THE LITTLE DIGGER

MOWA minnesota onsite wastewater association

February/March 2015 - Vol. 30, Issue 1

A bi-monthly publication

How to keep septic systems off drugs

By the MPCA

There's an old saying, you are what you eat; and to some degree the same can be said about your septic system. "If you are on drugs, so is your septic system," says John Buchanan, a professor at the University of Tennessee who was one of the keynote presenters at the annual Minnesota Onsite Wastewater Association (MOWA) convention held in Minneapolis in January. And the problem with some of the drugs and compounds going into septic systems is they are harder to break down than contaminants normally found in human waste.

Septics Keynote, *Continued on Page 2*

MPR editor says septic pros can help residents better appreciate, conserve what lies beneath us

By the MPCA

Most people have no idea where the water that runs from their tap comes from, or where it goes, but that is changing because now, in some places, there is no water coming from the tap and in other places what is coming from the tap is polluted. And we're just now scratching the surface of this problem and what lies beneath it.

That's the message Minnesota Public Radio (MPR) editor Dave Peters (pictured at right) shared in his keynote address at the MOWA conference.

In a series of "Beneath the Surface" stories, MPR highlighted a number of changes drawing attention to groundwater issues in Minnesota and across the country:

① Nitrates from farming operations contaminating drinking water supplies

② Cities considering reusing wastewater for watering golf courses, equipment, possibly even for drinking water

③ Farmers, residents, others competing for dwindling groundwater resources

④ Contaminants of concern showing up in groundwater, etc.

"Working on this series showed us that water is a much bigger issue than we anticipated when we started," Peters said.

MPR tells pros to speak up, *Continued on Page 8*

In this Little Digger

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2015 Convention Keynotes: Take-aways and highlights!

Septics Keynote, *Continued from Page 1*

"Many of our pharmaceuticals are designed to be difficult to biodegrade. In order to be active within our bodies, pharmaceuticals must survive going through the liver—perhaps the most powerful treatment plant devised by nature," Buchanan said. "The liver has many enzymatic pathways that can breakdown complex compounds for easy removal by the kidneys. If these products are difficult for the liver to breakdown, then they will be difficult for the septic system to breakdown."

Adding to the problem is the fact that even very small amounts of certain compounds can have significant effects in humans. These trace amounts that can affect human health are often measured in micrograms or parts per billion (ppb), while pollutants most commonly dealt with have human health limits measured in milligrams or parts per million (ppm). For this reason many compounds have been identified as contaminants of emerging concern because until recently we did not have tools available able to detect much less measure them.

Buchanan said this list of compounds includes those not only associated with medications such as chemotherapy drugs but a long list of ingredients found in many of today's consumer products. He mentioned, for example, triclosan, a common ingredient in some anti-bacterial products. A 2003-2004 study showed that 75 percent of those tested had triclosan detected in their urine.(Minnesota has banned the use of triclosan-containing products in state agencies.)

What to do about the issue

Professor Buchanan said future treatment options for compounds of concern will vary. Municipal wastewater treatment facilities may focus on adding additional energy to the system in order to break down these compounds. This could include adding ultraviolet light as even exposure to sunlight can degrade many compounds that don't break down well in existing plants. Adding ozone or other strong oxidizers can also break down these compounds.

When it comes to septic systems, Buchanan suggested states could begin to consider simple techniques that could get more sophisticated as we gain a better understanding of the challenges we face in keeping our drinking water and surface waters clean of potentially harmful compounds.

- Those with septic systems should take extra medications to collection sites, not wash them down the drain or toilet.
- Don't pour pesticides down the drain.
- Minimize the use of antibacterial soaps, cleaners and bleach that stress/kill helpful bacteria in the septic system.
- Increased system maintenance may be required if a family is taking certain strong drugs such as chemotherapy drugs. The tank may need to be pumped more often to remove solids that are accumulating rapidly due to the loss of beneficial bacteria. If the system becomes too toxic for bacteria, the septic tank could be used as a holding tank during the course of a specific drug treatment and then pumped.
- Design changes may be necessary to protect drainfields such as additional effluent screens to limit solids exiting the tank or adding an additional septic tank or pre-treatment device.

Nursing homes, animal clinics of special concern

Buchanan said special consideration needs to be given to septic systems that serve assisted living centers, nursing homes and animal clinics where it is especially likely pharmaceuticals are getting washed down the drain. In these cases the time may come when septic system designs will need to account for more than just hydraulic loading. They will also need to focus additional attention on organic loading, especially the ratio of biological oxygen demand to chemical oxygen demand.

"Septic systems and soil have tremendous potential to capture trace organic compounds," Buchanan said. "But this system is not bulletproof. Someday we may have to evaluate trace organics in-- septage."

A copy of Professor Buchanan's presentation is available on the MOWA website.

