



2015 Convention Preview—

The High Tech World of Sewage in Carver County

When Carver County citizens think of iPads and GPS units, they likely think of surfing the internet, connecting on social media, or finding their way back to a favorite fishing hole. The last thing citizens might equate these gadgets with is septic tanks and sewage treatment systems. However, these high tech gadgets are now everyday tools for Carver County Environmental Services staff to ensure safety and reliability of septic systems and ease of data access for landowners and County staff.

Carver County's septic system permitting and inspection system has been around since the mid 1970's. This system has generally been more detailed and strict than most, due to well documented public health and water quality problems. Many of the County's septic systems were installed 20 years ago or more when home computers were still catching on and cell phones were the size of luggage [and only made phone calls]. The County's permit system was understandably



paper based. Paper can get lost or misfiled, hand written inspection notes are hard to read, and addresses and property lines can change. Thus tracking the more than 5,000 systems located in the County and the 100 to 175 new ones installed each year was a daunting task.

County staff were looking for a more efficient and accurate inspection and record keeping system.

Carver County,
Continued on Page 10

Back by popular demand— Upcoming Panel Discussions For MOWA Conference

*By Gregory Halling, Professional Engineer and
Advanced Designer and Inspector*

We are excited to again be offering three panel discussions in 2015 at the MOWA Conference which will be held in St. Louis Park on January 26th through the 28th. Many suggestions from last year and comments received during the year have been incorporated into the agenda. This year will be similar to last year so we will have two hour panels and we have combined ISTS professional categories.

The combined panels are LGU and Inspector Panel led by Marilee DeGroot and Pete Otterness, Maintainer and Service Provider Panel led by Lee Weigt and Tom Wirtzfeld and the Designer and Installer Panel led by Greg Halling and Wayne Johnson.

The panels will be on Tuesday and Wednesday and do not overlap with each other in case there are some who would like to attend all three panel discussions. Once again we

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From the Executive Director's Office



By Pat Martyn, MOWA Executive

MOWA

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It is Convention Time! Our Annual Convention and the great Minnesota septic get together is coming up on January 26-28, 2015. The site is The Doubletree Hotel in St. Louis Park, Minnesota just west of downtown Minneapolis. This will be a first for MOWA at that location, and we are very optimistic that you will love the facility, and especially the short walk to the West End Center, where there are dozens of restaurants at all levels of pricing, and an upscale movie theatre, and shopping galore.

This issue of the Little Digger has all sorts of information about the show, and we are really excited about the prospect of a great event. And, there is a handy registration that you can use to attend the show without hassle. There are other ways of registering as well, so choose the one that works best for you.

Most people emphasize the benefits of attending. We repeatedly get very high marks for the content of the show. Your opportunity to mingle with friends and colleagues in the industry and hash out items of interest, catch up on news or just some friendly conversation is a real benefit of the show.

Our Convention Committee has been working for months on the content of the show. This ensures the timeliest topics and the best speakers available to present on issues that are directly related to you and your business.

Exhibits hosted by the sponsors present the best products available. Reputable vendors will be at the show to display their wares, describe them to you, sell you if you are interested, and generally, inform and explain.

One of the best things about the show is that the Minnesota Pollution Control Agency, our primary State regulator, will be there. This presents to you an opportunity to visit with our State regulatory authority, and gain valuable insights into their enforcement responsibility, or ask a question that you may have been trying to figure out on your own. In addition, the MPCA will present on timely topics, and will be doing their usual great job of informing the industry.

Another item of interest to you is MOWA operating what we call the Foundation Grant. We are trying to move selection forward, so if you have a worthy non-profit that needs some septic improvement, will you please contact the office? We can answer questions and guide you through it. (See Page 13 for grant details.)

Lastly, do you want to play a more involved role in Board decision making process? Let us know if you are interested in running for a spot on the Board. Elections are held at the Convention, and we are looking for a few good people to fill the posts of departing Board Members.

