its Industry Members to finalize the Strategic Plan and move all the groups to a better position to weather out the financial crisis.

As we move into the future, NOWRA will also strengthen its ties with its MOU Partners; looking at joint conferences and other means to cut costs and increase attendance at all activities.

The financial and economic woes of the U.S. and the world are also plaguing our industry which in turn affects NOWRA. Some companies are restructuring and personnel have been affected. I wish all those folk the best in their future

endeavors. It is going to take time to turn the economy around, and we will have to be patient.

In the future, NOWRA and the onsite/decentralized-distributed industry need to play a bigger part in the U.S. infrastructure for the 21st century. NOWRA needs to be proactive in working with its partners to present a unified plan to the new administration for new construction, and fixing and replacing our aging infrastructure.

A lot of changes have taken place and there are a lot of challenges that have to be faced. I believe that under Tom Groves’ guidance as President, the new Board and BTF will face the challenges and move NOWRA forward as the leader in the onsite/decentralized-distributed sustainable integrated water management infrastructure.

I would like to thank the Executive Committee, the NOWRA Board, and all Committee Chairs for their support during my term as president . . . for taking their time to make NOWRA a better organization and its conferences and activities the best. I believe we have chosen the right association management team, BTF, to help lead NOWRA into the future.

I will be around for another two years as Past President to help where I can.

Thanks to all,
JERRY STONEBRIDGE, *President, NOWRA*

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Georgia Water Policy Issues: One Year Later

By Mark Hooks, R.S., C.P.M

Government Relations Committee Chair

This time last year, I reported on the Government Relations Committee's efforts to engage the policymakers in Georgia regarding their statewide water plan. ("NOWRA Board Urges Georgia Water Council to Change Position on Septic Systems," *Onsite Journal*, Fall 2007, v.16 no. 4 p.8). The Georgia policymakers's original plan indicated that a "Big Pipe" style sewer system was the preferred means of wastewater treatment, which meant that Georgia communities would shift away from the decentralized options that our industry provides.

Armed with the information from the EPA's 1997 Report to Congress, we were able to convince them that decentralized options are cost-effective alternatives. As a result, many positive changes were made to the plan. Instead of focusing on *replacing* decentralized options, the focus is now on *properly managing* them, as the EPA management guidelines suggest.

Over the past year, the Georgia regulatory officials have pressed forward with implementing these changes. Our successes now appear to be even greater than we expected. In some cases, the concepts that we managed to get into the plan actually favor decentralized options. For example, coastal communities are now required to evaluate whether the wastewater disposal systems will deplete or replenish the underground drinking water supplies.

The communities along the coast get most of their water supply from underground freshwater aquifers. Unless the water is treated and returned to the aquifer, saltwater from the nearby ocean fills the voids, rendering the water supply wells unusable without high levels of desalinization. In the past, it was common to withdraw the water from the ground, send the resulting sewage to a municipal treatment plant, and then dispose of it into a river or ocean. That practice did not replenish the underground supplies and problems resulted.

Since the new water plan was implemented, these coastal communities have been required to evaluate the impact of their wastewater disposal practices on water supplies. Due to this new requirement, our decentralized options are a favored means of treatment because they return most of the treated wastewater to the aquifer.

As a result of the new Georgia water plan, the U.S. Geological Survey conducted a study of how much water is returned to the aquifers in the Atlanta Metropolitan area. The study was conducted during a time of historically extreme drought (Figure 1). Therefore, the results show a time when the *least* amount of water would be returned to the aquifer. In

spite of the extreme drought conditions, 83% of the water was found to return to the aquifer, which amounts to 2.7 inches of groundwater inflow per year (Figure 2). A full summary of their study can be viewed online at: http://ga.water.usgs.gov/download/septic/OWTS_USGS_1.pdf

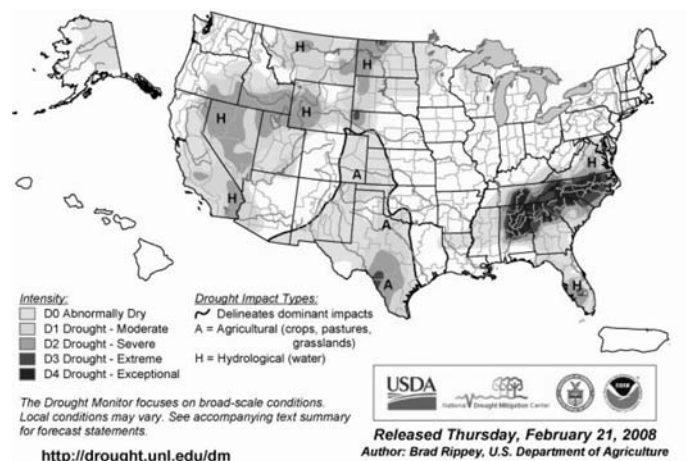


Figure 1. The national drought status at the end of the USGS study.

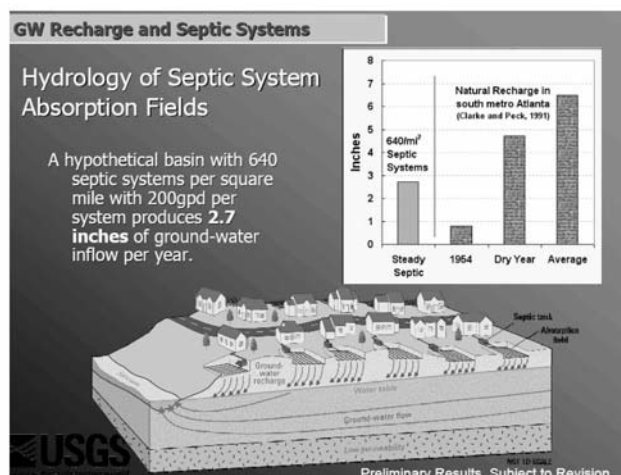


Figure 2. Septic system groundwater recharge.

The Georgia water plan is a good example of how NOWRA is taking a leadership role in developing sustainable water management policies. It also shows how responsible state water managers can be positively influenced by the NOWRA membership's experts. In the future, we expect to comment to Congress on the reauthorization of the Clean Water Act and on the allocation of wastewater infrastructure funding. Working as a team with our state affiliate members, we can assure that our industry becomes a respected part of the nation's wastewater infrastructure. ■

Performance-Based Rules Are Coming! NOWRA Offers Help

By **Richard Otis**, *Incoming NOWRA VP President-Elect*
Matt Byers, *Onsite Wastewater Manager, Zoeller Company*

The world has changed! We are probably more aware of it than ever before. The current financial crisis is getting the most attention today, but it wasn't long ago that we were concerned about energy shortages, and before that food shortages and global warming. And before that it was collapsing bridges and declining water quality. It doesn't stop there. Our earth is reaching its carrying capacity for our way of life. Pestilence and famine are rapidly increasing. But what does all this mean? It means that mankind will soon be facing a whole new global paradigm and to survive we all need to step up. This includes our industry; we are not immune.

Fortunately for us, it could be easier than for others to step up. Our industry has much to offer the world. When done well, our wastewater practices help to reduce the impacts of our footprints. Our wastewater treatment systems work with the environment to sustain water quality and public health, reduce energy inputs and greenhouse gases, and reuse our "wastewater" and the nutrients it contains to preserve our precious water resources. Our systems can help replace deteriorating infrastructure with more practical and less costly options. We can help maintain a good standard of living for families despite the challenges we face.

It just won't happen automatically, however. We can't stand still. We need to move forward, show others that we have solutions, and build the public's trust in what we do. It won't be easy but it will be worthwhile.

They Aren't Just Septics Anymore!

NOWRA and its members understood early on that our industry had much more to offer than it was providing and that if we were to survive the serious challenges ahead, we needed to encourage our industry to change. In 1999, NOWRA wrote and adopted the *Model Framework for Unsewered Wastewater Infrastructure* that outlined a strategy for what we needed to do to realize the potential of a

ABOUT THE AUTHORS: **Richard Otis, Ph.D., PE., DEE**, is a former senior associate with Ayres Associates and has been involved in research and demonstration of wastewater collection, treatment, and disposal alternatives since 1970. He is a member of the Model Code Committee, a past NOWRA Board member and the incoming NOWRA VP President-Elect. **Matt Byers, Ph.D.**, is the Onsite Wastewater Manager for Zoeller Company. Dr. Byers received his Ph.D. in Environmental Programs and Entomology from the University of Nebraska. He is the Chairperson for NOWRA's Technical Practices Committee.

decentralized approach to wastewater treatment and reuse. This framework identified the critical components necessary to achieving the goal of "sustainable development while protecting human health and the environment." Together, the seven critical components of this framework provide NOWRA a clear direction for what we need to do to become a leader in wastewater management and gain parity with conventional sewerage. These components are:

1. Stipulate performance requirements that protect human health and the environment;
2. Require system management to maintain performance within the established performance requirements;
3. Monitor and enforce compliance to the stipulated performance requirements;
4. Provide technical guidelines for site evaluation, design, construction, operation, and maintenance for both engineered and prescriptive designs that provide acceptable treatment for the conditions encountered;
5. Require education/training for all practitioners, planners, and owners;
6. Require certification/licensing for all practitioners to maintain standards of competence and conduct;
7. Review regulatory programs regularly to identify knowledge gaps, implementation shortcomings, and necessary corrective actions.

This framework was a beginning, when NOWRA offered a new direction where "septics" would not be enough anymore. It was a new milestone when decentralized treatment and performance management began!

What Do We Mean by Performance Management?

Performance management is an approach to onsite and cluster wastewater treatment that turns what we have been traditionally doing upside right. Rather than using prescriptive designs that dictate what type of site that would be acceptable for development, the performance management approach evaluates the potential risks of a wastewater discharge on a particular site, which then dictates what type of system would be considered acceptable if the site were to be developed. What might be an acceptable system could be either a prescriptive or engineered design. The treatment requirements necessary to manage the potential risks on the particular site would determine the type of system. The owner of a property would have a broad range of treatment processes and equipment to choose from, but whatever is

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Performance-Based Rules Are Coming (continued from page 7)

chosen must meet the performance requirements or face enforcement action. Together, this is “performance management.” No longer should “bury and forget” be acceptable.

Why Is Performance Management Important?

Our traditional approach to onsite and cluster system regulation with its focus on compliant construction rather than treatment results is no longer adequate. Increasingly, development is occurring on lands that are less suited for traditional onsite systems and the densities of development are often greater, which increase the risks of contamination of our water resources. In addition to public health, there is growing public concern over the potential impacts that traditional onsite systems may have on groundwater, inland lakes, and other public waters. Environmental protection is becoming a priority as high as public health. The traditional regulatory approach does not respond well to these concerns.

If we are to rely on onsite wastewater treatment as an effective and permanent component of our rural infrastructure that provides affordable sanitation and sustainable development for individual homes, small unsewered communities, and urban fringe developments, performance management is critical. If we fail to integrate performance management into our programs, we are choosing to ignore increased risks to public health, impaired environmental quality, severe limitations on unsewered development, and expensive central sewerage. But the changes made must be carefully conceived to ensure sustainable public health and environmental protection, as well as sound land use.

How NOWRA Can Help

In 2000, the NOWRA Board of Directors took a significant step outlined in the *Model Framework for Unsewered Wastewater Infrastructure* by authorizing the formation of the Model Code Task Force. The charge given the task force was to draft a comprehensive framework on which state-level codes for decentralized wastewater treatment systems should be written. The *Model Code Framework for the Decentralized Wastewater Infrastructure* is the outcome of that mandate. It is comprised of two documents: Volume I—*Workbook for Writing the Code* and Volume II—*Code Design Philosophy and Guidance*. These volumes were adopted by the NOWRA Board in 2007.

The *Model Code Framework* is not a “model code.” but a framework to help state and local units of government assemble a code by promoting a process of code development that seeks to align the aims of stakeholder groups affected by its provisions. If alignment of aims is successful, the code should be adopted with broad community support.

