



THE LITTLE

MOWA
onsite wastewater association

DIGGER

February/March 2018 - Vol. 33, Issue 1

A bi-monthly publication

25 x 25 Report— Increase water quality education, boost investments, hold more water on land

Reprinted from the MPCA Waterfront Bulletin - February 20, 2018

Gov. Mark Dayton recently released a report summarizing key findings from 10 Water Quality Town Hall meetings held last year across the state. The report, which summarizes more than 3,500 suggestions from more than 2,000 meeting participants, recommends strategies to boost water quality education efforts, empower local action and collaboration, and increase investments in local clean water infrastructure, among other ideas. Improving education and reducing runoff ranked among the top themes and comments.

Holding more water on the land was also a top concern across the state. Participants in the town hall meetings, who rotated among small group discussions, suggested a wide range of strategies, reflecting regional topographic differences along with the assertion that solutions to hold water on the land need to be site specific. Many of the recommended strategies provide multiple benefits. For example, rain gardens not only slow the flow of water, but also provide habitat for pollinators and can serve as educational tools for communities. Cover crops another example. They help reduce erosion and build soil health, further reducing the need for fertilizer and other inputs.

Top strategies suggested for agricultural areas:

- Expand cover crops
- Reduce tillage
- Increase crop diversity
- Increase perennial crops
- Improve drainage management for better water retention
- Improve soil health

Top strategies suggested for urban areas:

- Expand rain gardens
- Improve storm water management
- Expand green and permeable infrastructure
- Increase native landscaping

25x25 Report, Continued on Page 16

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STATE OF MINNESOTA
EXECUTIVE DEPARTMENT



MARK DAYTON
GOVERNOR

Emergency Executive Order 18-05

Providing for Relief from Regulations to Certain Motor Carriers and Drivers Operating in Minnesota

I, Mark Dayton, Governor of the State of Minnesota, by virtue of the authority vested in me by the Constitution and applicable statutes, do hereby issue this Executive Order:

Whereas, extreme winter weather conditions and lack of snow cover have caused freezing of septic systems over much of Minnesota;

Whereas, it is urgent that immediate action be taken to prevent danger to public health and to avoid further damage to septic systems;

Whereas, the seasonal load restrictions, as described in Minnesota Statutes, section 169.87, subdivisions 1 and 2 went into effect on March 5, 2018 in the southeast and metro zones; on March 6, 2018 in the south zone; and will go into effect in the other portions of the state in the near future; and

Whereas, these seasonal load restrictions will impair the removal of sewage from septic systems and increase the harm caused by leakage and rupture of septic systems.

Now, Therefore, I hereby declare that:

1. A state of emergency exists in Minnesota, and that vehicles used to pump and/or transport sewage from septic systems be exempted from the seasonal load restrictions on local and state highways and streets, imposed in Minnesota Statutes, section 169.87, subdivisions 1 and 2, while providing emergency septic system pumping services.

Pursuant to Minnesota Statutes, section 4.035, subdivision 2, this Emergency Executive Order is effective immediately and must be filed with the Secretary of State and published in the State Register as soon as possible after its issuance. It remains in effect until June 1, 2018.

In Testimony Whereof, I have set my hand on this 9th day of March, 2018.


Mark Dayton
Governor

Filed According to Law:


Steve Simon
Secretary of State



From MOWA's Executive Director



By Pat Martyn, MOWA Executive Director

We hope you enjoyed the 2018 Winter Convention in Alexandria as much as we did. It was so great to see some old friends, and it was very exciting to see the vitality of the membership. The annual meeting at lunch was a special time, as we were able to

report that MOWA is as healthy financially and in terms of membership, it as strong as it has been in more than a decade.

We are off and running again with a new Board of Directors, and have added a new terrific operator: Travis Johnson of Septic Check. You are encouraged to connect with any of those folks if you have a 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 succeeded in our goal to improve the volunteer experience inside of MOWA, and your ideas and time are much appreciated.

Now, on to thanking the people who put this Convention together. A round of applause, please, for the Convention Committee that did such a good job organizing the 2018 MOWA Convention. It was a great few days during which we had the MPCA, excellent speakers, social events, and terrific exhibitors. Of course, the attendees drive the show, and the evaluations were really good. Thanks to all who participated.