Calendar of Events

MOWA Events

January 26th – 28th, 2015 - Annual Convention & Tradeshow – DoubleTree by Hilton – Minneapolis Park Place (visit www.mowa-mn.com for details)

Industry Events

February 23-26th, 2015 - Water & Wastewater Equipment, Treatment & Transport (WWETT) Show (formerly, the Pumper & Cleaner Expo), Indiana Convention Center – Indianapolis, IN (visit www.pumpershow.com for details)



2015 Minnesota Onsite Wastewater Convention
"Meeting Challenges in an Evolving Wastewater World"
 DoubleTree by Hilton, Minneapolis – Park Place
 January 26th – 28th, 2015

Attendee Registration – Deadline: January 16th, 2015
 (One form per person, please make copies for additional individuals)

Company Name: _____ Contact: _____
 Address: _____
 City, State, Zip: _____
 Phone: _____ Fax: _____ E-Mail: _____

MOWA Members

Non-Members*

By January 16th, 2015:

By January 16th, 2015:

- All 3 Convention Days **\$295**
- Any 2 Convention Days **\$235**
- 1 Day: Monday OR Tuesday **\$150**
- 1 Day: Wednesday Only **\$100**

- All 3 Convention Days **\$395**
- Any 2 Convention Days **\$290**
- 1 Day: Monday OR Tuesday **\$195**
- 1 Day: Wednesday Only **\$125**

After January 16th, 2015: WALK-IN

After January 16th, 2015: WALK-IN

- All 3 Convention Days **\$375**
- Any 2 Convention Days **\$315**
- 1 Day: Monday OR Tuesday **\$230**
- 1 Day: Wednesday Only **\$125**

- All 3 Convention Days **\$475**
- Any 2 Convention Days **\$370**
- 1 Day: Monday OR Tuesday **\$275**
- 1 Day: Wednesday Only **\$125**

Registration Includes:
 Admission, Luncheons,
 Reception, Trade Show,
 Entertainment AND
 Education
 (everyone receiving
 CEUs must pay
 registration fee)
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See Reverse Side for Full Schedule

Grand Total

General Registration = \$ _____
 Please circle the day(s) you will attend: Monday - Tuesday - Wednesday
 Additional Lunch and/or Trade Show Tickets (1 ticket for each event)
 Lunch Name: _____ Name: _____ # _____ X \$35.00 = \$ _____
 Trade Show Name: _____ Name: _____ # _____ X \$35.00 = \$ _____
Total = \$ _____

Payment:

- Check: Payable to MOWA** **Amount:** \$ _____
 Mail to: MOWA, 5200 Willson Road, Suite 300, Edina, MN 55424
- Credit Card: Fax to (952) 920-1533 or Mail to - address above** **Amount:** \$ _____
 Type of Card: Visa MasterCard
 Credit Card # _____ Expire Date: _____ / _____
 Cardholder: _____ Signature: _____

By this signature I authorize MOWA to process fees pertaining to MN Onsite Wastewater Convention.

I agree to indemnify and hold harmless Minnesota Onsite Wastewater Association (MOWA), from any and all liability, loss, damage, or expense from any incident which may arise while attending any portion of the 2015 MOWA Annual Convention. If applies, I authorize any photos taken of me at this event to be published in MOWA's Little Digger and/or other MOWA -related promotional materials.

Signature: _____ Date: _____

Cancellation Fee: \$100. Written notice of cancellation must be received in the MOWA office no later than 01/23/14. No refunds after 01/23/14.

MOWA 2015 Convention - Education Schedule & Sign-Up

(please complete and return to the MOWA office with your Convention registration)

Schedule subject to change; CEUs listed are anticipated, based on MPCA approval

MONDAY, JANUARY 26, 2015

Time		Topic/(CEU)	SELECTION
9:00 AM	9:50 AM	Rules and Design Guidance Related to Type III Systems (1.00 D)	____ I will attend
10:20 AM	11:10 AM	Designing Type III Systems (1.0 D)	____ I will attend
11:10 AM	12:00 PM	Identifying Soil and Site Conditions for Type III Systems (1.00 D)	____ I will attend
1:00 PM	1:50 PM	Type III System Installation Challenges (1.00 D)	____ I will attend
1:50 PM	2:40 PM	Designing a Flow Equalization System for Limited Area Sites (1.00 D)	____ I will attend
3:00 PM	3:50 PM	Developing Management Plans and Operating Permits for Type III Systems (1.00 D)	____ I will attend
3:50 PM	4:40 PM	Management Opportunities for Type III Systems (1.00 D)	____ I will attend

TUESDAY, JANUARY 27, 2015

Time		Topic/(CEU)	SELECTION
8:30 AM	9:20 AM	Building Sewers and SSTS – MPCA and DLI Interagency Work Group (1.00 D)	____ I will attend
9:20 AM	10:10 AM	Groundwater and Surface-Water Interactions/ Forging a New Relationship with Water (1.00 I)	____ I will attend
10:10 AM	11:00 AM	Your Septic System on Drugs (1.00 D)	____ I will attend
1:00 PM	5:00 PM	MPCA Retesting (offered at no charge) (0.0)	____ I will attend