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NOWRA'S MODEL CODE REGULATOR WORKSHOPS

A National Education and Outreach Program

In 2006, NOWRA was awarded a grant from the U.S. Environmental Protection Agency to present a series of workshops to state and local onsite wastewater regulators and public officials in how to use and apply NOWRA's *Model Code Framework for Decentralized Wastewater Infrastructure*. The purposes of the workshops were to promote the integration of regulations with performance- and science-based provisions and to advance the professionalism and maturation of our industry.

From January 2007 to March 2008, six one-day workshops were held across the country. The venues included Lexington, KY; Baltimore, MD; Atlantic City, NJ; Denver, CO; Yakima, WA; and Mobil, AL. In all, over 120 persons participated in the six workshops. The attendees were from 19 states and 3 foreign nations.

The workshops were organized as an interactive forum between the workshop leaders and attendees. Prior to each workshop, a questionnaire was sent out to the registrants requesting each to list salient issues they would like addressed. In this manner the workshops could be tailored to local situations and concerns.

The workshops focused on “informed choice” in which policy makers and citizens at all affected levels participate in setting and applying regulations; they understand the regulatory options as well as the benefits and costs associated with each option. A variety of options rather than single solutions to issues raised by the questionnaires were discussed among the leaders and participants, which exposed everyone to new ideas and experiences to help each address similar issues within their own jurisdictions. The sessions helped the participants to understand the regulatory options and the risks, benefits, and costs associated with each option.

Their responses to the workshops were good and they highly valued the discussion sessions where issues could be critically scrutinized. Their primary complaint was that the discussion sessions were too short!

Four messages could be derived from each of the workshops: (1) that regulators who will enforce the rules should not be solely responsible for drafting the rules (conflict of interest); (2) that during rule making, a stakeholder group should work with the regulators at an equal level throughout the process; (3) that a process is necessary to address conflicts of interest, which inevitably occur among regulators, practitioners, service providers and owners; and (4) that generally, the regulatory community has difficulty grasping the full meaning and intent of performance-based rules, probably largely due to the upheaval of traditional practices that performance programs require. ■

Performance-Based Rules Are Coming *(continued from page 9)*

The *Model Code Framework* provides for alignment of aims in the following manner:

- **Code options are provided.** The *Model Code Framework* provides a range of regulatory options that allow the most appropriate to match code requirements to risks of harm to public health and the natural environment. Where its knowledge of local conditions is a paramount factor, a local jurisdiction decides the level of regulation necessary to provide an acceptable level of protection.
- **Purpose of provisions are clear.** Each requirement is developed in a three-part process that lists the purpose of the requirement, provides a range of performance options which can achieve that purpose, and code language which defines a measurable performance-based requirement. Guidance is provided to assist in making choices on code requirements.
- **Requirements are based on science.** The requirements suggested in the *Model Code Framework* were developed by national experts from all sectors of the decentralized wastewater treatment industry, including scientists, engineers, regulators, contractors, manufacturers, soil evaluators, and academic researchers. The requirements are backed by current science; where the science is not settled, the expert opinion of the group was used.

The *Model Code Framework* provides options for as many levels of system performance and quality-assurance management practices as are needed to match state and local conditions, capabilities, and politics. The written code should reflect the community's capacity to implement requirements intended to reduce the health and environmental risks associated with decentralized wastewater treatment systems. It is recognized that states and local communities have different capabilities to administer and enforce codes. The *Model Code Framework* informs and supports code development processes and provides options that allow adopting jurisdictions to choose code requirements appropriate to their circumstances.

What States or Counties Have Adopted the Framework?

Change is difficult, particularly when it comes to making significant changes to rules because of impacts the new rules can have on the affected people's practices and livelihoods. As a result, rule revisions are a slow and often infrequent process. Whether states or counties have undertaken rule

revisions using the *Model Code Framework* is difficult for NOWRA to know since it was only rolled out in the last year.

However, over twenty NOWRA members from all sectors of our industry participated in its development over more than a four-year period. The majority of the participants were involved in policy development in their own states and the experience in the development of framework certainly has influenced their thinking with respect to their code revisions.

Moving from prescription to performance-based rules is a huge step and not one that NOWRA recommends because of the turmoil that it can cause. That is why the *Model Code Framework* was written with a range of options for each code provision discussed so that a state or local rule can evolve in small steps over time as needs and acceptance change.

Most state and local rules do not address our current concerns well. They typically lack appreciation for environmental sensitivity to wastewater discharges. They seldom require timely servicing and maintenance. They are inflexible and discourage current thinking regarding "best practices" and new technologies. They are not user friendly and frustrate not only practitioners and owners but also the regulators themselves. "Work arounds" to the rules in the form of variances are common, which weaken the rules even more. It is these concerns and frustrations with which the *Model Code Framework* is intended to address.

It is important to understand that the *Model Code Framework* is not a "model code." Instead, it offers options based on the principal of "informed choice" where policy makers and citizens at all affected levels participate in setting and applying regulations in which they understand the regulatory options and the risks, benefits, and costs associated with each option. Using NOWRA's *Model Code Framework* becomes a learning process helping those involved become aware of ideas, processes, and tools that provide flexibility and accountability of which they weren't aware. It is something we believe is worth trying!

You may obtain a CD containing an Executive Summary, Volume 1: Workbook for Writing the Code, and Volume 2: Code Design Philosophy and Guidance from NOWRA by calling 1-800-966-2942.

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Minnesota's Onsite Code Changing to Meet New Challenges

By **Gretchen Sabel**

Planner, Minnesota Pollution Control Agency

The last four years have been busy in Minnesota's SSTS program as the first major revision to the 1996 code came to be. Begun in 2004 and completed in 2008, these changes added new standards for large systems, new license categories, a septic tank testing and verification process, a product registration process for both treatment products and distribution media, and revised local ordinances to meet the new standards. The goal of the revisions was to improve the environmental performance of systems through stronger standards and more rigorous training and testing for practitioners both in private practice and the local regulators who approve the systems.

Recent History of Onsite Regulation in Minnesota

Thirty years ago, with leadership from Professor Roger Machmeier and others at the University of Minnesota, the Minnesota Pollution Control Agency (MPCA) developed a voluntary system for improving onsite performance. It included standards for systems promulgated in an advisory rule (that could be adopted by local governments, but was not mandatory), and a voluntary certification program for practitioners with training offered by the University. In 1994, a law was passed that instituted a mandatory statewide licensing program and required MPCA to develop minimum standards for onsite systems as well as local programs. In response to this law, MPCA promulgated the first mandatory state code in 1996.

Because local programs had been so varied across the state (some had adopted the advisory code, others adopted some variation of the code, and some had no local ordinance at all), the transition to the mandatory code was anything but smooth. The 1997 legislature made changes to the statute that required all counties to adopt the state code and included some compromises that allowed the program to move forward while allowing flexibility to those who were having problems making the needed changes. The partnership with the University of Minnesota expanded, with a full suite of pre-licensing and

ABOUT THE AUTHOR: **Gretchen Sabel** is a planner with the Minnesota Pollution Control Agency, where she is responsible for local government and legislative issues relating to Subsurface Sewage Treatment Systems. She holds a Bachelor's degree in Biology from the University of Cincinnati, a Master's of Public Policy from the University of Minnesota, and enjoys the give and take involved in policy and rule development and implementation.

continuing education classes offered each year to support the MPCA's certification and licensing program.

The 2004–2008 rule change was the first major change in the code since 1996. This process included several opportunities for public input into what needed to be changed, one law change that directed additional rulemaking, and a long public comment period on the proposed language which brought in more than 1,000 individual comments to be addressed. Hearings on the rule were held statewide via the MPCA's video conferencing network to allow people across the state to participate in the full hearing period at once, rather than in separate regional meetings. The final rule language became effective on February 4, 2008. The rule, and much other information on the MPCA program, can be found on the MPCA website at: <http://www.pca.state.mn.us/programs/ists/index.html>.

The Big Changes and How They Are Being Implemented

New standards for large systems add ground water protection for nitrogen—systems between 5,000 and 10,000 gpd must meet a 10 mg/l total nitrogen standard if they are determined to impact an aquifer. This requirement is intended to protect existing and future drinking water sources. (Systems up to 10,000 gpd are regulated by local governments through local ordinances that are based on the state rules; systems over 10,000 gpd are permitted by the MPCA.) Other considerations to be addressed include ground water mounding under systems, phosphorus impacts on surface water and increased definition of ownership for permitting systems.

These large system standards have been the most challenging part of the new rule, beginning with the need to better define what type of education and background is needed to effectively design systems that meet the standards. Clarifying the role of Registered Professional Engineers and Geoscientists in design is needed—changes to the statutes in 2007 required MPCA to develop design guidance to define where MPCA-licensed onsite contractors need to involve these registered professionals in the design process. The design guidance for systems up to 5,000 gpd will be completed in 2008; systems up to 10,000 gpd will be addressed in 2009.

New license categories were added as well: Advanced Designers, Advanced Inspectors and Service Providers. The Advanced Designers will design systems greater than 2,500 gpd that use prescriptive designs as specified in the design guidance, as well as systems for all non-domestic waste and

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Minnesota's Onsite Code (continued from page 11)

systems that serve commercial and other non-residential applications in all size ranges. Systems that use pretreatment products also will need to be designed by Advanced Designers. Advanced Inspectors will inspect the same suite of systems. Service Provider is a new category for those who take care of systems of all types, but only Service Providers can maintain the larger and more complex systems that the Advanced Designer designs.

Development of the pre-licensing courses for Advanced Designers and Inspectors has been complicated by the need to develop the design guidances. Since work will be continuing in this area, the first Advanced Designer courses offered in 2009 will only certify individuals to work on systems up to 5,000 gpd as the design guidance for larger systems continues to be developed. The new categories go into effect on February 4, 2011, three years from the effective date of the rule.

Septic tank testing and verification is also a new feature of the rule. Septic tank manufacturers have until February 4, 2011, to document to MPCA that their tanks meet the strength and water tightness standards in the new rule. Tanks that meet these standards will be listed on the MPCA website; only these tanks can be used in systems after this date. MPCA is now working to communicate the new standards to tank manufacturers and to work with them on development of the forms and other tools for the verification process.

Treatment and dispersal product registration was added to the rule so that there is a clear, statewide process for manufacturers and vendors to follow when seeking to sell their products for use in Minnesota onsite systems. The program in the state of Washington was the model for Minnesota's program. A Technical Advisory Panel (TAP) has been established for this process and several products have come forward into the registration process. Questions now being wrestled with include the sizing of synthetic drainfield media and up scaling of treatment technologies with NSF certification at lower sizes. For more information on product registration and

the work of the TAP, see www.pca.state.mn.us/programs/ists/productregistration.html.

Finally, **local ordinances** will need to be amended to incorporate the new rule requirements. This is an opportunity to get a more consistent network of local ordinances in place statewide. County ordinances must be amended by February 4, 2010 to conform to state rule; city and town ordinances must conform to the county ordinance within a year of its adoption. Any ordinance can be more restrictive, and counties may be less restrictive than state standards in specific, limited situations. The new ordinances will include a requirement for management plans for all new systems and operating permits for all systems that would have to be designed by an Advanced Designer. A model ordinance for counties to consider when amending their ordinances was developed by the Association of Minnesota Counties through a contract with Ayres Associates, Inc. This is available online at www.mncounties3.org/macpza. MPCA has a network of regional staff in place to work with the local units of government as they work through this process.

It has been good to work with practitioners in local governments and licensed businesses as they make the required changes to implement the rule. The current economic conditions make it harder and we appreciate the willingness with which the work is being done. The continued leadership and support of the University of Minnesota has been instrumental in this progress; MPCA thanks them for the technical and practical expertise that they lend to the industry and for the great instruction they do to ensure that the practitioners have the necessary skills to design, permit, install, inspect and maintain onsite systems. ■



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IN THE NEWS

Were you or a NOWRA colleague the subject of a news story? The story could have been in your local newspaper, an association newsletter, online news or other format. Send copies of the article to NOWRA to be included in the next *Onsite Journal*!