And, you might be interested in knowing that we raised over \$6,400 for the scholarship program! Thank you to all who donated and who bid for your generosity and to the great volunteers who worked so hard this year. Make sure you look at the Tony Ruppert scholarship program that is offered on our website.

Now, we are moving on planning the next annual MOWA Event – our 2018 Summer Seminar. The committee is already hard at work on planning this event, so stay tuned for the Save the Date and other details to be announced soon.

And, finally, don't forget to mark your calendar for the 2018 ONSITE WASTEWATER MEGA-CONFERENCE OCTOBER 21-24, 2018 being held in partnership with NOWRA. This exciting event will be held at the Doubletree by Hilton Bloomington.

We look forward to seeing you there!



Mike Schmidt, Roe-d-hoe winner 1st place winner, will compete in the National Roe-d-hoe competition to be held at the 2018 Fall Convention in Bloomington.

#	Name	Bowling Pins	Golf	Basketball	Total
5	Chris Klein	0:44	1:07	0:31	2:22
4	Dan Fischer	0:56	0:15	1:01	2:12
3	Darren Flygare	0:56	0:22	0:43	2:01
2	Lee Loverink	0:55	0:12	0:45	1:52
1	Mike Schmidt	0:59	0:18	0:34	1:51

Calendar of Events

MOWA Events

October 21 – 24, 2018 – **NOWRA/MOWA Mega-Conference** – DoubleTree by Hilton, Bloomington, MN (visit www.mowa-mn.com or www.nowra.org for details).

MOWA

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Convention Highlight: Training, networking and awards!



Overall, over 200 members, industry professionals, speakers and exhibitors were in attendance over two action-packed days at the Arrowwood Resort in Alexandria on January 30 and 31.

Photos : Educational session (top) ; MPCA staff on-site during the Exhibitor's Reception (right); QBE staff at their booth with the MOWA "dividend check" totaling \$413,943 during the Exhibitor's Reception (bottom right); and MOWA President Dean Flygare (left) and MOWA Executive Director Pat Martyn (right) during the Scholarship ceremony (bottom).



Convention Highlight: Vendors and Wastewater Olympics!



Good times all around at the 2018 MOWA Convention Vendor Show and Wastewater Olympics held Tuesday evening, January 30th.

Photos: MOWA members and vendor staff (above and below right); Wastewater Olympics contenders (bottom left); and Wastewater Olympics skills test (center left).

A MOWA Thank-You goes out to Convention, Exhibit and Tony Ruppert Scholarship Sponsors. We can make great things happen when we work together!

For photos of the Tony Ruppert Fundraiser Auction, go to Page 15.





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Convention Photo Share: The Best & The Worst!

MOWA Best/Worst Photo Contest

True to our word, MOWA is sharing “the best” and “the worst” photos entered in the 2018 Convention Photo Share contest. You have to admit, these photos are awe-inspiring—whether it’s roots masquerading as Rapunzel’s hair (bottom right), the “Blue Lagoon” (below), or an homage to Inspector Gadget (bottom left). The darn’dest things can happen!



And the Winners are: #1 - Bernie Miller: *Homeowner Wiring*; #2-Travis Johnson: *Flooded Basement*; and #3 - Jeremy George: *Root Mass*.



UNIVERSITY OF MINNESOTA

MN Educator Honored at Natl. WWETT Show

Wastewater Industry Honors Announced at WWETT Show— Gustafson Receives Ralph Macchio Lifetime Achievement Award

By Jim Kneiszal

The pumping industry's two major annual awards were presented at the National Association of Wastewater Technicians State Association Breakfast meeting at the 2018 Water & Wastewater Equipment, Treatment & Transport (WWETT) Show in Indianapolis on Feb. 22.

The Ralph Macchio Lifetime Achievement Award was presented to David Gustafson, P.E., of the University of Minnesota onsite wastewater treatment education program. Gustafson has taught education courses and seminars through NAWT for 30 years, both at locations across the U.S. and at the WWETT Show. He is known for lively presentations and encouraging active participation among attendees.

"He has proven a sense of humor goes a long way. David is certainly a drawing card at any training session. He keeps everybody on the edge of their seats, interactive and involved," Ferrero says.

"He still fills our classrooms. He apologizes every time for being an engineer, but he brings it down to our level and is certainly a worthy recipient."