From the Executive Director's Office

By Pat Martyn, MOWA Executive Director

We are off and running again with a new Board of Directors. Their names and contact info are listed elsewhere in this publication. You are encouraged to connect with those folks if you have thought about MOWA or want a new idea brought forward. Also, if you would like to be on a Committee, please contact the Chair of the Committee or the MOWA office and we can get you set up. We have tried mightily to improve the volunteer experience inside of MOWA, and your ideas and time are much appreciated.

Speaking of Committees, let's hear a round of applause for the Convention Committee that labored so mightily to orchestrate the 2015 MOWA Convention. It was a wonderful few days during which we had the MPCA, excellent speakers, and social events, and terrific exhibitors. Of course, the attendees drive the show, and the evaluations were quite good. Thanks to all who participated.

And congratulations to the Legacy Award winners: Ron Jaspersen, Jim Johnson, and Gretchen Sabel. Each of those people contributed to MOWA in ways that will be hard to duplicate, and we really appreciate their contributions.

Congratulations to the Legacy Award winners:

Ron Jaspersen, Jim Johnson, and Gretchen Sabel!

Have you heard about the terrific success of the MOWA Foundation's first year project? Do you have a project that you like to have considered? MOWA invites you to submit an idea if you have a project for a non-profit that you feel strongly about.

Lastly, every once in awhile, I see some new work relating to the history of sanitation and the absolute mind boggling ways we have improved our lot. Dirty Old London (Yale University Press) was recently reviewed in the New York Times and it reminded me that the city used to discharge untreated waste directly into the Thames River which ran through the middle of town. Not much different than the 1800's practices of the Minneapolis- St. Paul area. What was interesting was the city's water intake supply was just yards from the discharge. Whatever Londoners in the 1800's were lucky enough to have piped in water found it was so contaminated that anything might come out of the tap. Other residents bought water by the pail from a pub or shop.

MOWA Welcomes New Members!

Mike Smeed
Bongard Corp./Norwesco
Forest Lake, MN

Scott Swenson
Ferguson Waterworks
Fargo, ND

Tom Donahoe
Cherokee Enterprises
Madison, WI

E. Craig Jowett
Waterloo Biofilter Systems
Ontario, Canada

The ***LITTLE DIGGER*** is a bi-monthly publication of the Minnesota Onsite Wastewater Association. Editor: Carla Tourin E-mail: MOWAcarla@aol.com The articles printed in the publication do not necessarily reflect the opinion of this organization. Readers are encouraged to respond to the articles with their own points-of-view. We welcome industry-related comments or articles. Information or inquires should be sent to any of the following: MN Onsite Wastewater Association, 5200 Willson Road, Suite 300, Edina, MN 55424
Phone: (952) 345-1141 Toll Free: 888-810-4178, Website: www.mowa-mn.com

MOWA
2015 BOARD OF DIRECTORS

2015 Convention Highlight - Legacy Award Recipients

Retired MPCA staffer Sabel among three honored for lifetime achievment in Minnesota's septic program

By Sara Heger, University of Minnesota Onsite Septic Program

The MOWA awarded three lifetime achievement awards at the annual conference in January. This award recognizes individuals whose careers in the field of onsite wastewater treatment are exemplary, with outstanding service, dedication and accomplishment for MOWA.

Gretchen Sabel

Gretchen Sabel retired this past summer from the MPCA after 36 years of state service. She committed nearly four decades of her life to environmental protection. She was on the team that helped pass the historic Minnesota Groundwater Projection act in 1989. For nearly 25 years she was a "founding mother" of the Minnesota septic system program as we know it today. Her unwavering support for local programs has resulted in millions of dollars in assistance and development of 250 local programs. Gretchen came from Pittsburgh, PA, where the groundwater was contaminated and a polluted environment was a foregone conclusion. Coming to Minnesota, Gretchen was proud to live in a state that didn't tolerate that. She dedicated her career to that premise.

Jim Anderson

Jim Anderson, (pictured center) has been conducting research and providing education on septic systems since 1971. Jim and Roger Machmeier started the Onsite Sewage Treatment Program (OSTP) at the University of Minnesota resulting in one of the best education and certification programs in the US. Jim's soils expertise, combined with Roger's engineering knowledge created a program which successfully trains installers, designers, inspectors and service providers. In addition, he helped develop and update Minnesota Rules 30 years as chair of the Minnesota Septic System Advisory Committee. Presenting the award, OSTP's Sara Heger said: "Jim's example taught the septic industry three important things: 1) the value of getting your hands dirty, 2) the value of belonging to a state association and 3) the impact that one person can make."

Ron Jaspersen

Ron (pictured at left) has served the onsite community for many decades as a precast tank manufacturer and through his efforts to improve the industry. His standard for fairness, equity and getting it right for all parties is demonstrated daily through delivering the highest quality products and service. He has donated an immeasurable amount of time over the years to work on critical issues that include association finances and bylaws, state septic code and policy, and state statutes. He has applied his penchant for detail to these efforts while working quietly and without fanfare. His positive impacts may be largely unseen but have had major benefit for people served by septic systems.