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The State of the Nation's Efforts to Institutionalize Decentralized Wastewater Management

By **Joyce Hudson**

Senior Engineer, U.S. Environmental Protection Agency

As EPA enters the second decade of its national program to promote better management of individual and clustered (decentralized) wastewater systems, it is helpful to step back and review the achievements of the past ten years. The 1997 *Response to Congress on Use of Decentralized Wastewater Treatment Systems* provided the framework for significant efforts to build awareness and knowledge of the benefits of these systems, deal with legislative constraints, promote an organized management framework, and assess the nature of liability, fee structure, and financial barriers.

Promotion of the management framework has been a key focus. EPA has issued design guidance, general management guidelines, a management handbook, and has supported a variety of public and private sector forums to elevate professionalism regarding all aspects of decentralized treatment systems. EPA has also worked collaboratively to build awareness and knowledge of the benefits of individual/clustered systems by conducting internal and external activities intended to highlight their performance, management, and cost attributes, and stressing their water quality, regulatory compliance (e.g., anti-degradation), and modular aspects. These activities have occurred through the public/private sector "MOU Partners" group; external analyses of performance, cost, and other data; internal orientation regarding the need to more fully assess appropriate wastewater treatment technologies—especially when supported by public funding; and through various guidance, outreach, and other efforts.

State and local programs have been important partners in this effort. State and local agency staff active in the various MOU Partner organizations have joined with their colleagues in the non-profit and private sectors to explore the status of wastewater treatment technologies, planning paradigms, regulatory programs, operation/maintenance requirements, and environmental impacts. As a result, a number of states have characterized and upgraded their onsite/cluster system management programs to improve consistency statewide and better align their regulations with approaches that incorporate

relative risk—to public health and water resources—into system management requirements.

EPA has recognized 13 states that have adopted wastewater treatment system management programs that are tailored for states' unique conditions but consistent with EPA's management program promotion efforts. These states have stepped forward to recognize that decentralized systems are—and will continue to be—important parts of the nation's wastewater treatment infrastructure, and therefore need to be planned, designed, installed, operated, and maintained properly. Below is a brief synopsis of specific program components for a few of the states that have adopted management guidelines that support elevated levels of professionalism in the wastewater treatment arena:

- *Alabama* offers performance-based permits for large systems, requires financially accountable management entities for systems serving two or more homes, and has worked extensively with homebuilders to improve overall system management.
- *Arizona* requires system inspections when property is sold or otherwise transferred, and specifies inspector training and mandatory maintenance contracts for alternative systems.
- *Delaware* allows experimental and alternative technologies by regulation, requires management programs for large systems, pump-outs every 3 years for small systems and provides SRF loans to homeowners.
- *Florida* provides for renewable performance-based operating permits for engineered systems as well as maintenance contracts and annual inspections. The state also has one of the best inventory systems among the states reviewed.
- In *Georgia*, all agencies involved in regulating onsite and community systems work closely together to ensure proper management; lifelong maintenance and reporting is required for all alternative/advanced systems.
- *Iowa* provides a structure that accommodates and promotes all five of EPA's system management models, deployed a statewide inventory database to track all onsite systems installed under county ordinances and the state issued general permit, establishes responsible management entities where needed, and offers SRF loans for decentralized facilities.
- *Maryland* allows alternative technologies, recognizes management districts for large systems, and provides assistance

ABOUT THE AUTHOR: **Joyce Hudson** is a Senior Engineer and Manager of EPA's Decentralized Wastewater Management Program in the Office of Wastewater Management.

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Nation's Efforts to Institutionalize Decentralized Wastewater Management *(continued from page 13)*

- to homeowners through several dedicated funding sources including the Chesapeake Bay Restoration Fund, SRF loans and state funding sources.
- *New Jersey* emphasizes water reuse and conservation through tax credits, allows alternative systems, requires a prepaid maintenance contract; and makes use of Clean Water State Revolving Fund (SRF) loans for decentralized systems.
 - *North Carolina* requires renewable operating permits for more complex systems and has issued a general NPDES permit for systems that discharge directly or indirectly (i.e., through field tiles, ditches, etc.) to surface waters, which is an area of regulation EPA is acutely interested in—and will be active in—during 2009 and beyond.
 - *Oklahoma* has a strong enforcement program that provides a backstop to their uncomplicated and straightforward state rules, and requires certification for system installers.
 - *Rhode Island* encourages planning through grants, authorizes management districts, supports maintenance requirements for complex systems, requires licenses for installers and inspectors, provides for mandatory system inspections, and extends SRF loan opportunities to decentralized treatment.
 - *Virginia* recently established a performance standard for all onsite systems to be implemented through operating permits where appropriate and is planning to expand the standard to include nutrient requirements.
 - *Wisconsin* focuses heavily on ensuring certified and licensed professionals are servicing onsite systems, that systems are routinely inspected and also finances replacement and upgrade of failing systems.
- EPA will be working further with states over the next few years to continue the development of risk-based management efforts that accommodate regulatory, incentive-based, educational, and/or cooperative actions as appropriate. In addition, EPA will increase internal and external efforts to support better wastewater impact assessments; more robust integration of wastewater, stormwater, and water resource management; and improved overall performance of wastewater treatment technologies. These actions will occur through the MOU Partner group, within EPA programs, and via external communication and cooperation with other interested parties. Balancing the twin objectives of supporting better management of existing and new systems while ensuring a more fulsome consideration of centralized/decentralized treatment options, as appropriate, will continue to be a high priority of the agency for years to come. ■

Notice of NOWRA 2009 Annual Membership Business Meeting

When: 8:45–9:30 AM, Wednesday, April 8, 2009

During the 18th NOWRA Annual Technical and Education Conference

Where: Meeting Room 202, Midwest Airlines Center, Milwaukee, WI

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 Wednesday, April 8, 2009 at 8:45am. The NOWRA 2009 Annual Membership Business Meeting will be held in Meeting Room 202, Midwest Airline Center, 400 W. Wisconsin Avenue Milwaukee, WI, 53203.

All members are urged to attend and participate in this meeting. This notice will be placed on the NOWRA website (www.nowra.org) with additional and updated information as it becomes available and in the *Onsite Journal*.

Draft Business Meeting Agenda

1. Roll Call—A master membership list will be available
2. Reading of 2009 Annual Meeting Notice
3. Reading/distribution of the previous annual meeting minutes
4. President's Report
5. Secretary-Treasurer's Report
6. Executive Director's Report
7. Committee Reports
8. Other Business
9. Open Member Discussion
10. Adjournment

For additional information, please contact NOWRA Headquarters at 1-800-966-2942.



Board of Directors' Comings and Goings

The 2009–2011 NOWRA Board of Directors election came to a close on October 31, 2008.

We had great voter turnout this year—almost double that of last year.

We believe this was due to the many highly qualified candidates on the ballot.

CONGRATULATIONS

NOWRA is pleased to announce the newly elected members of the Board of Directors

The Board positions have three-year terms, beginning on Dec. 1, 2008.

Edward J. Corriveau, Chief of Planning Finance, Commonwealth of Pennsylvania Dept. of Environmental Resources
Compliance Monitor/Regulator Sector Representative

Tom Fritts, VP of sales and Co-Owner,
Residential Sewage Treatment Co. Inc., Grandview, MO
Operator/Manager/Maintenance—
Service Provider Sector Representative

Craig Gilbertson, Environmental Planner, Ayres Associates
Site Evaluator/Soil Scientists, Designer/Engineer Sector Representative

Gregory D. Graves, General Manager, NORWECO, Inc.
Supplier/Vendor Sector Representative

Randall J. Miles, Associate Professor of Soil Science,
University of Missouri
Academic Researcher Sector Representative

IN APPRECIATION

We would like to thank the following outgoing NOWRA Board Members for their dedication and service to NOWRA over the last three years.

Raymond Peat
Past President

Mary Clark
Designer/Engineer Sector Representative

Kornell “Trapper” Davis
Installer/Contractor Sector Representative

Mark Hooks
Compliance Monitor/Regulator Sector Representative

George Loomis
Academic Researcher Sector Representative

Howard Wingert
Supplier/Vendor Sector Representative

WELCOME

VP/President-Elect Richard “Dick” Otis, Ph.D.

He is a tireless leader for NOWRA, having served on the Board and multiple committees.

Dick helped lead the Model Code Workshops and continues to contribute regularly to the Onsite Journal.

NOWRA Board of Directors

Executive Committee

President—Thomas Groves

VP/Pres-Elect—Richard Otis

Past-President—Jerry Stonebridge

Sec-Treasurer—Brian McQuestion

2006–2009 Directors

(Terms Expire December 2009)

Regulator—William “Press” Allinder

Installer/Service Provider—JR Inman

Supplier/Vendor—Albert Schnitkey

2008–2010 Directors

(Terms Expire December 2010)

Installer/Contractor—Ellen Vause

Installer/Contractor—Peter Balas

Engineering/Designer—Rodney Ruskin

Academic/Research—Judith Sims

2009–2011 Directors

(Terms Expire December 2011)

Engineer/Designer—Craig Gilbertson

Service Provider—Tom Fritts • Regulator—Ed Corriveau

Academic/Research—Randall Miles

Supplier/Vendor—Greg Graves

MARKETING & COMMUNICATIONS COMMITTEE

Submitted by Karen Borgeson, *Chair*

The primary purpose of the NOWRA Marketing & Communications Committee is to develop effective communications and promotional strategies to achieve greater public awareness of NOWRA's programs and work on behalf of the onsite industry. The committee works with the Executive Director to identify & implement strategies that showcase the achievements of NOWRA, and its members through production of the Associations publications, marketing materials, conference promotion, website, and homeowner education materials.

The committee typically conducts a conference call the first Tuesday of the month at 11:00 EDT. We schedule other conference calls as required. We take the opportunity to have face-to-face meetings at NOWRA Installer Academy, Annual Conference, and any conference where several members are attending (Pumper Show, WEFTEC, etc.).

Installer Academy

The Marketing & Communications Committee has been working with BTF and the Conference Committee to promote the Installer Academy through:

- Postcard and e-mail campaign to current membership.
- Print advertising and/or articles in the *Pumper*, *Onsite Installer*, NAWT newsletter, *Onsite Journal*, and local affiliate newsletters.
- Mailing to 1,700 non-members in the Southwest states and Oregon (increased their CEU requirement).

NOWRA's Annual Conference & Expo Onsite: The Sustainable Wastewater Opportunity

The committee will work closely with the Wisconsin Onsite Water Recycling Association (WOWRA), the NOWRA Conference Committee & BTF to promote the Annual Conference April 6–9 in Milwaukee, WI.

Local Affiliate Groups

Work with BTF to develop and implement a marketing plan for the top 3 priorities identified in the strategic planning process and local affiliate group task force recommendations. The following projects have been discussed:

- National presence & lobbying influence
- Web-based information resource for national and industry issues
- Education & Training: Speakers Bureau, Joint conferences with affiliate hosts

- Coordinate Advertising/Promotion efforts to bring manufacturers support to local level.
- Provide national news and industry trends
- SepticLocator

We are looking for more committee members to help with:

- **Technical writing**
- **Website design and optimization**
- **Advertising/Graphic Design**
- **Conference Planning & Promotion**
- **Membership Growth**

If you are interested in joining our committee, please contact or e-mail:

Karen Borgeson (888) 342-5753, Ext. 3426

Karen.Borgeson@sjerhombus.com

Mike Stoll (585) 615-6440

mstoll@netafimusa.com

AFFILIATE LEADERS COMMITTEE

Submitted by Hilary Moore, *Chair*

Communication is the process of attempting to impart information from a sender to a receiver with the use of a medium. But why is something so simple, yet so hard to achieve? We all are aware that in a successful organization, you must be able to communicate effectively. Effective communication isn't just with the BOD, but in fact is the exchange of information and knowledge within the state affiliate groups, as well as with those who have a direct relationship with "our" organizations.

In an attempt to open the lines of communication, a "State Affiliate Liaison" conference call has been established. This monthly call is "state" led and used to disseminate information and updates with regards to NOWRA to the state affiliates as well as to act as an open forum for discussion. The call is an opportunity for state associations to speak freely and share their concerns, ideas, and thoughts of NOWRA and to have their questions answered.