Time		Track I	Track II	Track III	SELECTION
1:30 PM	2:20 PM	Open Forum: Service Providing & Maintenance (1.00 D)	Improper Dosing and Mound Failure (1.00 D)	Nitrogen Removal and Onsite Wastewater Systems (1.00 D)	____ T1 ____ T2 ____ T3
2:20 PM	3:10 PM	Open Forum: Service Providing & Maintenance (1.00 D)	Successfully Dosing Pipe Networks (1.00 D)	Removal of Nutrients from Domestic & High-Strength Sewage (1.00 D)	____ T1 ____ T2 ____ T3

WEDNESDAY, JANUARY 28, 2015

Time		Track I	Track II	Track III	Track IV	SELECTION
8:00 AM	8:50 AM	Open Forum: Design & Installation (1.00 D)	Importance of Contracts: Key Aspects and Mistakes to Avoid (1.00 D)	Improving Wastewater Treatment in Small Communities/Unsewered Update (1.00 D)	Existing System Compliance Inspection Manual Working Session (1.00 D)	____ T1 ____ T2 ____ T3 ____ T4
8:00 AM	9:40 AM	Tank Manufacturers Meeting (note: must register for at least one day of the convention to attend this meeting) (0.00)				____ I will attend
8:50 AM	9:40 AM	Open Forum: Design & Installation (1.00 D)	Surety Bond Protection & Claims (1.00 D)	State and Local SSTS Program Administration (1.00 D)	The High Tech World of Sewage in Carver County (1.00 D)	____ T1 ____ T2 ____ T3 ____ T4
10:00 AM	10:50 AM	Open Forum: LGU./Inspector (1.00 D)	Workers Compensation Insurance – the Requirements and Examples (1.00 D)	MPCA Technical Update (1.00 D)	MIC – What Have We Learned So Far? (1.00 D)	____ T1 ____ T2 ____ T3 ____ T4
10:50 AM	11:40 AM	Open Forum: LGU./Inspector (1.00 D)	Marketing - Small Business (1.00 I)	Rules & Design Guidance Related to Type III Systems (1.00 D)	Precast Concrete Grease Interceptor Design (1.00 D)	____ T1 ____ T2 ____ T3 ____ T4
11:40 AM	12:30 PM	Closing Keynote: MPCA SSTS Program Update and Volunteer Recognition (1.00 D)				____ I will attend

2015 Convention Preview - Precast Design Update

Precast Concrete Grease Interceptor Design

by Claude Goguen, National Precast Concrete Association

Thousands of restaurants in the United States serve nearly 70 billion meals a year to their patrons. That's a lot of food, whose preparation releases an ocean of wastewater into the environment. The need for effective pretreatment of that wastewater is crucial. Ineffective grease removal from these waste streams results in the discharge of large quantities of grease into public sanitary sewer systems. Solidified grease can develop into stoppages in the piping networks downstream and create costly and time consuming problems at municipal wastewater treatment plants. By trapping fats, oils and greases (FOG) and solids, a grease interceptor is the last line of defense against potential problems downstream.

Precast concrete grease interceptors play a major role in pretreating grease-laden waste streams. In addition to providing greater storage capacity and longer retention times, large precast concrete grease interceptors offer the added benefits of structural integrity, design flexibility and long service life. Outdoor concrete interceptors provide a level of health safety since the outdoor interceptors physically remove

the grease and collect it outside the kitchen area, thereby removing it from the vicinity of food preparation and storage.

As more of these large precast concrete grease interceptors are specified, questions arise about how to size and configure them. One factor that appears most critical for performance is that separation efficiency is directly related to the retention time, which in turn is affected by storage capacity. Greases and oils have a lower specific gravity than water, so when a grease-laden mixture is left undisturbed, they will float to the surface. As such, there must be sufficient time for this process to occur. Another FOG medium that is sometimes ignored is emulsified oils, which result from the use of detergents in a dishwashing machine. These emulsified oil particles are smaller in diameter than other types of FOG and require a longer retention time to separate from the wastewater. Furthermore, the grease interceptor must be configured to minimize turbulence and allow the suspended

Precast Design, Continued on Page 17



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2015 Convention Preview - Septics and pharmaceuticals

Your Septic System on Drugs

By John R. Buchanan, Ph.D., P.E., University of Tennessee

Have you ever looked at the number of ingredients in shampoo? Not counting water, there were 24 ingredients listed on my bottle. I had never heard of most of these compounds. For example, one of the ingredients is Dimeadowfoamamidoethylmonium Methosulfate (I'm not kidding). I did an internet search for this product and found that the main purpose of this compound is to prevent static build-up in your hair (no frizzy hair). However, this produce is also a quaternary ammonia salt, and in high concentrations, quaternary ammonia compounds are powerful sanitizers. There are no health concerns for this product at the concentration used in shampoo; however, think about how many bottles of shampoo go down the drain each month. We may need to be concerned about whether these products accumulate and thus become harmful.