2015 MOWA Convention gets high marks from members!

Whether taking "selfies" *(above)* or checking out the latest products and services at the Trade Show *(above right)* or participating whole-heartedly at the Scholarship Auction *(below),* MOWA members made the most of the 2015 Minnesota Onsite Wastewater Association's Annual Convention held January 26-28 at the DoubleTree by Hilton in Minneapolis.

The convention drew almost 200 MOWA members and supporters to the metro area for CEU-approved training, an evening at the Toby Keith's I Love This Bar & Grill, keynote presentations from national experts, and MOWA's Annual Meeting and 2015 Board election.

Keynotes, sessions and accommodations get thumbs up!

.The convention earned “a big thumbs up” *(above)* from most attendees! Whether commenting on the food, the facilities or the offerings, everyone appreciated the opportunity to get training to maintain their licensure, network with colleagues, and relax during the “slow season.”

A total of 28 presenters made for an outstanding educational program *(left)*; many of the presentations are now available on MOWA website.

MOWA
minnesota onsite wastewater association

MOWA Members—
Getting the job done!

2015 Convention Keynotes: Take-aways and highlights!

MPR tells pros to speak up, *Continued from Page 1*

MAP: Pumping groundwater to contain pollution

More than 4 billion gallons of water are pumped out of the ground in the Twin Cities every year to remove contamination. Some of that water is treated and put to use but much is not. This map shows the 26 sites in the seven-county area that each pump more than 5 million gallons per year. The two sites in yellow pump more than a billion gallons a year. The shaded area is where a new state approach to dealing with groundwater concerns is focused. Figures are 2008-2012 annual averages, except where noted. Source: Minnesota Department of Natural Resources.

While the issues with groundwater are national, they are being addressed at the local level. “The concerns are different in different areas,” Peters said. “In southwest Minnesota there are concerns about nitrates in the groundwater... in White Bear Lake there is the concern over dropping water levels in the lake.”

Peters said bringing people together as was done in White Bear Lake to understand the problems they face and what should be done needs to happen everywhere. “We are early on in this process and it can be a bit bureaucratic but it’s good that we are starting to learn a new way of relating to water... . MOWA members can help with that, help the people they work with to have a closer, more thoughtful relationship with the water they use.”

MPCA Updates and Enforcement Actions

MPCA commissioner recognizes helping hands in septic program's successes

By the MPCA

The MPCA SSTS program is nothing without its stakeholders, says MPCA staffer Nick Haig. "We are fortunate to have committed partners in the delivery and continuous improvement of this program. We have tallied the contributions of over 50 individuals who have given at least 2,000 hours of their time to our program in 2014 by serving on the SSTS Advisory Committee, the Technical Advisory Panel, the Implementation and Enforcement Task Force, and our recent Need to Know and Exam Development efforts."

Haig said this contribution is the equivalent of one full time employee, not just any employee "but a super FTE with over 50 brains and different perspectives and viewpoints."

Those who volunteered their efforts in 2014 will be receiving recognition from MPCA Commissioner John Linc Stine. There are volunteering opportunities available for 2015. If you are interested in exploring what these are, contact Aaron Jensen or Nick Haig.

Last quarter 2014 MPCA SSTS enforcement cases totaled $8,350

By the MPCA

During the period October - December, 2014, the MPCA completed 58 enforcement cases in 34 counties. Six of the 58 MPCA cases (10 percent) were SSTS related. They were located in Fergus Falls, Brainerd, Baxter, Isanti, Duluth, and Breckenridge.

Financial penalties totaling $8,350 for the six cases ranged from $650 to $2,750. More information can be found on the MPCA website.

UNIVERSITY OF MINNESOTA
Onsite Sewage Treatment Program

Thirst For Knowledge—

Through wastewater education and research projects, onsite specialist Sara Heger is making a difference for the environment in her home state of Minnesota and across the country

By David Steinkraus

Sara Heger works in her office at the University of Minnesota Water Resources Center. (Photos by Brad Stauffer)

Sara Heger

POSITION: Engineer in the Onsite Sewage Treatment Program of the Water Resources Center at the University of Minnesota

EDUCATION: Bachelor's degree in biosystems and agriculture from the University of Minnesota; master's degree in water resources science from the University of Minnesota

SPECIALTIES: Consumer outreach and education for wastewater professionals, wastewater system consulting, applied research and analysis, and troubleshooting

AFFILIATIONS: Minnesota Onsite Wastewater Association, National Onsite Wastewater Recycling Association, Consortium of Institutes for Decentralized Wastewater Treatment, Slow Food Twin Cities

WEBSITE: http://wrc.umn.edu/people/sara-heger/index.htm

Sara Heger didn't set out to be an expert in onsite wastewater treatment. It just turned out that way. As an engineer for the University of providing education at professional conferences, consulting on troubled systems and working on projects to improve the industry.

From childhood on, her experiences lined up to mostly bring her back to where she began – working the ground. She understands the industry because she lives it, and after 16 years as a wastewater engineer she has a broad insight into the issues facing the industry.