In November, the call also introduced a new segment to the agenda for "special" topics of discussion. This portion of the call allows for states to place an onsite related topic on the agenda in an attempt to share experiences and knowledge within the group.

Currently each state has provided a contact person to receive invitations to the call. Typically we receive participation from 8 states consistently but would love to have everyone

involved. This is a chance for your voice to be heard! For those that can not participate, the call meeting minutes are distributed as well as all NOWRA BOD meeting minutes. If you are not receiving this information or would like to be added to the list please contact me: Hilary.Moore@state.de.us.

TECHNICAL PRACTICES

Submitted by Matt Byers, *Chair*

There are two issues currently facing the Technical Practices Committee.

Succession for Committee Chair

After four years of serving as Chair of the Technical Practices Committee, I am stepping aside. I feel it is time to give someone else an opportunity to enhance our field with his/her gifts. I have enjoyed this role. It has truly been a blessing to be able to contribute to our field. The un-sewered world of wastewater is gaining a good reputation around the world. Onsite will never go back to being just a 'quick fix' until sewer comes. We need to understand where we are now and build for a more sustainable future. So, for anyone looking for a good opportunity to truly lead in this field, I urge you to speak to Tom Groves, President Elect about this Chair opening.

Water Softener Guidance with Onsite

NOWRA and the Water Quality Association (WQA) are working jointly to produce a guidance document addressing the issue of softeners and onsite. Allison Blodig (Premier Tech Environmental and Softener Task Force Chair) is coordinating the revisions to the drafts. Below are a few recommendations included in the document:

- Use softener systems that are high efficiency.
- Turn softener systems off during vacations.
- If you have a softener system and an onsite system and you suspect there is an incompatibility issue, you should communicate with professionals in both areas to solve the issue.

In the absence of perfect knowledge, we, as experts in onsite and water conditioning, have pooled what we think we know and provide guidance now. The document is not intended to have "all the answers" and will be amended as knowledge is gained. The document is intended to assist system owners, regulators, water professionals, etc. who deal with this issue. The final document will be published in an upcoming issue of the *Onsite Journal*.

EXTERNAL AFFAIRS COMMITTEE

Submitted by Mary Clark, *Chair*

The EPA MOU (Memorandum of Understanding) Partners are growing! In January 2005, when the group was first established, there were eight member organizations, plus

EPA. The partnership agreements were renewed with the current members, plus six new member organizations. A signing ceremony was held November 19th in Washington, D.C., at EPA's office. The ceremony was followed by a strategic planning meeting, which continued through the morning of November 20th.

The organizations will work together to improve management of septic wastewater systems by exchanging information and providing technical assistance to their members, states and local municipalities.

NOWRA has been working hard to develop closer working relationships with the current MOU partners, including listing event calendars and advertising in each others journals, offering training courses at conferences, and sharing an MOU partner booth at exhibits halls. Here are some additional highlights of our MOU partner alliances at work to better the industry:

1. NAWT (National Association of Waste Transporters)— They have exhibited at both our annual conference and Installers Academy, This year, NAWT will offer training on vacuum truck operation in Las Vegas at the Installer Academy.
2. NEHA (National Environmental Health Association)— We have in the past shared booth space at each of our

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Committee Reports *(continued from page 17)*

conferences and we are looking to reinstate this informal agreement. NEHA has a Certified Installer credential exam that will once again be offered this year at the Installers Academy in December.

3. CIDWT (Consortium of Institutes for Decentralized Wastewater Treatment)—They will once again be offering their 3rd pilot installation training program at the Installer Academy. This curriculum has been developed in conjunction with NOWRA and NEHA. NOWRA will be the host for all four of the pilot workshops.
4. NESC (National Environmental Services Center, also known as the Small Flows Clearinghouse)—NOWRA has provided exhibit hall space and NESC staff have made presentations at our annual conferences.
5. RCAP (Rural Community Assistance Programs)—NOWRA has provided exhibit hall space and RCAP staff have made presentations at our annual conferences.
6. NATat (National Association of Towns and Townships)—NOWRA has shared exhibit hall space
7. WEF (Water Environment Foundation)—NOWRA has shared exhibit hall space which has included NOWRA

having a booth at the annual WEFTEC convention typically attended by 15,000 people. NOWRA also participates on the WEF Small Community Committee. Tentative plans include NOWRA and other EPA partners sponsoring a preconference workshop for WEFTEC 2009.

8. U.S.E.P.A. (United States Environmental Protection Agency)—NOWRA has provided exhibit and meeting room space and EPA staff have made presentations at our annual conferences.

The newer organizations joining the MOU Partners all share a connection with water, but some of them are more focused on water supply than wastewater treatment and reuse. These organizations include:

1. ASIWPCA (Association of State and Interstate Water Pollution Control Administrators)
2. GWPC (Ground Water Protection Council)
3. SORA (State Onsite Regulators Alliance)
4. WERF (Water Environment Research Foundation)
5. ASTHO (Association of State and Territorial Health Organizations)
6. ASDWA (Association of State Drinking Water Administrators)


An orientation webinar was developed for presentation to our new partners and their members, as a way to introduce some basic concepts about decentralized wastewater treatment and management.

The formal signing ceremony, including Mr. Benjamin Grumbles, administrator at EPA, was held on Wednesday, November 19th. Tom Groves, incoming NOWRA President, attended and signed the document. Mary Clark also attended both the signing ceremony and planning session as representative of the NOWRA External Affairs Committee.

Joyce Hudson, USEPA led the planning for this event, which was held at EPA headquarters in Washington, D.C. In preparation for this meeting, a subcommittee was formed and worked with EPA and their contractors. Bonnie Bailey from WEF helped develop and send out a quick survey questionnaire, in order to collect specific information on each of our organizations, and identify the interest and needs for education and outreach regarding the benefits and limitations of decentralized systems. The meeting was held to move from periods of discussion and feedback, to developing objectives and actions for the group, both for the near- and long-term, as well as identifying how we can communicate and work together to share information and further the understanding and use of decentralized as an integrated piece of our national infrastructure.


Watch for more information on our EPA MOU Partners as well as joint partnership sponsorships in future editions of the *Onsite Journal* or on the NOWRA web site. ■

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On November 19 and 20, 2008, NOWRA Vice-President Tom Groves and External Affairs Committee Chairperson, Mary Clark, travelled to Washington D.C., to represent NOWRA at the EPA MOU Partners for Decentralized Wastewater Management Renewal Signing Ceremony. The EPA MOU (Memorandum of Understanding) is an agreement originally signed in 2005 by eight organizations involved with decentralized wastewater management. NOWRA was one of the original signatory members in 2005. In 2008, EPA has expanded the MOU Partnership to include six additional organizations. The ceremony consisted of representation and brief updates from each partner group, an official signing ceremony, and concluded with a 1½ day strategic planning meeting.

NOWRA Vice-President Tom Groves, who signed the MOU on behalf of NOWRA, stated that “NOWRA was extremely pleased to be a partner in the MOU, and equally pleased to be renewing our commitment.” He also stated that the MOU is important to the onsite/decentralized industry because “it can provide us with one consolidated voice on the issues.” Groves then reported on past activities that have come out of the EPA MOU partnership and future opportunities for collaboration. (For more detail on the past activities, please refer to the External Affairs Committee report on page 17.)

Future collaborative activities for NOWRA include the opportunity to build off of the existing relationships that NOWRA has already forged with the partners. We see more collaboration, training opportunities, and sharing of information. The opportunity also exists for NOWRA and some of the partners to conduct joint annual conferences and give input on research needs for the industry. A joint partner resource library is also being discussed as a mechanism to share the existing information, data, research, and papers that have been developed in the industry. Most importantly, a public education campaign will be developed through this partnership to help raise the public’s awareness of onsite/decentralized systems in this country.



Russ Martin (left), State Onsite Regulators Alliance, and Tom Groves, NOWRA’s incoming President, at the EPA MOU Partners event in Washington D.C.

These new activities are what excite NOWRA about participating in this partnership. We believe that much of the information and activity that will be obtained through this agreement has direct benefits to many of NOWRA’s members who have asked for this through their affiliate groups, focus groups, or through the NOWRA strategic planning process. As the 2008 NOWRA Strategic Plan rolls out over the next few months, you will see that the MOU Partnership offers NOWRA a means for meeting many of our needs. The EPA MOU Partnership for Decentralized Wastewater Management offers NOWRA a great opportunity to be heard on a national level through a consolidated voice, to provide benefits and contacts to our members, and to educate the public on our industry and why it is so important.

For more information on the EPA MOU Partnership or any of the partnering organizations, please visit the EPA website at www.epa.gov/owm/septic. If you would like to get involved with the External Affairs Committee, please contact Mary Clark or the NOWRA Office. ■



Members of the EPA MOU for Decentralized Wastewater Management Renewal met recently in Washington, D.C., for an official signing ceremony and a strategic planning meeting. Tom Groves (6th from the right) represented NOWRA at the event.



Septic Systems Fact Sheet

Office of Wastewater Management | Decentralized Wastewater Program

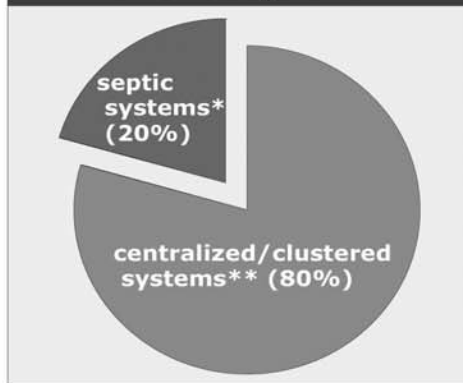
This fact sheet presents data on soil-based septic systems collected by the U.S. Census Bureau for the 2007 American Housing Survey, based on a sampling of 55,000 housing units.

Septic System Use

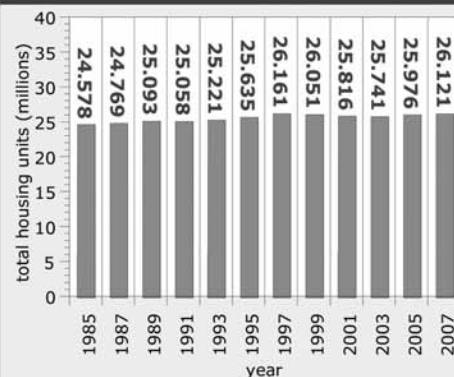
■ In 2007, an estimated **20 percent** (26.1 million) of total U.S. housing units were served by septic systems. This is an increase of 1.54 million septic systems since 1985.

■ In 2007, **22 percent** (1.6 million) of all housing units less than 4 years old used septic systems.

Total housing units served by septic and centralized/clustered systems



Total housing units served by septic systems

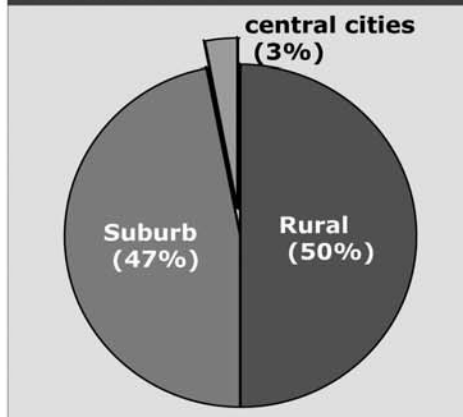


Demographics

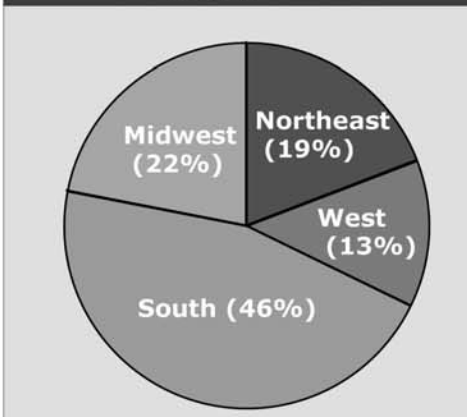
■ In 2007, **50 percent** (13.1 million) of total housing units with septic systems in the United States were in rural areas, **47 percent** (12.3 million) were in suburbs, while **3 percent** (774,000) were found in central cities.