Gustafson says the wastewater leaders in NAWT always pushed him to improve the training sessions. He thanked COLE Publishing founder Bob Kendall, who presented the award with Ferrero, for establishing the Pumper & Cleaner Environmental Expo, now the WWETT Show, and fostering professionalism in the industry.

"You get so much more than you could ever give from working with the professionals and the guys and gals that make this



David Gustafson, P.E., accepts the Ralph Macchio Lifetime Achievement Award. He is joined by Ralph Macchio, left, and Gene Bassett, right.

a fabulous industry," Gustafson says. "We need to keep the industry going forward. I think we're at a place that if we're not moving forward, we're going to lose significant ground."

The award namesake, Ralph Macchio, also thanked Gustafson for sharing his expertise. "You keep us on our toes, and we learn a lot from you by the way you teach. You're a special educator who has the ability to reach all the people in the room," he says.

This article first appeared online at Pumper.com March 1, 2018, published by COLE Publishing, Three Lakes, Wis. It is reprinted by permission. https://www.pumper.com/online_exclusives/2018/03/wastewater-industry-honors-announced-at-wwett-show?utm_source=streamsend&utm_medium=email&utm_content=newsletter&utm_campaign=180308

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Problemsolving Tips from University of Minnesota Professor Emeritus— Troubleshooting: Check for Hydraulic Overloading

By Jim Anderson, Ph.D.



I continually get questions about why systems fail and questions about the cause of certain system problems. When you are called to a site where the system is struggling, your first step in finding a solution is to identify the cause of the problem. As you all know, this is sometimes a lot harder than it appears. I will spend a little time going through ways to troubleshoot systems of different types, going over what to look for, and — when possible — giving potential solutions. I did this a couple years ago as some of you may recall, and it led to a lot of good discussion about the causes, identifying them and finding solutions.

Troubleshooting a system starts with communicating with the homeowner. The more you learn about their water use and system use habits, the sooner you can home in on the problem. In addition, constant communication with the homeowner about what you are doing and why you are doing it will cut down on any misunderstandings about your recommendations and ultimately the services you provide and they pay for. There is nothing that creates more problems with homeowners than a lack of understanding what you as the service provider are doing and what is leading you to the conclusion — especially if that conclusion is going to result in the homeowner spending a lot of money on repairs or replacement. There is obviously a problem or you would not be there, but homeowners are just like us: hoping that the fix is easy and, above all, cheap. As we all know, this is often not the case.

When the troubleshooting call is due to surfacing effluent in the drainfield area or a backup into the house from a full system, discussion with the homeowner about what water use appliances are being used, how many residents are in the house, and any small-business activities taking place can go a

long way to determining whether the system is being hydraulically overloaded simply from using too much water. Many homeowners, particularly if they have not lived with a septic system before, do not understand or realize that their system has a finite or limited capacity to accept what they want to put into it.

If you are uncertain about what questions to ask the homeowner, there are numerous pamphlets and brochures available through the EPA, state Extension specialists and organizations

such as NOWRA - National Onsite Wastewater Recycling Association and National Association of Wastewater Technicians.

Based on their answers about water use, if you feel there is a good possibility that the system is overloaded, I suggest putting in a water meter for a period of time to measure actual use occurring in the home. One of my early troubleshooting experiences involved looking at a system serving a three-bedroom house with an estimated flow of 450 gallons per day. The homeowner was adamant that they could not be using more than that amount of water. Homeowners usually underestimate their use by a lot.

In that case, we installed and calibrated the water meter and let it run for a week. When we came back, the actual average daily use was 750 gallons per day. This is 1.6 times the design flow for the system. The homeowners were still not convinced they could ever use that much water; we recalibrated the meter in front of them and left it for another week, and even though they “watched it,” the average was still over 700 gallons a day. We then talked about installing low water use fixtures and enlarging the system to accommodate actual flow.

About the author Jim Anderson is connected with the University of Minnesota onsite wastewater treatment program and is an emeritus professor in the university's Department of Soil, Water and Climate. Send him questions about septic system maintenance and operation by sending an email to kim.peterson@colepublishing.com.

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Truck Talk: Have Pride in Your Ride!