"I wanted to get away from farming," Heger recalls about her career path from higher education onward. She was interested in the environment but not in working the front lines of agriculture.

> ***"When was the last time you spent $5,000 to $15,000 for a piece of equipment in or around your home and you didn't get an owner's manual?***
>
> ***We need to have it like getting your oil changed. Why does everybody not know they need to get their tank cleaned?"***
>
> ***Sara Heger***

Be an Engineer

While she baled hay as a teen on her family's farm in Minnesota, Heger regretted the life she was missing, all the options and activities open to girls in the cities. Her father ran the farm, first as a dairy operation and later raising hogs and cash crops. She was the youngest of eight children. Her mother died when she was young and her older sisters helped raise her.

In her father she had a singular advantage. "My dad wanted me to be an engineer, so I was on the science track in high school. He was a strong proponent of women and girls being encouraged in that direction," Heger says. She earned an undergraduate degree in biosystems and agricultural

Heger Profile, *Continued on Page 11*

Heger Profile, *Continued from Page 10*

engineering because she could learn about water and soil along with engineering.

What makes the wastewater industry so attractive is the combination of high and low technology, she says. On the high end are all the technologies and pumps to provide treatment, but on the low end everything depends on soil to passively accept large amounts of water, provide final treatment and recycle that water through the environment

Heger's first step into the industry came in her third year of college when she had an internship at Minnesota's Pollution Control Agency. "Actually, I didn't care at all what the job was there as long as it was environmentally related. I just wanted some experience," she says. She got that, but she also met Jim Anderson, then a professor at the University of Minnesota and director of its Water Resources Center. His writing is familiar to readers of this magazine. With his encouragement she entered a master's degree program in water resources science, and as she finished that degree the job she now holds became available.

She may have wanted to get away from agriculture and farming when younger, but her attitude has changed. She has great appreciation for the hard work farmers do every day and for her own past. "There's nothing to me now like the smell of a dairy barn," she says.

Training and Technical Assistance

At the University of Minnesota, Heger has two primary responsibilities. One is research and the other is education.

Education means providing training at workshops and providing technical assistance to wastewater professionals, governments and property owners in Minnesota and across the country. Heger says she enjoys translating complex scientific information into understandable terms.

Research does not mean working in a laboratory day in and day out. "We're trying to answer questions that come up in the industry. We're not inventing new technology. We're solving problems," Heger says. This might take the form of helping a manufacturer test a new technology in the field.

Sara Heger gives a presentation on subsurface sewage treatment systems at a contractor's meeting in Cologne, Minn. Topics included the permitting process, inspections and rule changes.

At the moment she's involved with a project in Crane Lake, Minn., a town in the lake-studded wilderness and canoeing paradise that hugs the Canadian border. She has to help the community determine how to bring this environmentally sensitive area into compliance with modern wastewater standards.

Heger Profile, *Continued on Page 12*

Heger Profile, *Continued from Page 11*

In addition to doing much of the research work, Heger is also a grant writer, meaning she tries to keep money flowing in from various sources and makes sure projects are completed. It's a vital position because for as much as the wastewater industry depends on the expertise of the university program, it is not funded by the university or the state of Minnesota but with grants and other money.

"So the good thing is I get to do a lot of different things, and that keeps my job interesting," she says.

Distilling Complex Ideas

While consumer education typically brings to mind talking to a person or a group of people, in Heger's case it also means reaching people through publications. Of all the guides produced by the University of Minnesota Extension Service, the most circulated is the septic system owner's manual. To Heger, it is astonishing that people have such expensive and vital pieces of technology, yet are often not told how to take care of them.

"When was the last time you spent $5,000 to $15,000 for a piece of equipment in or around your home and you didn't get an owner's manual?" Heger says. "We need to have it like getting your oil changed. Why does everybody not know they need to get their tank cleaned?" Her own family was the same way when she was growing up, she says. Their tank was pumped only when backed up wastewater showed there was a problem.

The Minnesota guide is written for the Midwest and the challenges that come with operating in a cold northern climate, yet it has also inspired people in other regions to develop localized versions. Now Heger is involved in producing a national guide that can be customized for any location. This guide will not appear in a finished form. Instead it will be an online form that will work like online tax- preparation software, Heger says.

A knowledgeable system owner or a septic system professional will enter basic information about the system, or as much information as they know. The software will generate a customized maintenance guide for that type of system. It will be a simple guide, too – no 100-page monster that a customer will toss into a drawer because it's too much to read, Heger says.

However, Heger knows that manuals can take people only so far. Even if a system is maintained perfectly, there are still environmental issues because of what flows through an onsite system and what it cannot nowhandle, she says. Phosphorus is a good example of an issue that needs dealing with.

Tainting The Water Supply

In the Midwest, a phosphorus surplus from septic systems and lawn and agricultural fertilizers has been blamed for encouraging toxic algae blooms in inland lakes and for generally reducing the amount of dissolved oxygen by encouraging the growth of all kinds of aquatic plants. There are currently no off-the-shelf products for reducing phosphorus in wastewater, but Heger believes there will be an increasing need for such technologies as regulations catch up with the environmental harm.