■ In 2007, **46 percent** (10.1 million) of occupied housing units with septic systems were located in the southern region of the United States, followed by the midwest with **22 percent** (4.8 million), the northeast region with **19 percent** (4.2 million), and the west with **13 percent** (2.9 million).

Total housing units served by septic systems, by rural/urban/suburban classification



Occupied housing units served by septic systems, by U.S. Region***



*Total housing units served by a soil-based septic system for 5 or fewer units.

**Total housing units connected to a city, county, sanitary district, neighborhood, or subdivision sewer system serving 6 or more units (includes centralized and clustered onsite systems).

***Based on occupied housing units served by a soil-based septic systems (total housing units not available by region). Source: U. S. Census Bureau - American Housing Surveys for the United States, 1985 through 2007, Tables 1A-4, 1B-4, 1C-4, 1D-4, and 2.4.

The American Housing Survey is conducted by the U.S. Census Bureau, Housing and Household Economic Statistics Division every two years to determine up-to-date housing statistics. Field data cover an average of 55,000 housing units. A sample of housing units in all survey areas was selected from the decennial census. The survey goes back to the same housing units on a regular basis, recording changes in characteristics, adding and deleting units when applicable. This cross-sectioning of the housing inventory gives a picture of houses and households as they change over long periods of time. Since these estimates are based on samples, they may differ from the results that would have been obtained if a complete census had been taken under the same interviewing conditions.

Web site - www.census.gov/hhes/www/housing/ahs/ahs.html

US EPA Decentralized Wastewater Program - For more information visit www.epa.gov/owm/onsite

EPA# 832-F-08-057 Oct. 2008

ARIZONA ONSITE WASTEWATER RECYCLING ASSOCIATION

AzOWRA continues efforts to help restart the NAU Onsite Wastewater Demonstration Project. Members of the steering committee went to Rhode Island and Massachusetts to visit test sites in October and learn everything they could about their operations. Three or four hours were spent with the sites' decision makers at each site. During the visit to the University of Rhode Island, the incoming NOWRA president joined the group and toured the facility. The folks at both sites have provided AzOWRA with information relating to test facility operation and administration. The operators of the sites were very helpful and forthcoming. Much trial and error will be saved as a result of the information gathered. The Steering Committee will meet with NAU again on November 14 in Flagstaff to formalize the arrangements, review a draft Memorandum of Understanding and develop a detailed a business plan. Anyone interested in being involved in the Onsite Wastewater Demonstration Project please contact Richard Sinclair at richards@apewater.com. Progress reports are routinely posted in our newsletter, *First Flush* and on our website <http://azonsite.org/>.

The 2009 Onsite Wastewater Educational Conference is planned for June 17, 18, and 19, 2009, in Flagstaff, Arizona at the Radisson Woodlands Hotel. Invitations to Exhibitors have begun to be sent and response has been excellent. There are 20 indoor booths and tables and 4 outside spaces available for rolling stock or larger displays. The educational program is being developed. Conference attendance will qualify toward continuing education requirements for the Arizona Registered Sanitarians, Arizona Certified Water and Wastewater Operators, Arizona Real Estate professionals and more. Available sessions will include a Real Estate Agent Training course, 3 hours of continuing education credit has been approved by the Arizona Department of Real Estate and the NAWT Inspection Training and Recertification will be offered as a preconference workshop on June 16, 2009, also at the Woodlands (<http://ag.arizona.edu/waterquality/onsite/> for more information). If you are interested in making a presentation or being an exhibitor, please contact the conference chairman, Suzanne Ehrlich at suzanne.ehrlich@co.yavapai.az.us or 928-442-5409.

The Annual Membership Meeting and dinner was held on November 7, 2008, in Scottsdale. Sincere thanks go to Ed Swanson for making facility arrangements for this annual event. Ballots for 2009 Board of Directors and Officers were presented to the attending membership and will emailed to all along with 2009 membership applications. Reports on the Demonstration Site, Conference, Finances, etc were presented to bring the membership up to date. A fine dinner was enjoyed and good company shared. Please join us for next big dinner event—the BBQ held during the Conference in Flagstaff.

The AzOWRA website, <http://azonsite.org/>, is continually updated to include the most current organization information. Go there to get membership forms, updates on meeting dates and locations, training opportunities in the area, the latest *First Flush* newsletter.

CALIFORNIA ONSITE WASTEWATER ASSOCIATION

The COWA 2009 conference to be held at the Sacramento Hilton from March 16th to the 19th builds on the success of our 2008 Conference and promises to attract a record crowd as all of California and stakeholders nationwide look for guidance in the implementation of AB885, the new state wide regulations for onsite wastewater systems. The theme of the conference will focus on the implementation of AB885 and what every service provider, manufacturer, engineer, regulator, and industry stakeholders should prepare for. All eyes will be on California as the world's 5th largest economy implements innovative statewide standards to address a very diverse state geology.

This year's conference will attract a broad and diverse audience as decision makers from industry, the regulatory community, developers, service providers, third parties (real estate professionals), and other stakeholders will come looking for answers to their questions about AB885 implementation and strategies for moving projects and programs forward.

The Honorable Governor Schwarzenegger has been invited to deliver the Key Note Address for the conference, but his schedule has not been confirmed.

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Affiliates' Updates *(continued)*

Our Spring 2008 Conference included presentations by leading national and state authorities in the onsite wastewater industry and included some great networking opportunities at our evening receptions. National TV and radio talk host and political comedian Will Durst was a big hit with the attendees. Vendors had the opportunity to present new products and technologies in separate breakout sessions providing an interactive forum for the exchange of information. World class presentations were made by various treatment technology providers, academia, and regulators.

Please check the COWA web site for more information on the upcoming 2009 conference and make sure you mark your calendar today for this very important onsite industry event.



Sessions were filled to capacity with participants at COWA's 2008 Conference.



From left to right: Mark Richardson, Will Durst, and Mark Adams at COWA's 2008 Conference.

Operations & Maintenance needs. We invite you to attend and learn more about "the other guy's" portion of the industry in order to better understand how our part fits into the whole. For more information, please contact Becky Roland at broland@phoenix-amc.com or 303-551-3266.

CPOW is also developing a Colorado Model Code. Several members have been involved in the process, and a draft code is expected to be presented to attendees at the January Annual Conference listed above.

DELAWARE ON-SITE WASTEWATER RECYCLING ASSOCIATION

DOWRA Annual Conference: DOWRA's Annual Conference "Doing What is Right for the Environment" was held October 14 and 15 at the Dover Downs Hotel and Convention Center. Even during these hard economic times the event hosted over 340 attendees including 40 exhibitors and 20 presenters.

Legislative Updates: Governor Ruth Ann Minner and Department of Natural Resources and Environmental Control Secretary John A. Hughes announced the adoption of the regulations governing the pollution control strategy for the Indian River and Bay, Rehoboth Bay and Little Assawoman Bay Watersheds on October 15, 2008.

The Pollution Control Strategy is designed to reduce the amounts of nitrogen and phosphorus entering the Inland Bays and their tributaries to levels required to meet water quality standards. The strategy will be published in the November 2008 Delaware Register of Regulations.

DNREC Secretary Hughes noted that the milestone announced today was the result of years of spirited discussions and debate with many interest groups, using science as the backbone for the strategy to meet water quality standards.

The strategy includes provisions to establish buffers to filter pollutants before they flow into the Inland Bays and their tributaries. The strategy also includes a map highlighting the primary and secondary waters and the proposed buffer widths. The buffers will only be required for new developments or subdivisions.

Primary waters, including the Inland Bays and tributaries with continual stream flow and state-regulated wetlands, require buffer widths of 100 feet, while secondary waters, including bay tributaries with intermittent streamflow, require 60-foot buffers. Buffer widths may be reduced to 50 feet on primary waters and 30 feet on secondary waters with enhanced

COLORADO PROFESSIONALS IN ONSITE WASTEWATER

CPOW will be hosting its Annual Conference January 22-23, 2009 in Denver Colorado. The theme is **BACK TO BASICS AND BEYOND**, and conference will include a multi-track agenda focusing on Regulator & Designer, Installer and

stormwater management and a development-wide nutrient management plan.

The strategy also requires pump-out and inspection of onsite wastewater treatment and disposal systems (septic systems) that serve homes and businesses which are sold or transferred to other owners. In addition, advanced treatment for nitrogen reduction is required for all new and replacement onsite wastewater and disposal systems on properties located within 1,000 feet of tidal waters and wetlands, as mapped in the proposed regulation. All new and replacement systems would be required to use this technology by 2015.

Delaware's Inland Bays are recognized as waters of exceptional recreational and ecological significance. In 1998, the Inland Bays Tributary Action Team, a group of stakeholders representing citizens, businesses, organizations and government, was formed to develop a pollution control strategy. In 1998 and 2004, DNREC completed total maximum daily loads (TMDLs) for nutrients for the Inland Bays. TMDLs establish the maximum amount of individual pollutants that can be discharged to a water body from point (direct) or non-point (indirect) sources while maintaining water quality standards.

Nonpoint sources of nutrients include onsite wastewater treatment and disposal systems (septic systems), runoff from development (stormwater) and agricultural runoff. About 80 percent of the fresh water entering the bays is groundwater, which means that nutrients that flow through the soil also enter the groundwater.

The TMDLs for the Inland Bays established that nonpoint sources of nitrogen and phosphorus need to be reduced by 40 to 85 percent to bring the water quality to the level sufficient to protect human health and support aquatic life.

Riparian buffers—areas of vegetation adjacent to waterways—play a significant role in protecting and improving water quality by filtering runoff and groundwater and removing excess nutrients.

The Order adopting the proposed regulation as the final regulation is available for review at: www.dnrec.delaware.gov.

MICHIGAN ONSITE WASTEWATER ASSOCIATION

MOWRA is gearing up for the annual Michigan Onsite Wastewater conference which is scheduled for January 13-15, 2009, at the Kellogg Hotel and Conference Center on the edge of the Michigan State University (MSU) campus in E. Lansing. This conference is probably the oldest onsite conference in the country as this year will be the 58th annual meeting. The conference is sponsored, not only by MOWRA, but also by the

Michigan Environmental Health Association, the Michigan Septic Tank Association, and the Michigan Water Environment Association along with the Department of Environmental Quality and MSU.

The annual conference this year will have an international flavor for the first time ever, with the keynote speaker being Dr. Peter Wilderer, professor at the Technical University of Munich and Director of the Institute of Advanced Studies on Sustainability. Wilderer very active in the International Water Association and is one of the leading scientists in wastewater. He is frequently called upon to discuss cutting edge technologies in both water and wastewater circles internationally. We are privileged to have him as our featured speaker. Other featured speakers will be NOWRA member Dr. David Lindbo, soil scientist from North Carolina State University and Dr. Mark Gross, Training Coordinator with Orenco Systems Inc. The conference also features a day long session on the Basics of Onsite, patterned after the NOWRA A-Z program. There is a special track for people in the septic pumping industry to help them get required continuing education units. Details on the conference are available at www.meha.net, www.msta.biz, and www.mowra.org.

The Michigan legislature has once again this year been discussing the possibility of legislation leading to a state sanitary code to provide some uniformity to our onsite regulations. So far this is all within the purview of one senator and nothing has reached the full senate or the House of Representatives. We are hopeful that there will be movement on this in 2009.

MINNESOTA ONSITE WASTEWATER ASSOCIATION

The Minnesota Onsite Wastewater Association had a busy summer. A very successful soils seminar was attended by 100 people in central Minnesota in July. The popularity of the last two years events has made it likely that this will become an annual event. Looking forward, we are excited about the upcoming MOWA Annual Convention March 2-4 at the Ramada Inn, Mall of America, Bloomington, MN. It will feature terrific educational events.

Several MOWA members are actively involved in the SSTS (Subsurface Sewage Treatment System) Advisory Committee that is reviewing the Design Guidance documents, certification requirements, and product registration process to support the new rules for individual, midsized, and large SSTS's. In addition, the Legislative Committee is discussing a request to develop a position on the Groundwater Protection bill.