I checked my shaving cream – it has 12 ingredients and my toothpaste has nine. What is the fate of these products, and all the other products that we call personal care products (PCP)? Do they disrupt the activity within the septic tank, do they cause the soil absorption area to prematurely fail, or do they pass through to the groundwater? The correct answer to most of these questions is, “we really don't know.”

Another product I use several times per day is hand soap —its ingredient list is much the same as the other cleansing agents, except it contains triclosan. Triclosan is a strong antimicrobial and is considered an endocrine disrupter because its chemical structure is similar to some hormones. Nearly all antimicrobial soaps and detergents, socks that don't stink, and Microban™ kitchenware contains triclosan. And, triclosan is a hot topic in Minnesota, starting in 2017 triclosan has been banned in most consumer goods. Along with other chemicals, this product goes down the drain.

Septic systems renovate wastewater through these basic processes; physical separation (settling), precipitation, evaporation, microbiological degradation or biological uptake, and sorption to the soil. If one of these mechanisms does not remove a compound from the water, then that compound will be persistent in the environment. One means of bypassing these mechanisms is to become enveloped in dissolved organic matter. Dissolved organic matter in septic systems is derived from naturally-occurring and synthetic organic compounds. Synthetic organic compounds (such as detergents) can be more difficult for microorganisms to



degrade. While triclosan is nearly insoluble in water, add in a little dissolved organic matter and the triclosan will partition into the organic matter, become to be more soluble, and resistant to biodegradation. The end result is triclosan can be mobile in the soil and can contaminate groundwater.

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. 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. The microorganisms in septic systems also have enzymatic systems, but they are more interested in easily available carbon and/or easily available electrons. As such, they do not have the ability to breakdown many of the complex pharmaceuticals. We cannot ban all pharmaceuticals and personal care products, so we need to develop new ways to manage these compounds once they are in our wastewater.

John Buchanan will be a keynote speaker at MOWA's 2015 Convention. In addition to "This is Your Septic System on Drugs," presentation topics include "Maximizing Denitrification," and "Flow Equalization as a Solution for Small Lots." See page 4 for Convention schedule and details.



2015 Minnesota Onsite Wastewater Convention "Meeting Challenges in an Evolving Wastewater World"

DoubleTree by Hilton, Minneapolis – Park Place

January 26th – 28th, 2015

Sponsor Application – Deadline: Jan. 2nd, 2015

Company Name: _____ (As it should appear on exhibitor sign)

Contact: _____ Email: _____

Address: _____

City, State, Zip: _____

Phone: _____ Fax: _____

Event Sponsorship:

Event	Amount	Day	Benefit
Breaks	<input type="checkbox"/> \$250.00	All 3 days	<p>Limited to 6 sponsors - Sponsors will be acknowledged in ... Convention program, Table Signs, & Easels</p> <p>Limited to 6 sponsors - Sponsors will be acknowledged in ... Convention program, Table Signs, & Easels</p> <p>Limited to 4 sponsors - Sponsors will be acknowledged in ... Convention program, Table Signs, & Easels</p>
Continental Breakfast	<input type="checkbox"/> \$250.00	All 3 days	
<u>Tuesday Night</u> Reception	<input type="checkbox"/> \$250.00	1 day	
<p>EVENT(S) SPONSORSHIP AMOUNT: _____ Events X \$250 = \$ _____</p>			

Payment:

Check: Payable to MOWA **Amount:** \$ _____

Mail to: MOWA, 5200 Willson Road, Suite 300, Edina, MN 55424

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Type of Card: Visa MasterCard **Amount:** \$ _____

Credit Card # _____ Expire Date: _____ / _____

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By this signature I authorize MOWA to process fees pertaining to this MN Onsite Wastewater Convention.

Please make a copy of this application for your records

I agree to indemnify and hold harmless Minnesota Onsite Wastewater Association (MOWA), from any and all liability, loss, damage, or expense from any incident which may arise while attending any portion of the 2015 MOWA Annual Convention. If applies, I authorize any photos taken of me at this event to be published in MOWA's Little Digger and/or other MOWA-related promotional materials.