The Onsite Sewage Treatment Program has three phosphorus projects going. One is in conjunction with a company to test some of its ideas Another involves collecting wastewater from a cluster of buildings, removing the phosphorus and generating biogas for energy production. The third evaluates how much phosphorus migrates out of wastewater systems. One study evaluated cesspools, which have not been allowed in Minnesota since the early 1980s, and found a very high level of phosphorus 40 feet down-gradient, Heger says.

From her position at the university, Heger sees the need for much more consumer education. The biggest issue she and her colleagues see are toxic septic tanks – tanks where the bacteria population is unhealthy or absent because of an accumulation of home cleaning chemicals, pharmaceuticals and all the other things that shouldn't dump down drains.

Heger Profile, *Continued on Page 13*

Heger Profile, *Continued from Page 12*

Taking wastewater samples at a Minnesota highway rest stop are Sara Heger and a University of Minnesota civil engineering student, Mike Szmurlo.

Consumers don't know enough to ask the right questions, Heger says. Because they lack knowledge of their wastewater systems, they don't think about the environmental impact of a drug that a doctor prescribes and that works its way through the patient and into the water supply. This isn't just an issue for those on septic systems, of course, but it's an important area of concern for decentralized systems.

Of all the presentations she gives, the issue of what is being flushed through wastewater systems draws the most feedback. "And this is people in the industry. I hope the information gets from their hands to their customers' hands. Our industry, not me, is doing all this education," Heger says.

Industry Proud

It is the industry that taught her, and Heger says her most valuable connections have come through professional organizations. Early in her career she became involved with the Minnesota Onsite Wastewater Association. The membership gives constant feedback and they are great supporters, she says.

More than 10 years ago Heger became involved with the National Onsite Water Recycling Association. Through NOWRA she had the opportunity to meet professionals from across the country, plan national conferences, learn about systems and research elsewhere, and develop educational materials through the Consortium of Institutes for Decentralized Wastewater Treatment.

Heger does not stop learning, and in addition to her job in the onsite program, she's working on a doctorate degree in water resources science. She doesn't need it for her university job nor is she planning to leave the university for an academic job that takes her out of the field. What she's doing now is too interesting to leave, she says.

She is pursuing the degree just for herself. At the same time she's doing what the entire industry must do, because the only thing protecting the health of people and the environment is the knowledge of wastewater professionals.

FOR MORE INFO:Cole-Parmer, 800/323-4340
www.coleparmer.com

This article first appeared in the February 2015 issue of Onsite Installer magazine, published by COLE Publishing Inc., www.onsiteinstaller.com It is reprinted by permission.

Member Forum: Watching the Bottomline!

Tips to Improve Your Cash Flow

by Transworld Systems

Cash flow is the lifeblood of a business. When a business provides a service or product, they should expect to be paid in a timely basis, right! However, anyone who's been in business a month or more has learned that's not always the case. And those accounts not paid within terms can have a dramatically negative impact on a business's cash flow.

ESTABLISH SOUND CREDIT PRACTICES

When dealing with new customers, always obtain thorough contact and credit information. Never grant credit before you are comfortable with the customer's ability to pay.

HAVE A DEFINED CREDIT COLLECTION POLICY

One of the major causes of overdue receivables is that the payment policy has not been clearly defined to clients and office staff. Defining your policy and educating your clients and staff can avoid many payment delays. Chances are they will pay late or maybe not at all. Make sure your terms of payment are clearly stated at the time of service.

INVOICE PROMPTLY AND BILL REGULARLY

If you don't have a systematic invoicing and billing system, get one. The faster you mail invoices, the faster you'll be paid. An invoice should show the amount due and when payment is expected. Invoices without payment terms may automatically fall to the bottom of customers' payment stack.

USE ADDRESS SERVICE REQUESTED

One of the most difficult collection problems is tracking a client who has "skipped".

Any statements or correspondence sent should have the words "Address Service Requested" printed or stamped on the envelope. The Post Office will research this information. And if they can locate a change of address on that person, they will send you form #3547n with the client's correct address.

AGGRESSIVELY FOLLOW UP ON PAST DUE ACCOUNTS

As soon as a bill becomes overdue, call the customer and ask when you can expect payment. No law says you can contact a client only once a month. Surely you've heard the old adage "A squeaky wheel gets the grease"! It's an excellent idea to contact late payers every 10-14 days. Doing so will enable you to diplomatically remind your customer of your terms of payments. Having a plan and adhering to it makes both you and your consumer aware of the fact you expect to be paid.

USE YOUR AGING SHEET, NOT YOU'RE FEELINGS

It's easy for a businessperson to let an account age beyond the point of collect ability because he or she felt the client would eventually pay. The truth is …if you aren't being paid, someone else is! So stick to your plan of follow up. You'll soon know who intends to pay you and who doesn't.