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MISSOURI SMALLFLOWS ASSOCIATION

The Missouri Smallflows Organization, Inc. Board of Directors has unanimously approved the Academic Scholarship Program. This program is exclusively for the sons, daughters, or dependents of a full member of the MSO the year they apply and receive the scholarship. It will consist of two- (2), \$500.00, non-renewable academic scholarships for 2009, to be awarded after June 1, 2009.

To ensure that there are appropriate checks and balances within the program and reduce the possibility for conflicts of interest or inappropriate action by anyone connected with the program the Board of Directors developed a set of Standard Operating Procedures, Rules, and Code-of-Ethics governing the Scholarship Committee and the Academic Scholarship Program. A copy of these will be available on the MSO web site in the near future for all members and applicants to review.

The Scholarship Committee will be made up of three- (3) voting members who are full members of the MSO and will include a Chairperson appointed by the MSO President, a registered installer and a member at large, both chosen by the Committee Chairperson. No voting member of the committee will serve more than a three- (3) year term.

The application process is very straight forward. Applicants must rank in the upper one-half of their graduating class to be eligible to apply. Selection is competitive and will be based on three main criteria. (1) Academic standing of the student during all four years in high school. (2) Extracurricular activities and leadership. (3) Character References and other pertinent factors. The awardees may attend any accredited college, university or technical school of their choice in the United States, and may choose any course of study, but must be enrolled as a full-time student and maintain a minimum or equivalent of a 12 credit hour schedule. The award will be sent to the recipient only after they have submitted documentation to the Scholarship Committee that they are enrolled the year the scholarship is received.

Applications must be submitted on forms provided by the MSO. These forms will be sent to the student upon written request, stating the name of the parent or guardian who meets the membership status for 2009. The application forms will be made available January 2009; these forms will not be available on the internet.

The membership of the MSO represents a standard of professionalism and excellence second to none in the industry. This program gives us a chance to reward our children who have

worked hard and want to continue that standard set by their parents and guardians.

NEBRASKA ONSITE WASTE WATER ASSOCIATION

The Association has again partnered with the University of Nebraska Cooperative Extension to provide a series of continuing education program opportunities across the State. Those programs included sessions on pumps and controls and on dosed systems.

The Association also hosted several separate continuing education sessions on its own.

An ever popular workshop on soils analysis and percolation testing was held in late summer and a workshop developed using training materials contributed by the Washington Onsite Sewage Association was offered in early fall.

Plans are nearly complete for the Annual Convention and Trade Show, which for several years has been paired with the annual meetings of the Nebraska Well Drillers Association. That event, set for February 11-12, 2009, will include several hours of continuing education programming and opportunities to meet and learn about products and services offered to the onsite industry by manufacturers and suppliers.

NOWWA continues to work closely with industry members, regulatory officials and educators to expand technical alternatives to better serve the consumer and to expand the professionalism and integrity of the industry. Public education programs along with training and education for others who must work with the onsite industry remain an important endeavor for the Association.

2009 already promises to be a year for new education programming partnered between the industry and the University and a year to continue solid cooperation and support between industry and the regulatory professionals serving the state.

OHIO ONSITE WASTEWATER ASSOCIATION

The Program Committee for the Ohio Onsite Wastewater Association (OOWA) has been hard at work organizing the 2009 Annual Conference and Trade Show to be held in Columbus, Ohio January 14 & 15. This is always a very well-attended conference with various exhibitors and a silent auction to raise money for the Professional Development and Memorial Grant Fund.

The event will kick off on Wednesday with a continental breakfast and registration at 7:30 AM. Jerry Tyler from the University of Wisconsin is scheduled as the main speaker and the trade show will be open throughout the day and evening. The second day is broken into two concurrent sessions; a technical track and an engineering track. Lunch is included both days. For more information or to register, contact Susan Ruehl at oowa@ohioonsite.org or at 866-843-4429.

OOWA board members have also been busy reviewing and commenting on the draft changes to the states proposed sewage treatment system legislation. The Household Sewage and Small-Flows On-site Sewage Treatment Systems (SFOSTS) Study Commission is working together to establish a legislative framework from which rules governing all household sewage treatment systems and SFOSTS will be written.

TEXAS ONSITE WASTEWATER ASSOCIATION

The Texas Onsite Wastewater Treatment Research Council (TOWTRC) and the Texas Onsite Wastewater Association (TOWA) are proud to announce their annual Convention in Waco, Texas on March 3 & 4 at the Waco Convention Center. A group of Local and National Speakers will provide opportunities for up to 10 Continuing Education hours for Installers, Service Providers, Designers and D.R.s. This year's Keynote address will be made by Jerry Stonebridge, NOWRA Immediate Past President. In addition to the conference, TOWA will also host their Basic Maintenance Provider (BMP) course immediately before the conference on Sunday and Monday the 1-2nd. The TOWA Annual Membership meeting will be held during lunch on Tuesday the 3rd. For more details on exhibiting, registration and TOWA Membership, please check out TOWA on the web at www.txowa.org or call 888-398-7188.

WASHINGTON ONSITE SEWAGE ASSOCIATION

For most everyone, now the all the election hub-bub is over and we are looking toward the end of the year and the insertion of additional bailout (economic stimulus packages) . . . it's still about the economy!

So far the outlook in Washington isn't quite as bleak as it is for many other local and state economies. For many of our member companies, dollar volumes have declined, but depending on the business model of each, there continues to be some hope at the end of the tunnel . . . although it may seem like a long, long tunnel.

Some good news here is that the Boeing strike is over and Gas prices as of November 5, 2008, along the I-5 corridor have

broached the \$2.28 cent per gallon mark and I predict will get below \$2.00. If my prediction comes true, on that day I will buy a lottery ticket. This is a welcome relief not only for our industry but for our local economy as well.

What that means for us is that every homeowner out there on a septic system that drives 15,000 miles a year in a vehicle that get 20 miles to the gallon is going to save \$1,095 bucks in the next year if prices stay at current levels. . . .

That savings is enough to get your system inspected, pumped and access risers installed and have a little left over.

This is part of the kind of messages that WOSSA is bringing to about 254,000 KVI 570 Talk Radio listeners every Sunday for the next (now) 22 weeks. This 26-week program has gotten off to a great start, and with support of the industry, we have a fully funded program.

We have talked a lot about doing a better job of educating the public and this venue seems to be doing a very effective job. With expert guests on each week we are able to take calls from system owners, get them some information that they can use when they take the next step and call someone to come and service their system. A key feature of the "in-show" advertising is our "Septic Solutions" Tips of the day that highlight the traditional "Do & Don'ts" for Septics . . . and coming soon is going to be a version of "Septic Solutions Myth Busters."

At the strategic planning session, one of the discussion ideas that were presented by Howard Wingert from the NOWRA Board, was to pick up the debate on Decentralized Vs Sewer and begin to make our case. WOSSA will attempt to do that in some upcoming shows at the state level. My research into this has brought me right into my own backyard where I live in University Place, WA. Surprisingly, we have about 23% of our citizens in U.P. that live on Septics—that's about 1,800 homes.

At the U.P. Website, they state that they want to bring these homes into the sewer expansion. They also state that the average hook-up fee will be \$35,000.

We don't think we like the math . . . this means that 1,800 families are going to cough up about \$63,000,000 (yes that's 63 MILLION) dollars along with an average of an additional \$1,000,000 annually in sewer fees (we're at \$50.00/month).

So, here's the hook . . . all of these systems are currently working and under a managed inspection program by the county for an annual or three years inspection, if it's a pumped or gravity system respectively. Pick an average maintenance cost number like \$400 on a three-year interval and these folks would be spending about 75% less or \$239,999 dollars.

The states have suggested that NOWRA needs to represent us at the national level, but we haven't been able to articulate

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Affiliates' Updates *(continued)*

what we want them to say. If we want to make a difference and pick up this political fight, here's a good place to start . . . why should we let local jurisdictions get away with this? If every state identified their own "Poster Child," we could develop a pretty strong case to bring forward to the EPA initiative set out in the '90s for an "Integrated Wastewater Management" policy that support decentralized.

We hear the (new) government is about to toss out another 300 BILLION dollar package for building/repairing infrastructure . . . maybe our time is now, to remind someone of a solution that will help our industry, the environment, and cost 75% less.

You can listen in on our weekly show "Septic Solutions" live over the internet at KVI.COM on Sunday's from 12:00 to 1:00 pm EST.

YANKEE ONSITE WASTEWATER ASSOCIATION

The following information is excerpted from our Fall 2008 newsletter and describes some of the subsurface wastewater related activities taking place across New England.

Connecticut

CT DEP Issues Final Approval for Madison Landing Discharge Permit

Decision includes conditions to ensure proper installation, operation and monitoring of wastewater system to protect natural resources.

The Commissioner of the Connecticut Department of Environmental Protection (DEP) on September 23, 2008 issued a final decision granting a water discharge permit for Madison Landing—a planned active adult community that has obtained the necessary local approvals to move forward. The final decision from DEP Commissioner Gina McCarthy incorporates provisions of the proposed permit aimed at ensuring that the advanced sewage treatment system planned for the site is properly installed and operated and that the discharge from it is carefully monitored.

Commissioner McCarthy's decision requires that:

- The applicant submit to DEP for review and approval plans and specifications for the proposed wastewater treatment system.
- That the permit be issued only after verification that the system has been installed in full compliance with the approved plans and specifications.

- The applicant obtain a legally enforceable agreement from Madison's water pollution control authority guaranteeing that agency will take appropriate steps to ensure effective management of the wastewater treatment system. The Department has obtained initial acknowledgement from the Town of Madison that it will ensure the effective management of the system through the establishment of financial and institutional controls to be negotiated by the applicant and the Town.
- The total amount of potential pollutants, including nitrogen, that may be discharged into groundwater be limited through an advanced level of treatment to minimize pollutant loading and to enhance and maintain the long-term health of the Long Island Sound. Nitrogen, which is contained in domestic sewage and other discharges, was closely evaluated because of the negative impact it has on water quality, natural resources and aquatic life.
- A state-certified wastewater treatment operator be responsible for the operation, maintenance and monitoring of the system to assure compliance with the discharge permit.
- The design engineer, wastewater treatment operator, and Zenon system representative provide written confirmation that the Zenon system is operating according to design specifications and permit conditions within three months of startup.
- Data collected from monitoring of the system's discharge be reported monthly to DEP—and submitted electronically to a new on-line system DEP is creating—to ensure efficient and accurate analysis and tracking of compliance with permit conditions.
- A state-licensed professional engineer perform an audit every two years to evaluate compliance with the permit and ensure the proper operation of the Zenon system. The results of the audit will be reported to the DEP, the Madison Water Pollution Control Authority and the Madison Health Department.

The Commissioner's final decision is available at: www.ct.gov/dep/adjudications.

To download additional information about Connecticut regulations and the latest updates visit:

http://www.ct.gov/dep/cwp/view.asp?a=2721&q=325706&depNav_GID=1654

The Department's new website address is www.ct.gov/dep.

Maine

A Task Force outside the Department, consisting of licensed site evaluators, local plumbing inspectors, system installers,

and equipment manufacturers presented recommended rule changes to the Department July 28, 2008. We are proceeding with the formal rulemaking process including changes sought by the Department with the goal of completing the rulemaking process by January 31, 2009. A copy of the proposed changes will be available on our website as soon as possible: <http://www.maine.gov/dhhs/eng/plumb/index.htm>.

Beginning July 16, 2008 system inspections for real estate transfers in the coastal Shoreland zone will become mandatory. Since 2003 the Department has conducted a Voluntary Certification Program for individuals wishing to inspect operating systems; this program will continue with the possibility of rulemaking for the mandatory inspections.