Imperial Industries Builds Pumper's 2017 Classy Truck of the Year

Henry Damm of Big Bore Drilling in Fresno, California, wasn't in the market for a new truck until he needed a replacement truck after an accident. At first, Damm sought out used chassis and trucks, but couldn't find anything to suit the needs of his



business. That's when he decided to buy a new 2016 Peterbilt, built out with a tank by Imperial Industries. Damm also hired a graphic designer for the logo in hopes of getting his truck featured in Pumper magazine, and he ended up with the Classy Truck of the Year. **In the market for a new truck? Check out Imperial Industries!**

This article first appeared online at Pumper.com February 9, 2018, published by COLE Publishing, Three Lakes, Wis. It is reprinted by permission. https://www.pumper.com/video/video_profile/imperial_industries_builds_pumpers_2017_classy_truck_of_the_year



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Water Summit: What the Governor Heard!

Pollutants & drinking water

Across the state, Minnesotans expressed a desire to reduce the amount of harmful pollutants that enter our water. These pollutants come from things we do on the land such as applying fertilizers and pesticides on farm fields, yards, and lakeshores and from the chemicals and materials we use in our households, buildings, and industries. They are a concern for recreation, wildlife, and drinking water.

Top pollutants of concern for Minnesota:

- Contaminants of emerging concern (CECs), including pharmaceuticals and microfibers
- Nitrogen
- Phosphorus
- Sediments
- Salt

Understanding the issue: Water pollution

Safe, clean drinking water is fundamental to the health and vitality of our state. Minnesota has a long history of providing excellent drinking water for our citizens due to investments in prevention, treatment and monitoring and building strong partnerships throughout the state. In recent history, Minnesotans have rarely had to consider where the water in their taps comes from. However, 20 percent of Minnesotans rely on private wells that are not regulated by the state after the initial drilling stage. In Minnesota, over 70 municipalities and thousands of homeowners who rely on private wells have nitrate pollution approaching or exceeding safe drinking water standards.

Septic systems

A top concern in northeast Minnesota is reducing the number of failing and inadequate septic systems. Problematic septic systems exist throughout Minnesota, but residents in the northeast expressed a particular concern that the good water quality they enjoy in this area of the state is negatively impacted by septic systems that are improperly managed and maintained. Stricter enforcement of septic system regulations, providing financial assistance for costly system repair and installation, and education for septic system owners were three strategies suggested by the public to address this issue.

Understanding the issue: Sub-surface sewage treatment

Minnesota residents in areas without access to public sewer systems maintain their own septic systems. When working properly, septic systems treat wastewater and ensure that pathogens, nutrients, and other chemicals do not reach ground and surface water. A poorly functioning septic system is a threat



Looking ahead to the next 20 years, Minnesota will need to invest an additional \$7.4 billion to address existing infrastructure as it ages and needs to be replaced. Addressing familiar and emerging threats with new infrastructure for municipal systems and private wells will require additional funds in order to maintain the quality of drinking water we have come to expect. Major water problems elsewhere in the United States have been in the news over the past year, including ongoing lead problems in drinking water in the city of Flint, Michigan, and unsafe levels of nitrate in the rivers from which Des Moines, Iowa, draws its water. We have the knowledge and tools to avoid these problems, but it will require ongoing

vigilance and investment in the systems and infrastructure that keep our water safe. We cannot take drinking water for granted.

In addition to drinking water, monitoring shows that while 60 percent of lakes and rivers meet standards, another 40 percent are impaired. Some pollutants, such as phosphorus, have been an issue for decades, and we know a great deal about how they affect the environment. Other pollutants, such as pharmaceuticals, have been recognized as problems more recently, and still others we may not know about yet. The development of new products and chemicals and our knowledge about what affect chemicals have on the environment and human health are constantly evolving, and the challenges we face may change down the road.

to human health and the environment because it may not remove these harmful elements and can lead to contamination. The landscape of northeast Minnesota creates unique challenges for finding suitable locations for septic systems. Septic systems need adequate soil to allow for proper drainage. Shallow bedrock and extensive wetland areas make finding enough soil more difficult in this region of the state.

Often mound systems or advanced treatment systems are needed to treat the sewage to an acceptable level before discharge to the soil, but these systems are more expensive and can cost as much as \$20,000. St. Louis County offers grants to help offset costs for updating septic systems for low income families, but this funding is not sufficient to bring the majority of systems into compliance. Currently there is no good way to determine what percentage of septic systems in the northeast are not in compliance.