Signature: _____ Date: _____

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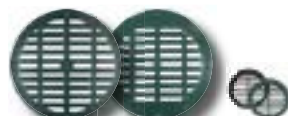
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Grates: 3", 4", 6", 12", 15", 18", 20" & 24"

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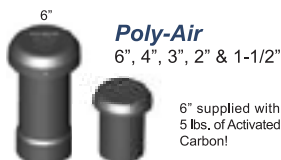


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2015 Convention Preview - Industry leaders to present

Carver County, Continued from Page 1

After visiting with Washington County and learning about their system using laptops and GPS, staff returned to Carver County and teamed up with their own Information Services and GIS departments to find ways to streamline the County's paper based inspection process and old electronic record filing system.

The end result is a GPS unit used to collect and record sewer system inspection data, a new iPad application for easy viewing and editing of the collected information, and a customized permitting program utilizing Microsoft Dynamics CRM.

During construction of a septic system, staff uses the GPS unit to collect precise locations of the sewage treatment system components (i.e. borings, sewer lines, tanks and soil treatment area) and other important features such as wells, buildings, and property corner stakes. The iPad is then used to view the collected data overlaid on an aerial photo to verify placement of the system in the designed location and in relationship to the property lines, and also to photograph important milestones and collect any associated notes.

Not only is this a valuable tool for County staff, the benefits extend to homeowners, contractors, and realtors by providing a detailed record of all the components of the system as installed that is more accurate and easier to understand (Not based on handwritten notes or a document that has been copied or faxed multiple times).

Reduction of Building Permit Review Time – able to verify that the proposed (addition, deck, accessory structure, etc.) would meet the required setback(s) to the septic system without having the site staked and staff visiting the property.

Fewer Surveys Required – increased comfort level of staff in making the determination that the septic system proposed meets the proper setback to the property line, when the property line is close or undefined.

Citizens can be assured that their new septic system has been rigorously reviewed and that the records will be readily available when they or a future homeowner needs them. Carver County staff are leading the way with this new technology and application and demonstrating the system for other counties and local governments while continuing to refine its use.



Joe Enfield, Carver County SSTS Inspector Senior Environmentalist, and Kimberly Jopp, Carver County SSTS Inspector Senior Environmentalist, will be presenting on the "The High Tech World of Sewage in Carver County" at MOWA's 2015 Annual Convention on Wednesday, January 28, 2015. See page 4 for Convention schedule and details.

Convention Panels, Continued from Page 1

will have several questions to discuss but encourage input from the audience and hope to do a good job of incorporating input from the audience for a real give-and-take discussion with the experts in our field of expertise. We believe it is very valuable to get the input from other practitioners as each one has experiences that can affect and help improve our industry as well as each company's bottom line.

Each question to be discussed will relate to specific parts of MN Rules 7080 so that the sessions will be eligible for continuing education credits. This year the topics will range from filters to commercial designs, to how is the design guidance working for existing systems, to proper maintenance, to grease trap issues, to sampling, LGUs requirements for operating permits, to enforcement, to the new inspector's manual. We look forward to seeing you at this year's conference in St. Louis Park.



MPCA Updates and Opportunities

New regs for plumbing license renewal

By the MPCA

New State Board of Plumbing rules require all licensed plumbers to take 16 hours of Department of Labor and Industry-approved continuing education (CE) in each full two-year license period in order to renew their licenses. All master plumbers and restricted master plumbers had to report their first CE at their license renewal in December 2014. Journey and restricted journey plumbers must report their first CE at their license renewal in December 2015. The new plumbing CE requirements are similar to the continuing education requirements that electricians and residential building contractors have been taking for many years. However, like electricians, plumbers who are renewing their licenses for the first time are NOT required to report CE. This means that for the December 2014 renewal cycle, only those master and restricted master plumbers who obtained their license before December 31, 2012, will need to submit CE this year. Masters and restricted masters who first obtained their license after Dec. 31, 2012, will report CE for the first time with their 2016 renewal. If you have question, visit the plumbing CE web page or call (651) 284-5031.

MPCA Retesting Session at MOWA 2015 Convention

The MPCA will be offering a retesting session at the 2015 MOWA Annual Conference on Tuesday, Jan. 27, from 1:00 -5:00 p.m. All SSTS exams will be offered, including the Soils exam. In December, the MPCA will notify those who have not passed an exam or whose certifications have lapsed over the past year to make them aware of this retesting opportunity. Remember, you must "catch up" on your continuing education before you can retest. If you would like to inquire about your eligibility or schedule an exam session, contact Jane Seaver at the MPCA.