FOLLOW THE COLLECTION LAWS

According to these laws it's illegal to use unfair or deceptive practices to collect a debt. Calling a client at odd hours or threatening to turn an account over to a collection agency if you don't usually take this course of action can put you or your business at risk. A debtor can then sue you for libel or harassment!

REMEMBER: NOBODY COLLECTS EVERY ACCOUNT

Even by setting up and adhering to a specific collection plan, there are a few accounts that will not be collected. By identifying these accounts early, you will save yourself and your business a great deal of time and money. If you've pursued an account for 60 days from the due date and they still haven't paid, you're being delivered a message-paying you is not on their priority list. From that point on, a third party can motivate a client to pay in ways you cannot, simply because the request for payment is coming from someone other than you.

USE A THIRD PARTY SOONER

The longer you let delinquent accounts sit, the less likely you will ever collect. According to the United States Department of Commerce, nearly 26% of accounts that are three months past due will never be collected. That figure jumps to 70% after six months, and after a year, the probability of never collecting and overdue account hits nearly 90%. It's no wonder that, by some estimates, one out of five business failures is due primarily to bad debt

Information provided by: *Patrick Boyum/Andrew Lange, Transworld Systems, 1611 W. County Road B # 306, St. Paul, MN 55113 651-631-2919 877-435-4874 Fax*

UNIVERSITY OF MINNESOTA

Contributions Requested for UM Pilot Project

Recharge/Reuse Project—Piloting Recharging of Local Watershed

Minnesota Landscape ARBORETUM

Collaborative Pilot project needs resources!

A pilot demonstration is being considered to evaluate the viability and benefits of recharging a local watershed. Wastewater from the University of Minnesota Landscape Arboretum facility would be extracted from the sewer main upstream from its connection with the City of Chanhassen municipal sewer system. The wastewater would be settled in a series of tanks and then dispersed through a seasonal drip system with final treatment in the soil. Pretreatment of the wastewater prior to dispersal in the soil will also be considered. The system will be designed to take a daily seasonal load similar to a single family home with the excess flows returned to the municipal sewer main. Final daily flows and loading have not been determined. The treatment area is approximately is 85'x20' on fill soils.

Demonstration goals

- To return the water resource back into the local watershed
- To effectively reuse wastewater from the Arboretum facility as a resource for irrigation.
- To monitor contaminates of emerging concern to determine if the treated wastewater can effectively remove contaminates of concern

MOWA Request

The MOWA Board of Directors is interested in being a partner in the pilot project. At the January 28th, 2015 meeting the Board discussed providing association funds for the project, soliciting members for project materials, project design, and project

University of Minnesota Onsite Sewage Treatment Program

Pilot Project Request, *Continued on Page 17*

Pilot Project Request, *Continued from Page 16*

installation. The Board also felt that beyond the project goals the project would provide an excellent exposure opportunity for the association and industry. The MOWA board is requesting the following items:

- Project design (minimum requirement P.E.)
- Tanks
- Single family pretreatment unit
- Drip dispersal unit
- All necessary piping and valves
- Tank and pipe bedding
- Sponsorship funds for a display
- Control panel(s)
- Installation of the project
- Electrical installation
- Sponsorship funds for sampling and data evaluation

Detailed specifics of the project will not be available until the system is designed. If you or your company is interested in contributing please indicated what you are interested in providing and email your information to the Board at MOWAcarla@aol.com by March 31, 2015. If you have questions regarding the project you can contact Craig Gilbertson at Craig.Gilbertson@state.mn.us

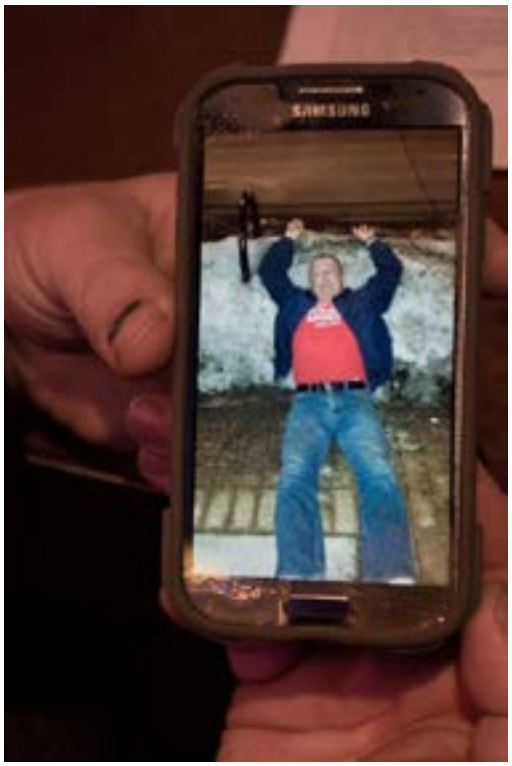
Convention End Note: Caught on Camera

Snow Angels anyone?