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2017 Tony Ruppert Scholarship Winning Essays

Wastewater Treatment, Quality and Quantity

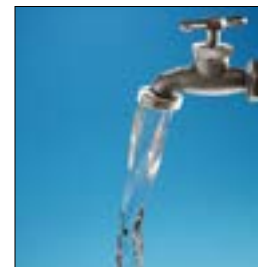
by Ashley Thelen of Park Rapids, MN, 2017 Tony Ruppert Scholarship Winner

What is wastewater? Wastewater is any water that has been adversely affected by anthropogenic influence. It can originate from a combination of domestic, industrial, commercial or agriculture influence. Waste water can come from many outside sources including, feces and urine, washing water (personal, floors, dishes, clothes), manufactured liquids from domestic sources (paint, cleaning liquid supplies, drinks and cooking oil), runoff waste from highways, roads, roofs sidewalks/ pavements which could contain oils, gasoline, animal feces, de-icing agents, etc.

In this essay we will be discussing the importance of wastewater treatment, why it should be treated and what can happen if water isn't treated. What treatments can be done to maintain a good quality water resource? How does wastewater affect our environment? And also we will be discussing the importance of quality water and why good quality water is important in communities.

Why treat wastewater? Wastewater plays an important role in caring for our own health and the environment. There are a lot of good reasons as to why keeping our water clean is an

important quality. Clean water is critical for wildlife habitats and fisheries and it is crucial for plants and animals that live in the water. It is important for the fishing industry and future generations. Wildlife depend on the rivers, oceans, shoreline, beaches and marshes for resting and feeding. Wastewater treatment also plays a role in recreation and quality of life. The recreational values of our waters and the scenic view are reasons many people choose to live where they do. Also if water isn't properly treated it can cause health concerns. If water is not properly cleaned, it can carry disease and harmful bacteria. The harmful bacteria would have to be removed to make the water safe.



What happens if wastewater isn't treated properly? Treatment of wastewater is very important for our environment, communities and for the population. Wastewater is treated to remove pollutants or contamination. Wastewater treatment is a process used to

TR Scholarship - Thelen, Continued on Page 14

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“Where Quality is a Standard Not an Extra”

TR Scholarship - Thelen, Continued from Page 13

maintain the overall quality and quantity of our water. Treating the wastewater from contaminants helps our environment because it can be recycled, treated, reused and discharged back into the environment. If our wastewater isn't treated properly it can cause health problems and diseases. Discharging untreated wastewater for example, water pollution, can cause the spreading of diseases, fish kills and can harm the aquatic life. The pollution of water can have some serious impact on all living creatures and it can negatively affect the use of drinking water, household needs, recreation and fishing.

Reducing wastewater saves money, helps our economy and can help the environment. Conserving water is a good idea for a number of reasons one big reason is reducing wastewater. Not only can it help lower monthly water bills but it can also increase wastewater treatment plant efficiency and savings on energy cost. However, the most important reason to reduce water use is to protect the water quality. And to ensure clean water is available in the future practice healthy habits by polluting as little as possible.

What are some wastewater treatment types? There are two types of wastewater treatment, Primary Treatment and Secondary Treatment. In Primary Treatment, suspended and floating solids are settled then removed from sewage. The flow from the sewers enters a screen or bar rack and removes large floating materials such as sticks of rags. It then flows through a grit chamber where heavier substances such as sand and rocks are removed. Grit

removal is then usually followed by a sedimentation tank or clarifiers where inorganic and organic solids are settled out. To treat and kill pathogenic bacteria the primary treatment used is chlorine (in the form of a sodium hypochlorite solution) to disinfect. Sometimes more chlorine is needed to kill adequate bacteria, excess chlorine can be removed by dechlorinating. But there is alternate disinfection methods as well, including ozone or ultraviolet light that are utilized by some treatment plants.

Another common treatment type is Secondary Treatment. The process of Secondary Treatment, the bacteria in the sewage is used to help further purify the sewage. Secondary treatment which can be referred to as a "biological process", removes 85 percent or more of the organic matter in sewage when compared with Primary treatment according to www.pollutionissues.com (Advameg Inc). In order to purify or clarify the wastewater, there is a process called the "activated sludge" or "trickling filters" which help provide a mechanism for bacteria, with added oxygen to come in contact with the wastewater to purify it.