To view a list of approved I/A technologies in Maine visit: <http://www.maine.gov/dhhs/eng/plumb/news.htm>
<http://www.maine.gov/dhhs/eng/plumb/lists.htm>

Massachusetts

The proposed revisions to the Ground Water Discharge Permitting Program Regulations (the "Ground Water Regulations"), 314 CMR 5.00, make a number of changes to streamline the existing permitting process and reduce the time it takes for an applicant to obtain a ground water discharge permit. The proposed regulations authorize the use of general permits, provide for administrative renewal of certain individual ground water discharge permits, and address two bottlenecks in the existing permitting process- the hydrogeological report and the financial assurance mechanism. To facilitate these streamlining changes, MassDEP is also revising 314 CMR 2.00, the provision of the regulations that establishes the procedures that applicants and the Department must follow when issuing permits. In addition to these streamlining changes, the proposed revisions to the Ground Water Regulations expand the list of activities that do not require a permit.

The proposed regulations also make a number of changes to streamline the Department's existing regulations and policies. The proposed changes incorporate several existing policies into the regulations, the Nutrient Loading Approach Policy, the Private Sewage Treatment Facility Policy, and the Policy Establishing the Regulatory Requirements for Closed Loop Geothermal Heat Pump Wells. The proposed regulations also provide that the Department may issue an individual ground water discharge permit that authorizes the reuse of effluent from permitted sewage treatment facilities in accordance with the proposed Wastewater Reuse Regulations, 314 CMR 20.00. This change eliminates the need for the Department's Wastewater Reuse Policy and allows the Department to issue one permit that authorizes a ground water discharge of

effluent resulting from the treatment of sewage at a facility and the reuse of this effluent as reclaimed water.

To view download the complete document, please visit: <http://www.mass.gov/dep/service/regulations/newregs.htm>

To view a list of approved I/A technologies in Massachusetts visit: <http://www.mass.gov/dep/water/wastewater/t5itprog.htm>

New Hampshire

Update to Env-Wq 1003.10 Rule to Repair or Replace Existing Residential ISDS, use this link to read the new rule: <http://des.nh.gov/organization/commissioner/legal/rules/documents/env-wq1000.pdf>

Or to download the Repair-Replacement Pre-Approval form and the Repair-Replacement Questionnaire visit: <http://des.nh.gov/organization/divisions/water/ssb/index.htm>

To download the latest information about subsurface systems in New Hampshire visit: <http://des.nh.gov/organization/commissioner/pip/factsheets/ssb/index.htm>

To view a list of approved I/A technologies in New Hampshire visit: <http://www.des.state.nh.us/factsheets/ssb/ssb-12.htm>

Rhode Island

The Department of Environmental Management's new Rules for septic systems took effect on January 1, 2008. Under the new Rules, the term "individual sewage disposal system" (ISDS) has been replaced with the term "onsite wastewater treatment system" (OWTS) to better emphasize the importance of treatment in system function and environmental protection. The new Rules update technical standards for the siting and design of septic systems, improve treatment for environmental protection and public health, increase protection of water resources, streamline the permitting process, and reformat the rules to follow the sequence of actions taken in permitting a septic system in Rhode Island. Among the technical changes are revisions to design standards to ensure optimal treatment in soil dispersal trenches, higher performance standards for septic systems in salt pond watersheds and on small lots with drinking water wells, and increased setbacks between large systems and drinking water wells.

The revisions to the septic system Rules were developed in conjunction with a diverse group of stakeholders. The stakeholder group included representatives from the building community, licensed septic system professionals, environmental organizations, municipal government, the University of Rhode Island, and state and federal agencies. In addition, the

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Affiliates' Updates *(continued)*

Department held five public workshops throughout the state, before holding a public hearing on the amendments in September.

Additional information on implementation of the new Rules, including revised forms, are posted at <http://www.dem.ri.gov/programs/benviron/water/permits/isds/newowts.htm>.

The Onsite Wastewater Treatment System Program has created an e-mail list to distribute information on Department policies and rule changes. You can subscribe by sending an e-mail to: majordomo@listserve.ri.gov. In the body of the message, include the following text: "subscribe owtsinfo." Leave the subject line blank. This is an announcement-only list so you will not be able to post messages to other subscribers.

To view a list of approved I/A technologies in Rhode Island visit:

<http://www.dem.ri.gov/programs/benviron/water/permits/isds/pdfs/ialist.pdf>

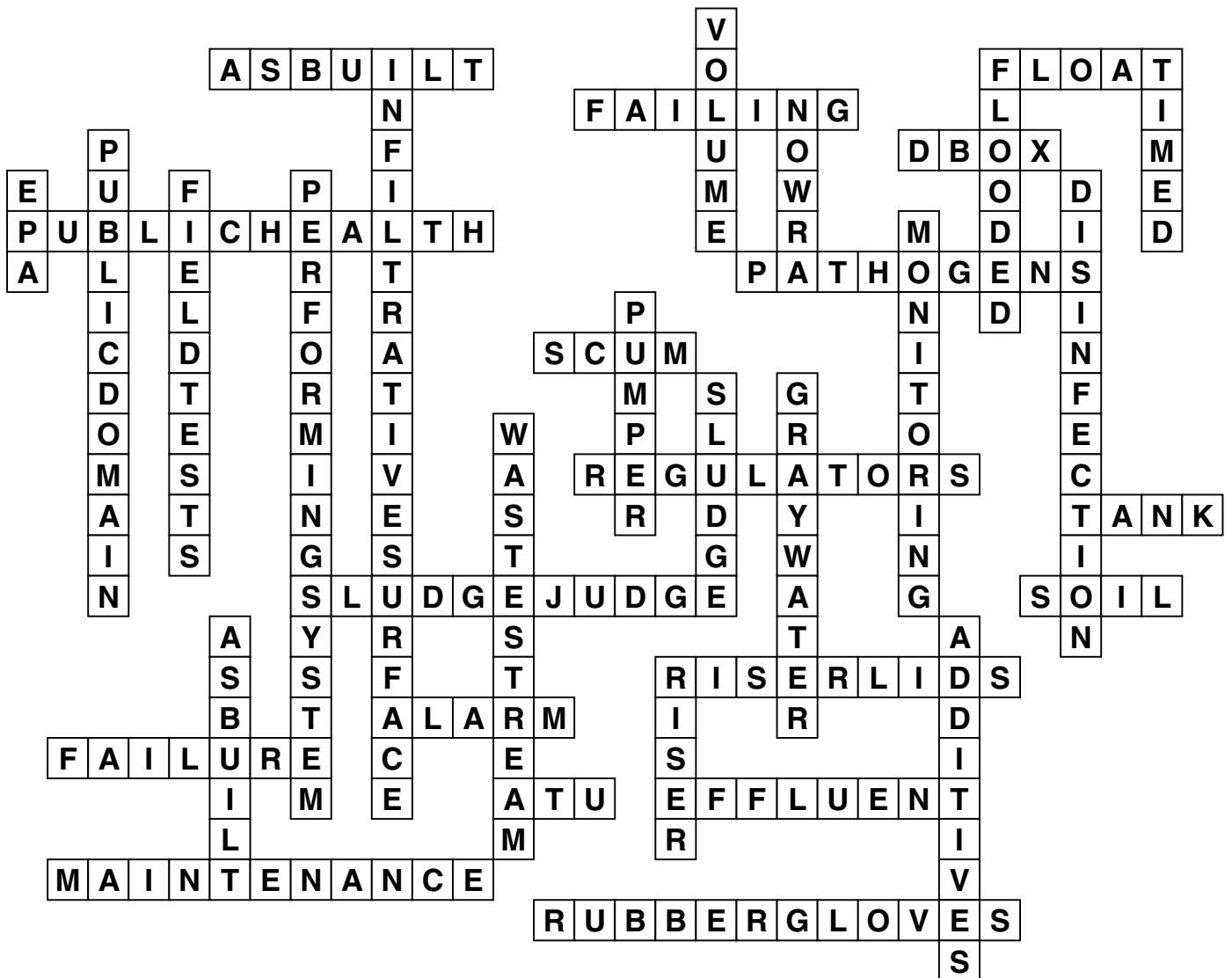
Vermont

Visit <http://www.anr.state.vt.us/dec/ww/sitetechn.htm> for the latest information on the Vermont Designer Licensing Program

To view a list of approved I/A technologies in Vermont visit:

<http://www.anr.state.vt.us/dec/ww/Innovative.htm#approvals>

Solution to Septic Solutions Puzzle printed in the Summer 2008 Onsite Journal.



Next Generation Performance Septic Tanks Are Here

Strong, Triple-Wall Plastic Design & Easy Installation Offered by Infiltrator® TW™-Series

Consistent triple-wall thickness for superior strength, factory installed structural bulkheads, and reinforced access ports are just three of the features found in the new TW™-Series Septic Tanks from Infiltrator® Systems Inc. The TW-Series tanks provide a revolutionary improvement in plastic septic tank design, offering exceptional strength comparable to concrete tanks. Available in sizes ranging from 375 gallons up to 1500 gallons and in single and dual compartment designs, these tanks are suitable for use as both septic tanks and pump tanks.

The bright orange TW-Series Septic Tanks are manufactured with state-of-the-art rotomolding technology exclusively licensed to Infiltrator Systems. The technology allows for precise, rotational molding that ensures consistent wall thickness resulting in exceptional tank strength. Cost competitive with most tanks on the market, the TW-Series Septic Tanks complement the entire line of Infiltrator plastic leaching chambers for a total system configuration.

TW-Series Septic Tanks from ISI

Easy to transport to even the most difficult sites and low in profile, the TW-Series Septic Tanks are ideal for installations where a high water table or other site restrictions exist. The tanks offer:

- Strong, triple wall design with consistent wall thickness
- Lightweight plastic construction for easy storage and delivery

- Cost competitive pricing
- Factory-installed structural bulkheads
- Reinforced lid and access ports
- Ease of installation without water filling, special soil bedding or backfilling procedures
- Low profile, flat bottom design; bright orange color

Infiltrator is the number one septic leachfield chamber system in the onsite industry with over 42 million units in-ground in all 50 states and 24 countries. Based in Old Saybrook, Connecticut, Infiltrator Systems Inc. has a staff of over 30 Field Representatives and an in-house Technical Resources Department to serve its customers. Since its inception in 1987, Infiltrator has introduced innovative products that meet increasingly stringent environmental and regulatory onsite wastewater treatment requirements. Through their understanding of the marketplace and the integration of engineering and manufacturing expertise, science, and technology, Infiltrator continues to drive the onsite wastewater market.

For more information about septic system innovation and installation solutions including the new TW-Series Septic Tanks from Infiltrator Systems visit our new website at www.infiltratorsystems.com or call 1-800-221-4436.

*Infiltrator Systems, Inc. is a Gold Member of
NOWRA's Business Benefit Program (BBP).*

*For more information about the BBP, contact
NOWRA at 800-966-2942 or visit www.nowra.org/bbp.html*

Check out the information on
decentralized systems on WERF's website!

www.werf.org/AM

The Research and Knowledge Area on Decentralized Systems on WERF's website has the latest news, products and tools and a searchable database.