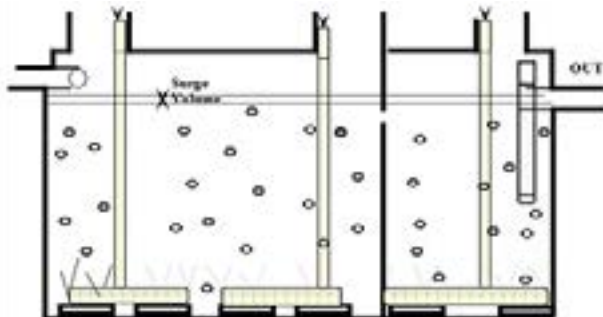
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Keeping current; MPCA announcements

Kristi Kalk Named New MPCA SSTS Staffer in Marshall Office



By the MPCA

Kristi Kalk is the new SSTS staffer in the MPCA Marshall Regional Office, replacing Matt Moon who is now working in the MPCA watershed unit in Marshall. Kristi graduated this past spring from Minnesota State University Mankato with a degree in environmental services.

By joining the MPCA Kristi says she has now participated in public service at all levels. At the city level, she was a lifeguard in her hometown of Fairfax, Minn., a small town near New Ulm. While in college, she worked for the National Park Service for two summers in Yellowstone and one summer on the East Coast. This past summer, she worked for Carver County doing water quality sampling work.

Work Continues on Ticketing Authority for SSTS Violations

By the MPCA

During the 2014 legislative session, the MPCA was granted the authority to issue civil citations (tickets) for SSTS violations. Currently, the MPCA has the authority to issue citations for violations of the underground tank and the solid waste rules.

For the SSTS program, citations are planned to be issued initially for specific violations. It should eliminate some of the legal paperwork associated with issuing Administrative Penalty Orders (APOs) and provide SSTS practitioners with timely handling of violations.

The SSTS enforcement staff is currently developing a procedure to use this authority and is planning on starting to implement it in Spring 2015. Stay tuned for more details in future SSTS Bulletins.

MPCA Enforcement Corner

By Pat Shelito, MPCA

During the period July - September, 2014, MPCA enforcement staff finalized 13 enforcement actions on companies or individuals, referred to as Responsible Parties in the enforcement world. These enforcement cases totaled 21% of MPCA enforcement actions reported during this period. A listing of MPCA enforcement actions is found at the MPCA website <http://www.pca.state.mn.us/index.php/about-mpca/mpca-news/news-media-center/quarterly-summary-of-enforcement-actions.html>. Twelve Administrative Penalty Orders (APO) and one Stipulation Agreement were issued to the Responsible Parties. The MPCA issues APOs and Stipulation Agreements to resolve compliance problems and SSTS licensure issues. The severity of the enforcement action depends on several factors, including the number of violations, environmental impact of the violation, whether it is a repeat offense, and how quickly the problem is corrected. The penalty monies are deposited in the state government general fund.

The Responsible Parties were Arnie Foss (Sherburne County), A Northern Cesspool, Inc. (Anoka County), Corey Seppman Well Drilling Co. Inc. (Blue Earth County), Seifert Septic Service (Ottertail County), Wencil Septic Pumping (Steele County), Affordable Portables (Dodge County), Bob's Econo Pump, Inc. (Beltrami County), Duane Cook (Traverse County), Veryl Lord (Mower County), Patrick Quandt (Mower County), Sheila Quandt (Mower County), Greg Klug (Houston County), Peter Winkels (Mower County), Duane & Denise Hoeft (Mower County).

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MOWA SSTS Replacement Grant Program

PURPOSE -The purpose of the Minnesota Onsite Wastewater Association (MOWA) SSTS Replacement Grant Program is to offer non-profit organizations with assistance in replacing SSTS.

QUALIFICATIONS OF APPLICANTS

In order to qualify for the grant program, the organization must meet the following criteria:

- Be registered with the Minnesota Secretary of State as a 501.c.3 organization;
- Have an existing subsurface sewage treatment system that:
 - Has been ordered to be replaced by the local permitting authority; or
 - Has been ordered to be upgraded by the local permitting authority.
- The site must be located in a County, City, Township or other municipality that is a member of MOWA.

MOWA OBLIGATIONS

MOWA will provide the following: 1) Design services; 2) Apply for the installation permit from the local permitting authority; 3) Installation services; and 4) Materials to install the SSTS.