In the sludge process, flow from the sewer or primary clarifiers goes into a tank, called the aeration tank, where compressed air is mixed with sludge and is recycled from the secondary clarifiers. In a trickling filter the wastewater flows over a bed of stones where the purifying organisms grow and come in contact

TR Scholarship - Thelen, Continued on Page 16

IN 2018, ALL ROADS LEAD TO MINNEAPOLIS!

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ANNOUNCING THE

2018 ONSITE WASTEWATER MEGA-CONFERENCE

OCTOBER 21-24, 2018

Doubletree by Hilton Bloomington – Minneapolis South

Bloomington, MN

A partnership between NOWRA and MOWA (Minnesota Onsite Wastewater Association)

2018 Tony Ruppert Scholarship Fundraiser Auction!



The Tony Ruppert Memorial Scholarship Fund Silent Auction and Fundraiser has become an enduring tradition at MOWA's Annual Convention. MOWA members get to contribute to a worthy cause while remembering a good friend and colleague, with the added bonus of having more than one good-natured laugh.

This year's unofficial award for Most Surprised Gift Recipient goes to Ron Jaspersen, Willmar PreCast Co. (shown below opening and modelling his new holiday attire.)

This year's effort raised \$6,400 for the Tony Ruppert Scholarship Fund.

Ton Ruppert Scholarship Fund Vendor Sponsors were: Silver (\$250) - Hoot Systems; and Bronze (\$100) - Eljen Corporation, Granite Waterworks, RTVision and Wenck Associates, Inc.



Tony Ruppert Scholarship Fund Attendee Sponsors were: Platinum Plus Sponsors (\$500) - Willmar Precast and Ziegler; Silver Sponsors (\$100) - Fiedler's-Your Pumping Specialists, James Brothers Construction and Olson's Sewer Service & Olson's Excavating Service; and Gold Sponsors (\$50) - C.K. Excavating.

TR Scholarship - Thelen, Continued from Page 14

with the wastewater removing the contamination as it flows over the bed of stones.

Why is the quality of our water source so important? Water quality is essential to human life and the health of our environment. Water is a valuable natural resource that humans and marine life rely on. Our water resources are of major environmental, social and economic value. It is important not only to protect public health, it provides ecosystem habitats, used for fishing, mining, farming, contributes to tourism and recreation.

What affects the quality of our water? The water quality can be closely linked to the surrounding environment and the land used. Water is never pure and is affected by community use in agriculture, urban, industrial use and recreation. The weather too can have an affect on the water quality, for example a country like Australia which is a drier area is affected by the droughts.

In conclusion, we can improve our water quality by providing information to the public, developing environmental educational programs, develop pollution reduction programs, working with the community to tackle difficult water quality problems and working together with other government agencies to implement effective water quality. We can also play a role in maintaining our quality water source by polluting less, reserving water usage and keeping our environment clean. If we have a healthy clean

environment we can guarantee a healthy resource of water for our future generations.

Sources

Heritage, C. O. (2017, May 12). Water quality. Retrieved August 15, 2017, from <http://www.environment.nsw.gov.au/water/waterqual.htm>

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25/x25 Report, Continued from Page 1

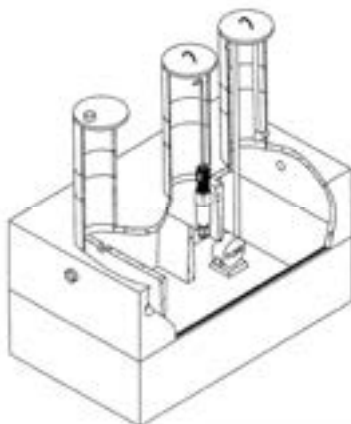
When releasing the report, the governor emphasized the need for his proposed \$1.54 billion bonding packaging, which includes money for water infrastructure and resources. See the governor's website for a full list of projects included his public works proposal.

This will be the final session for the two-term governor, who has made water quality a top issue of his time in office. The Legislature, which convened Feb. 20, must complete its work by May 21 this year.

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2018 OSTP Certification Course Descriptions and Offerings

Introduction to Onsite Systems (15 Direct Credits)

Fee: \$360 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 Minnesota.