WERF supports research and development projects that help communities, engineers, regulators, and others address critical knowledge and information gaps in decentralized systems. For more information, contact Jeff Moeller at 703-684-2461 or



*NOWRA is proud to partner with WERF to
promote decentralize systems research and information.*

2009 AFFILIATE & NOWRA EVENTS

January 2009

- 12-13 **Wisconsin Concrete Precast Association**
WPCA 2009 Winter Conference, Holiday Inn Hotel and Conference Center, Madison, WI. Contact: 608-256-7701 or www.wiprecast.org
- 13-14 **Iowa Onsite Wastewater Association**
11th Annual Conference Polk Cty. Convention Complex, Des Moines, IA. Contact Alice Vinsand, Inc., at (515) 225-1051 or www.iowwa.com.
- 13-15 **Michigan Onsite Wastewater Recycling Association**
58th Annual Michigan Onsite Wastewater Conference, East Lansing, MI. Contact Ted Loudon at (517) 353-3741 or www.mowra.org
- 14-15 **Ohio Onsite Wastewater Association**
Annl. Conf. & Trade Show, Ramada Hotel and Conf. Cntr., Columbus, OH. Contact: Susan Ruehl at (866) 843-4429 or www.ohioonsite.org
- 14-15 **Alabama Onsite Wastewater Association**
2009 Annual Installer Conference, Auburn Conference, Dixon Conference Center, Auburn, AL. Contact: Dave Roll (334) 396-3434 or www.aowa.org
- 16 **Oklahoma Certified Installers Association**
2009 OCIA Onsite Convention, OK Expo Hall, OK State Fairgrounds, Oklahoma City, OK. Contact: Bill Warden 918-798-4407 or www.ocia.s5.com
- 19-21 **Missouri Smallflows Organization**
Annual Conference, Holiday Inn Expo Center, Columbia, MO. Contact David Casaletto at (417) 739-4100 or www.mosmallflows.org
- 22-24 **Alberta Onsite Wastewater Management Association**
Annual Conference and Trade Show, Deerfoot Inn & Casino, Calgary, AL. Contact: (780) 489-7471 or www.aowma.com
- 22-23 **Colorado Professionals in Onsite Wastewater**
Annual Conference, Denver, CO. Contact: Becky Roland at broland@phoenix-amc.com or 303-551-3266.
- 23-24 **Washington Onsite Sewage Association**
13th Annual Conference and Trade Show, Hilton Hotel in Vancouver, WA. Contact: (253) 770-6594 or www.wossa.org
- 26-28 **North Carolina Septic Tank Association**
19th Annual Conference and Superbowl of Onsite Wastewater, Hickory Conv. Ctr. Hickory, NC. Contact: 336-416-6394 or www.ncsta.net
- 30-31 **Wisconsin Onsite Water Recycling Association**
2009 Annual Convention, Madison, WI. Contact: Ann Gryphan at (608) 256-7701 or www.wowra.com

February 2009

- 11-12 **Nebraska Onsite Wastewater Association**
2009 Annual Convention & Trade Show, Lincoln, NE. Contact: Lee Orton at (402) 476-0162 or www.nowwa.org

- 14-15 **Utah On-Site Wastewater Association**
9th Annual Conference and Expo, Expo Center, West Valley City, UT. Contact: (453) 797-3174 or www.uwrl.usu.edu/partnerships
- 17-19 **Kansas Small Flows Conference**
Annual Conference and Trade Show, Grand Prairie Hotel and Convention Center, Hutchinson, KS. Contact: (620) 548-2369 or www.ksfa.org
- 20-22 **National Precast Concrete Association**
1st Annual "The Precast Show" George R. Brown Convention Center, Houston, TX. Contact: (800)366-7731 or www.npca.org
- 26-28 **Pumper Show**
2009 Cole Publishing Pumper and Cleaner Environmental Expo, Louisville Exposition Center, Louisville, KY. Contact: (800) 257-7222 or www.pumpershow.com

March 2009

- 1-4 **Ontario Onsite Wastewater Association**
10th Annual Conference and Trade Show, Sheraton Conference Centre, Richmond Hill, Ontario. Contact: (800) 668-0101 or www.oowa.org
- 2-4 **Minnesota Onsite Wastewater Association**
2009 Annual Conv., Ramada Inn - Mall of America, Bloomington, MN. Contact: MOWA (888) 810-4178 or www.mowa-mn.com
- 2-4 **Texas Conference - TOWTRC & TOWA**
2009 Annual Conference and Trade Show, Waco Convention Center, Waco TX,. Contact:(888) 398-7188 or www.txowa.org or register at www.lonestarregistration.com
- 8-10 **Pennsylvania Association of Sewage Enforcement Officers.** Annual Conference and Trade Show, Grantville, PA Contact: (717) 761-8648 or www.pa-seo.org
- 16-19 **California Onsite Wastewater Association (COWA)**
2009 Western Onsite Wastewater Exhibition & Technical Conference, Hilton Arden West Hotel, Sacramento, CA. Contact (916) 772-8168 or www.cowa.org
- 18-19 **Tennessee Onsite Wastewater Association**
13th Annual Education Workshop and TOWA Annual Meeting, UAW Hall, Spring Hill, TN. Contact: Scott Fellwock or www.onsite.tennessee.edu/TOWA.htm

April 2009

- 6-9 **National Onsite Wastewater Recycling Association**
18th Annual Technical Exhibition and Conference, Midwest Center in Milwaukee, WI. Contact: (800) 966-2942 or www.nowra.org

June 2009

- 17-19 **Arizona Onsite Wastewater Recycling Association**
2009 Onsite Wastewater Educational Conf., Radisson Woodlands Hotel, Flagstaff, AZ. Contact: (928) 443-0333 or www.azonsite.org

Exposition Schedule/Information

NOWRA's 18th Annual Technical Education Conference & Exposition
Milwaukee Midwest Airlines Center • Milwaukee, WI • April 6-9, 2009

Exposition Schedule – Midwest Airlines Center – Exhibit Hall D

Booth Set-Up	Monday, April 6, 2009	12:00 pm – 6:00 pm
Exposition Inspection/Walk-Thru	Tuesday, April 7, 2009	9:00 am – 10:30 am
Exposition Opening & Hours	Tuesday, April 7, 2009	10:30 am – 6:30 pm
Exposition Reception	Tuesday, April 7, 2009	4:30 pm – 6:30 pm
Local Professionals Open House	Wednesday, April 8, 2009	7:00 am – 3:30 pm
Expositions Breakdown	Wednesday, April 9, 2009	4:00 pm

2009 NOWRA BOOTH RATES

Sign up today to get the booth or your choice.

Member 10 x 10 Booth	\$1295
Member Additional 10 x 10 Booth	\$1195
Non-Member Booth	\$1495
Non-Member Additional Booth	\$1395

EACH EXHIBIT BOOTH INCLUDES

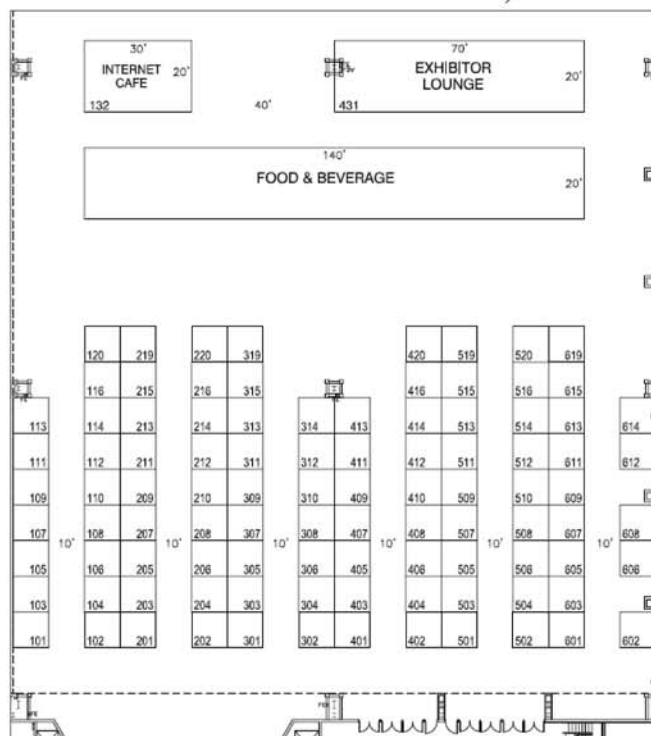
- 2 Full Registrations*
- 1 – 7" x 44" one-line, black & white ID sign
- 1 – 8' x 30" skirted table
- Booth back drapes, 8' high with two 36" -high side dividers.
- 2 chairs & wastebasket
- Company name and profile in Exhibitors' listing in the Conference Program.
- Attendee list distributed via email before and after the conference.
- Carpeting is provided throughout the hall.
- Copy of proceedings.

*Full registration includes admittance to all technical sessions, receptions, awards luncheon, breaks, one complementary conference proceedings and conference handouts. Additional booth registrations are \$175 per person.

HOTEL RESERVATIONS

All Lodging Reservations for NOWRA's Conference will be made directly with the Hilton Milwaukee City Center.

- Room rate for single/double is \$123.
- Cut-off date for room block is March 8, 2009.



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BUSINESS BENEFIT PROGRAM

By joining the BBP Program you can enhance your business marketing efforts
while helping support the association's mission:
to advance and grow the onsite and decentralized wastewater industry.

Some of the benefits include:

- Up to \$2500 in booth credits.
- Advertisement in the conference program book.
- Discounts on Onsite Journal advertisements. (Distributed to nearly 5000 members)
- Premium listing on our popular Septic Locator
- Several forms of recognition at all conferences and other publications.

For a complete listing of program benefits and more details,
please visit our website or contact NOWRA Headquarters.

SPONSORSHIP & ADVERTISING

Make the most of your conference experience by taking advantage of these valuable sponsorship and advertising opportunities we have. For more details and to see other exciting advertising and sponsorship opportunities please visit the website or call NOWRA Headquarters.

Advertising Rates

Size	B&W	Color
Full Page	\$1250	\$1750
1/2 Page	\$900	\$1200
1/4 Page	\$500	\$750
Business Card	\$250	N/A
Inside Front/Back Cover	N/A	\$2250
Back Cover	N/A	\$2750

Other Great Opportunities

Contact NOWRA or visit our website for more details
about these opportunities.

Conference Bags	\$1000
Conference Lanyards	\$700
Bag Inserts	\$500
Plasma TV Ad	\$600
Booth Traffic Builder Card	\$200

Sponsorship Levels

The Great Lake Level	Includes: booth, advertising, sponsorship of offsite reception, speaking spot in opening session and much more!	\$4000
The Lake Level	Includes: booth, advertising, sponsorship of cyber café and much more!	\$3000
The Harbor Level	Includes: booth, sponsorship of offsite tour, and many forms of recognition throughout the conference.	\$2000

For more information on any of the above information please feel free to contact us at:
NOWRA Headquarters
3540 Soquel Ave., Ste A, Santa Cruz, CA 95062 • 800.966.2942
info@nowra.org • www.nowra.org

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

Milwaukee will serve as an ideal location due to its position in the center of the Midwest, in the southeast corner of Wisconsin, on Lake Michigan's western shore. There is no shortage of water issues to talk about here!

Exciting tours will take you out and about in Milwaukee!

- Four decentralized systems featuring ATU's, mounds, constructed wetland and drip distribution systems in residential, commercial and school wastewater applications.
- Tour of Water Reclamation Facility of the Milwaukee Metropolitan Sewerage District that produces Milorganite a high quality, Class A/ Exceptional quality Biosolid that is marketed around the country.

Things to do and see in Milwaukee

- Milwaukee Public Museum: Always something exciting going on, including the NOWRA's offsite reception!
- Miller Brewery Tour: Take a tour through the famous Miller brewery.
- Milwaukee Art Museum: Located on Lake Michigan the museum has a beautiful display of art in perhaps the prettiest building in Milwaukee.

Don't miss the Symposium on Pharmaceuticals & Personal Care Products

NOWRA will host a pre-conference workshop on April 6th focusing on Pharmaceuticals and Personal Care Products in Wastewater, Surface Water, and Groundwater. A full day's line up of speakers will present the latest research on this issue.



NOWRA 18th Annual Technical Conference & Expo

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

Onsite: The Sustainable Wastewater Opportunity

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

Valuable Educational Sessions

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



Check the NOWRA website at www.NOWRA.org for more details on the exciting educational and networking opportunities!

2008 Business Benefit
Program Members

Gold

Advanced Drainage Systems
Bio-Microbics, Inc.
Concrete Sealants, Inc.
Consolidated Treatment Systems, Inc.
Containment Solutions, Inc.
Delta Environmental Products
Geoflow, Inc.
Hoot Systems, Inc.
Infiltrator Systems, Inc.
Netafim USA
Premier Tech Environmental
Ring Industrial Group, LP
Xerxes Corporation
Zoeller Pump Company



Silver

Aquapoint, Inc.
Salcor, Inc.
SJE-Rhombus Controls
Wieser Concrete Products, Inc.



Bronze

Adenus Technologies, LLC
Ecological Tanks, Inc.
Front Range Precast Concrete
Norweco, Inc.
Polylok, Inc.
Presby Environmental, Inc.
Waterloo Biofilters Systems, Inc.



Loyal

Arcan Enterprises
Coastal Plains Environmental Group
Gast Manufacturing