It's not hard to get captured on camera, thanks to the prevalence of high tech cell phones.

Just ask Jim Lashinski, who was snapped while trying to make a snow angel outside the Toby Keith Bar at the 2015 MOWA Annual Convention!

If you've got a priceless shot you'd like to share, e-mail MOWAcarla@aol.com



2015 OSTP Certification Course - Descriptions and Offerings

University of Minnesota
ONSITE SEWAGE TREATMENT PROGRAM

Introduction to Onsite Systems (15 Direct Credits)
Fee: $355 - Exam: Yes
This 15-hour workshop is the foundation for all SSTS certification courses and is best completed prior to the other workshops. It prepares participants for the Basic exam and provides an overview of onsite treatment options and concepts. Enrollment in this workshop includes a copy of the *Manual for SSTS Professionals in MN*
Topics include:
- Treatment of wastewater
- Wastewater characterisitcs
- Site evaluation
- Soil treatment systems

10-3 Alexandria - Douglas Cty Public Works Building 11/30-12/2/15 Deadline: 11/23/15

Installing Onsite Systems (12 Direct Credits)
Fee: $260 - Exam: Yes
This 12-hour workshop prepares attendees for the Installer exam and provides information about proper installation practices.
PREREQUISITE: Introduction to Onsite Systems
Topics include:
- Construction planning
- Construction practices
- Tools for installing
- Pipelayer certification

112-3 Alexandria - Douglas Cty Public Works Building 12/3-4/15 Deadline: 11/26/15

Maintaining Onsite Systems (15 Direct Credits)
Fee: $305 - Exam: Yes
This 15-hour workshop gives participants an overview of system management, the federal requirements for land application of septage, and prepares people for the Maintainer exam.
PREREQUISITE: Introduction to Onsite Systems
Topics include:
- Land application rates
- Maintaining Type I SSTS
- Record keeping
- Soil survey use

415-2 N. Mankato Best Western 4/20-22/15 Deadline: 4/13/15

Service Provider (21 Direct Credits)
Fee: $485 - Exam: Yes
This 21-hour workshop prepares attendees for the Service Provider exam and offers an in-depth look into the care of all system types. This course is based on the National O&M Service Provider materials and will include a field component. It is intended for system maintainers, designers or MPCA certified operators who need training for soil-based system management.
PREREQUISITE: Introduction to Onsite Systems
Topics include the management of:
- Type I systems
- Cluster systems
- Type IV systems
- System troubleshooting

49-1 N. Mankato Best Western 4/28-5/1/15 Deadline: 4/21/15
49-2 St. Cloud - Moose Lodge 10/6-9/15 Deadline: 9/30/15

Advanced Design & Inspection of Onsite Systems
(21 Direct Credits) *Fee: $435* Exam: Yes
This 21-hour course includes a field portion and focuses on the design and inspection of Type IV systems with flows greater than 2500 gpd. This course explores high strength waste, site assessment techniques, and prepares participants for the Advanced Design exam.
PREREQUISITE: Full Certification as a Basic Designer or Inspector and successful completion of Intermediate exam.
Topics include:
- •Collection system design
- •Groundwater mounding
- Nitrogen & phosphorus removal
- High strength waste

29-1 St Cloud- Moose Lodge 3/17-20/15 Deadline: 3/10/15

Inspecting Onsite Systems (12 Direct Credits)
Fee: $260 Exam: Yes
This 12-hour workshop identifies Minnesota requirements for existing and new system inspections and prepares participants for the Inspector exam.
PREREQUISITE: Introduction to Onsite Systems.
Topics include:
- Administrative requirements
- Existing system inspection
- New system inspection
- Tools and procedures

30-1 St. Cloud - Moose Lodge 6/2-3/15 Deadline: 5/26/15

Soils (15 Direct Credits)
Fee: $305 or $470 with Munsell Color Guide Exam: Yes
This 15-hour workshop prepares attendees for the Soils exam and provides participants with a detailed understanding of how particular soils affect the treatment of sewage. Participants will also receive instruction at a field location. Munsell Color Guides are available for $165 and Sand Cards for $10.
PREREQUISITE: Introduction to Onsite Systems
Topics include:
- Percolation testing
- Field evaluations
- Soil characteristics
- Soil survey use

515-1 New Ulm- Holiday Inn 5/19-21/15 Deadline: 5/12/15
515-2 Brainerd-Arrowwood Lodge 6/16-18/15 Deadline: 6/9/15

Basic Design of Onsite Systems (21 Direct Credits)
Fee: $435 - Exam: Yes
This 21-hour workshop teaches attendees to properly design various septic systems in preparation for the Basic Designer exam. Enrollees must have the current manual to use during the workshop. Onsite Manuals are available for $50.
PREREQUISITE: Introduction to Onsite Systems
Topics include:
- Flow determination
- System design
- Tank design
- Pumps and pressure design

20-2 Brainerd-Arrowwood Lodge 5/5-8/15 Deadline: 4/28/15

Enroll online at: septic.umn.edu
Classes are filled on a first-come, first-served basis.
OSTP, 173 McNeal Hall, 1985 Buford Ave., St Paul, MN 55108
Fax: 612-624-6434 **Phone: 800-322-8642**

MOWA Classified Ads

Do you have an item that seems appropriate for a classified? Free to MOWA Members: Pease submit your ad to MOWAcarla@aol.com. No services, manufactured equipment, or items that are part of the usual course of business. Ads limited to 30 words; include contact information (email or phone number). Please resubmit each time the Little Digger is published. MOWA does not warrant or verify any representation of your item.