The installation will take place during the MOWA Summer Seminar as part of a "hands-on" training to MOWA members

and SSTS professionals in the State of Minnesota. MOWA does not provide ongoing service, maintenance and repair at no cost to the grantee.

GRANTEE OBLIGATIONS

The organization of the selected site must agree to the following:

- MOWA and the University of Minnesota Onsite Wastewater Treatment Program can use the site as a location for training site;
- MOWA, contractors and vendors who donated time and/or materials can advertise that fact at the location of the site;
- If a Service Provider is required to provide service, the Grantee agrees to use a Service Provider who is a member of MOWA; and,
- The Grantee agrees to use MOWA members for Maintenance and Repairs.

GRANT AWARD DECISIONS

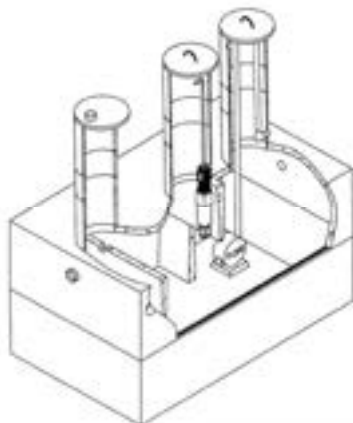
Each year, a site will be chosen by the Board OF Directors at the MOWA Annual Meeting based on applications received the previous 12 months and input received from members. Please visit our Web site for Grant Application and details:

www.MOWA-MN.com

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MPCA regulations on design & inspection

Whether or not to design (or inspect) depends on the weather

By the MPCA

Questions have been raised about whether or not it is acceptable to conduct SSTS design and inspection activities during winter months. Minnesota rules do not identify a date or season when design and inspection activities must cease. This is because Minnesota's site conditions do not follow astronomical or meteorological season labels. We have mild and dry autumns that sometimes last into December, and we have seen harsh, freezing conditions come early on many occasions.

State rules say field evaluation activities must be performed under appropriate conditions. Snow cover, low light conditions, and frost depth are three conditions that can make SSTS design and inspection impossible to complete. The MPCA does not condone or authorize any SSTS work that is completed under inadequate conditions and field sessions of soils-specific continuing education are not accredited during winter conditions.

What the rules say:

- 7080.1720 Subp 3. lists the surface features that must be defined to properly site and design an SSTS. You cannot measure slope with drifting snow. Describing landscape position amidst an indecipherable backdrop is impossible. "Snow" is not an acceptable label for type of vegetation!
- 7080.1720 Subp. 5 describes the conditions under which a designer and inspection can identify the limiting condition. Soil descriptions must be conducted under adequate light conditions with soil in a moist unfrozen state.
- 7080.1720 Subp. 6 defines how a designer sizes a soil dispersal area. Percolation testing is impossible to complete in freezing conditions.

You and your local SSTS program must determine when the conditions for SSTS design are acceptable. The MPCA has created a list to help you determine when to wrap up SSTS designs and inspections for the year. Do not design or inspect an SSTS any time you encounter one or more of the following conditions:

- 1, Snow is covering vegetation or impeding land slope observation.



2. Frost reaches the depth of the proposed soil dispersal bottom area.
 3. There is inadequate light to clearly see what you are working on.
 4. Your local inspector says conditions are not acceptable.
- Make sure conditions are acceptable before you get back into the field in the spring.

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Point-of-sale SSTS inspections provide benefits

Little over half of responding LGUs report point-of-sale SSTS compliance inspection programs; Hawaii weighs the question

By the MPCA

In the 2013 MPCA SSTS Annual Report, local governmental units were asked if they require compliance inspections at the time of property transfer. A total of 225 LGUs responded to this question. Of those, 116 said they have a property transfer (or point-of-sale) compliance inspection program and 109 said they do not.

There were 52 of 86 reporting counties (60%) that indicated they have a property transfer/SSTS compliance inspection program. For cities, 47 of 85 reporting cities (55%) indicated they have a program. Finally, 16 of 52 reporting townships (31%) indicated that they have a program.

An article in a recent edition of the *Onsite Installer* publication says Hawaii is considering SSTS compliance inspections when properties transfer as a way to help reduce the number of existing and new cesspools in the state.

"The Department of Health says cesspools release about 55 million gallons of untreated sewage every day across the state's islands. State officials have said the time of transfer provision would help with the transition away from cesspools. As the plan says, 'Requiring cesspool upgrades when property is sold makes sense because the cost of the upgrade can be shared between the buyer and seller at a time when sellers, with proceeds from the sale, are better able to afford upgrading costs, and buyers, who are usually borrowing already for their purchase, may obtain additional financing for eliminating a cesspool.'"