Topics include:

- Treatment of wastewater
- Site evaluation
- Wastewater characteristics
- Soil treatment systems

10-3 Mankato - AmericInn 11/12-14/18 Deadline: 11/5/18

Installing Onsite Systems (12 Direct Credits)

Fee: \$265 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
- Tools for installing
- Construction practices
- Pipelayer certification

11-2-3 Mankato - AmericInn 11/15-16/18 Deadline: 11/8/18

Basic Design of Onsite Systems (21 Direct Credits)

Fee: \$440 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
- Tank design
- System design
- Pumps and pressure design

20-2 Grand Rapids - Sawmill Inn 4/17-20/18 Deadline: 4/10/18

Advanced Design & Inspection of Onsite Systems

(21 Direct Credits) Fee: \$440 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
- Nitrogen & phosphorus removal
- Groundwater mounding
- High strength waste

29-1 Alexandria - Douglas County Public Works Building 3/27-30/18 Deadline: 3/20/18

Inspecting Onsite Systems (12 Direct Credits)

Fee: \$265 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
- New system inspection
- Existing system inspection
- Tools and procedures

30-1 Alexandria - Douglas County Public Works Building 6/6-7/18 Deadline: 5/30/18

Maintaining Onsite Systems (15 Direct Credits)

Fee: \$310 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
- Record keeping
- Maintaining Type I SSTS
- Soil survey use

415-1 Alexandria - Douglas County Public Works Building 4/2-4/18 Deadline: 3/26/18

Service Provider (21 Direct Credits)

Fee: \$490 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 O&M
- Type IV O&M
- Collection system O&M
- System troubleshooting

49-1 Mankato - AmericInn 5/1-4/18 Deadline: 4/24/18

Soils (15 Direct Credits)

Fee: \$310 or \$475 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. This class does NOT meet the 6-hour soils continuing education requirement for all Designer and Inspector categories.

PREREQUISITE: Introduction to Onsite Systems

Topics include:

- Percolation testing
- Soil characteristics
- Field evaluations
- Soil survey use

515-1 Grand Rapids - Sawmill Inn 5/22-24/18 Deadline: 5/15/18
515-2 Faribault - Rice County Gov't Services Center 6/12-14/18 Deadline: 6/5/18

Installer Continuing Education (12 Direct Credits)

Fee: \$265 Exam: No

This 12-hour workshop will meet the continuing education requirements for any certification but is specifically tailored for Installers. All information will be provided from the perspective of a system installer.

Topics Include:

- Construction safety
- Keys to proper installation
- Pumps and dosing
- Rule change implications

69-3 Grand Rapids - Sawmill Inn 12/6-7/18 Deadline: 11/29/18

Maintainer Continuing Education (12 Direct Credits)

Fee: \$265 Exam: No

This 12-hour workshop is specifically designed as continuing education for those involved in maintaining septic systems.

Topics include:

- 503 regulations
- Troubleshooting
- System care
- Other establishments

46-1 St. Cloud - Moose Lodge 4/4-5/18 Deadline: 3/29/18

Enroll online: septic.umn.edu

2018 OSTP Continuing Education Course Descriptions and Offerings

General Continuing Education (12 Direct Credits)

Fee: \$265 Exam: No

This 12-hour workshop is designed to meet the continuing education requirement for SSTS professional registration. The topics will be varied to give a wide range of information for SSTS professionals.

Topics include:

- Rule change implications
- Pressure distribution
- Working on difficult sites
- MPCA update

60-3 Alexandria - Douglas County 11/6-7/18 Deadline: 10/30/18
Public Works Building

60-4 Mankato - AmeriCnn 12/11-12/18 Deadline: 12/4/18

Design/Inspector Continuing Education (12 Direct Credits)

Fee: \$265 Exam: No

This 12-hour workshop is designed to meet the continuing education requirement of SSTS professional holding a designer and/or inspector certification. The course will focus on design and inspection issues.

Topics include:

- Rule/policy updates
- Commercial systems
- How to add capacity
- Challenging inspections
- System design with new forms

82-1 Mankato - AmeriCnn 4/12-13/18 Deadline: 4/5/18

Payment is required to reserve a spot in any course.