2015 MOWA MEMBERSHIP APPLICATION

MOWA minnesota onsite wastewater association

Membership: ❑ **Renewal** ❑ **New Member**

❑ Individual Member $240 (1 person)
❑ Business Group /Government Unit $340 (up to 5 people; $100 /person after 5)
❑ Student $140 (1 person)
❑ Life-time ❑ Honorary

Note: Your MOWA Membership includes one NOWRA membership

Memberships are based on calendar year - After July 1st, new members pay $140-individual / $190-business or gov't groups for remainder of 2015

Individual/Group Contact: **This person will be listed as the NOWRA member on the Septic Locator website. They will be listed first in all MOWA publications. Please print clearly.**

• 1st Member _____ Company Name _____

Address _____ City/State/Zip _____

Title _____ Phone _____ Mobile/800# _____ Fax _____

Email _____ Website _____ County _____

Circle the counties you work in: *Needed for Directory and Website.*

Statewide 88

Aitkin....1, Anoka....2, Becker....3, Beltrami....4, Benton....5, Big Stone....6, Blue Earth....7, Brown....8, Carlton....9, Carver....10, Cass....11, Chippewa....12, Chisago....13, Clay....14, Clearwater....15, Cook....16, Cottonwood....17, Crow Wing....18, Dakota....19, Dodge....20, Douglas....21, Faribault....22, Fillmore....23, Freeborn....24, Goodhue....25, Grant....26, Hennepin....27, Houston....28, Hubbard....29, Isanti....30, Itasca....31, Jackson....32, Kanabec....33, Kandiyohi....34, Kittson....35, Koochiching....36, Lac qui Parle Lake....37, Lake....38, Lake of the Woods....39, Le Sueur....40, Lincoln....41, Lyon....42, Mahnomen....43, Marshall....44, Martin....45, McLeod....46, Meeker....47, Mille Lacs....48, Morrison....49, Mower....50, Murray....51, Nicollet....52, Nobles....53, Norman....54, Olmsted....55, Otter Tail....56, Pennington....57, Pine....58, Pipestone....59, Polk....60, Pope....61, Ramsey....62, Red Lake....63, Redwood....64, Renville....65, Rice....66, Rock....67, Roseau....68, Scott....69, Sherburne....70, Sibley....71, St. Louis....72, Stearns....73, Steele....74, Stevens....75, Swift....76, Todd....77, Traverse....78, Wabasha....79, Wadena....80, Waseca....81, Washington....82, Watonwan....83, Wilkin....84, Winona....85, Wright....86, Yellow Medicine....87

Information: **(Check all that apply)**

❑ Installer ❑ Pumper ❑ Designer ❑ Inspector ❑ Gov't Regulator ❑ Educator ❑ Service Provider ❑ Student
❑ Soil Scientist ❑ Professional Engineer ❑ Manufacturer ❑ Operator/Maintenance ❑ Supplier ❑ Other: _____

Additional Business/Government Members:

• 2nd Member _____ Title _____ County _____

Address _____ City/State/Zip _____

Phone _____ Mobile/800# _____ Fax _____ Email _____

• 3rd Member _____ Title _____ County _____

Address _____ City/State/Zip _____

Phone _____ Mobile/800# _____ Fax _____ Email _____

(Please list additional business/government group members on separate sheet with complete contact information.)

Publications: Would you prefer receiving 'Little Digger' newsletters via ... ❑ Regular Mail ❑ Electronically

We currently send one publication per address to business/government groups. Contact the MOWA office if you'd like additional copies.

Additional NOWRA Memberships: **MOWA membership fees include one NOWRA membership per company/organization. List names of members who want additional NOWRA memberships here: Cost - $40 per person.**

2)_____ 3)_____ 4)_____ 5)_____

Payment: *(Please print)*

MOWA Membership $_____ + Add'l NOWRA Memberships = **Amount: $** _____

❑ Check enclosed (Payable to MOWA) ❑ VISA ❑ MasterCard

Card Number: _____ Expiration Date: _____ Cardholder Name: _____

Signature: _____ Date _____

MOWA, 5200 Willson Road, Suite 300, Edina, MN 55424 Phone: 952.345.1141 Fax: 952.920.1533

Note: Dues payable to MOWA are not deductible as a charitable contribution but may be deductible as an ordinary and necessary business expense.

MOWA
minnesota onsite wastewater association

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