The same edition of the *Onsite Installer* carries an excerpt from a recent edition of the *SSTS Bulletin* that quotes Manager Jim Ziegler on the benefits of conducting SSTS inventories.

MOWA Classified Ads

Do you have an item that seems appropriate for a classified? Free to MOWA Members: Please 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.

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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

Precast Design, Continued from Page 5

FOG to separate. This is especially important in high-flow situations, such as when draining a large sink. The grease interceptor must also be large enough to allow for sufficient storage of accumulated FOG between cleaning operations without affecting the flow characteristics through the unit.

The design of a precast concrete grease interceptor can be done to accommodate all these requirements. The challenge resides in the inconsistencies in specifications from the many jurisdictions across North America. Some require three chambers, some require two and some accept single chamber designs. This can be baffling (excuse the pun) for producers. Geometry criteria for interceptors (length, width, and height ratios) are also significantly different between various authorities. One study concluded that the shape was of minimal importance while some believe that the length of the interceptor is more crucial for separation than depth. The effluent discharge criteria also differs greatly based on jurisdictions. The minimum retention time is another point of contention.

Once geometry has been established, producers must also design for structural durability based on the anticipated loads. In some cases, producers will design the structure to satisfy AASHTO's H-20 load rating. Since grease interceptors are almost always installed in commercial environments, they are

frequently subject to traffic. When not placed in drive-thru's or parking lots, they can still be subjected to delivery trucks and pumping trucks, even in landscape areas. Adhering to AASHTO's traffic rating requirements helps ensure proper reinforcement selection and placement and concrete strength to withstand anticipated and sometime unanticipated loads.

The course at MOWA Annual Conference will cover these topics and more regarding the design, productions and installation of a long lasting and reliable grease interceptor.

Claude Goguen's presentation is scheduled for Wednesday, January 28, 2015. See page 4 for Convention schedule and details.

MOWA Welcomes New Members!

Jeff Iverson
Infiltrator Systems, Inc.
Mantorville MN

Peter Otterness
Nicollet County Environmental Services
St. Peter, MN

Mark Elhardt
Satellite Industries, Inc.
Plymouth, MN

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2015 OSTP Certification Course - Descriptions and Offerings

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 characteristics
 - Site evaluation
 - Soil treatment systems
- | | | | |
|------|---|---------------|--------------------|
| 10-1 | N Mankato- Best Western | 1/26-28/15 | Deadline: 1/19/15 |
| 10-2 | St Cloud- Moose Lodge | 3/2-4/15 | Deadline: 2/23/15 |
| 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
- | | | | |
|-------|---|------------|--------------------|
| 112-1 | N Mankato- Best Western | 1/29-30/15 | Deadline: 1/22/15 |
| 112-2 | St Cloud- Moose Lodge | 3/5-6/15 | Deadline: 2/26/15 |
| 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
- | | | | |
|-------|-------------------------|------------|-------------------|
| 415-1 | St Cloud- Moose Lodge | 2/11-13/15 | Deadline: 2/4/15 |
| 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 |

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
- | | | | |
|------|---|----------|-------------------|
| 20-1 | Alexandria - Douglas Cty
Public Works Building | 2/3-6/15 | Deadline: 1/27/15 |
| 20-2 | Brainerd-Arrowwood Lodge | 5/5-8/15 | Deadline: 4/28/15 |

Intermediate Design & Inspection of Onsite Systems

(21 Direct Credits) Fee: \$435 - Exam: Yes

This 21-hour course prepares individuals for the Intermediate Design and Inspection exam. Intermediate Designers can design Type I - IV systems for domestic strength wastewater up to 2,500 gpd. Intermediate Inspectors can review these designs, inspect these systems, and administer on-going compliance with their operating permits. Enrollment in this workshop includes copies of the MPCA Design Guidance.

PREREQUISITE: Full Certification as a Basic Designer or Inspector; Repeating the OSTP Basic Design course is highly recommended and can be counted as continuing education.

Topics include:

- ATUs
 - Flow equalization
 - Media filter applications
 - Soil treatment design reductions
- | | | | |
|------|---|------------|-------------------|
| 27-1 | Alexandria - Douglas Cty
Public Works Building | 2/17-20/15 | Deadline: 2/10/15 |
|------|---|------------|-------------------|

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 |

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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 _____
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- Soil Scientist Professional Engineer Manufacturer Operator/Maintenance Supplier Other: _____

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• 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.

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