**Confirmation with instructions will be
EMAILED along with a receipt.**

**Questions?
Call: 1-800-322-8642**

Soils Continuing Education (6 Soils-Specific Direct Credits)

Fee: \$240 or \$405 with Munsell Color Guide Exam: No

This 6-hour course couples classroom and field training to meet soils-specific MPCA continuing educational requirements for designers and inspectors. Munsell Color Guides are available for \$165 and Sand Cards for \$10.

Topics include:

- Regional geology and soils
- Local soil hydrology information
- Soils observations
- System siting and design

55-1 St. Cloud - Moose Lodge 5/15/18 Deadline: 5/7/18

55-2 Rushford - MiEnergy Co-op 6/19/18 Deadline: 6/12/18

55-3 Pine City - Pine County Courthouse 6/28/18 Deadline: 6/21/18

55-4 Fergus Falls - Otter Tail County Gov't Services Center 7/12/18 Deadline: 7/5/18

55-5 Grand Rapids - Sawmill Inn 7/24/18 Deadline: 7/17/18

55-6 Two Harbors - Superior Shores Resort 9/6/18 Deadline: 8/30/18

55-7 Waseca - Southern Research and Outreach Center 10/10/18 Deadline: 10/3/18

Design Field Day Continuing Education

(6 Direct Credits) Fee: \$150 Exam: No

This 6-hour workshop combines a classroom and field component to discuss the process of design. The course will review the requirements for designing a system and the required aspects to be submitted to the LGU. The field portion will be an evaluation of the soil characteristics and completion of the design report.

Topics include:

- Required design steps
- System loading
- Working with elevations
- Soil applications and concerns

63-1 Grand Rapids - Sawmill Inn 7/25/18 Deadline: 7/18/18

Enroll online: septic.umn.edu

Welcome to MOWA's Newest Members!

Our Mission... To promote the protection of human and environmental health through professionalism in Minnesota's onsite wastewater treatment industry.

MOWA strives to accomplish this through involvement in education, legislation, and government. We endeavor to develop and promote standards, products, and services reflecting our belief that our customers are best served by well-trained professionals who have the resources needed to thrive in a competitive marketplace, and who place a high value on protection of our natural resources.

Benefits of Membership

- ▶ Ability to influence state and national rules & policy
- ▶ Substantial business insurance savings
- ▶ Free directory & web site listings
- ▶ Connection with other onsite professionals
- ▶ Reliable information about the industry
- ▶ Reduced fees to MOWA events

The 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 inquiries should be sent to any of the following: MN Onsite Wastewater Association, MOWA, 5021 Vernon Ave, So., Suite 241, Edina, MN 55436 Phone: 612.801.5897 Fax: 952.487.4447 Website: www.mowa-mn.com

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2018 MOWA MEMBERSHIP APPLICATION

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 2018

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

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: _____ CVV: _____ Expiration Date: _____ Cardholder Name: _____
 Signature: _____ Date _____

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Note: Dues payable to MOWA are not deductible as a charitable contribution but may be deductible as an ordinary and necessary business expense. MOWA estimates that 10% of your MOWA dues are used for governmental affairs issues and therefore are not deductible.



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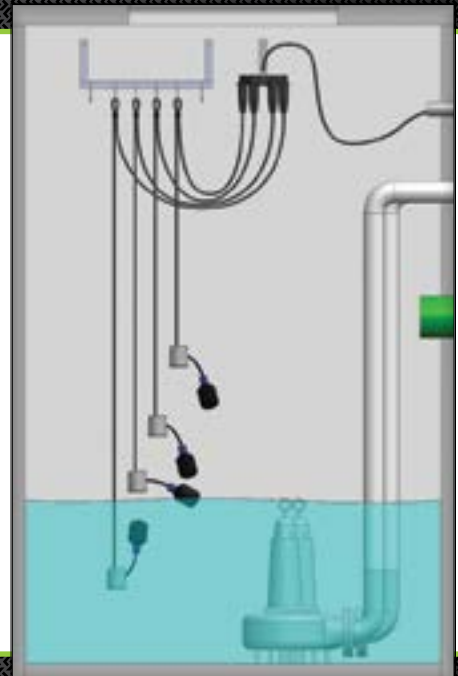
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- Up to 4 quick release floats
- Mounts directly in riser
- Great for new and retrofit applications
- Easy maintenance



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