Aerial view of Wisconsin Dells-Lake Delton Wastewater Treatment Plant

49th Annual W.W.O.A. Conference
October 6-9, 2015
Kalahari Resort, Wisconsin Dells
Host: Wisconsin Dells Wastewater Treatment Plant
The Clarifier is the publication of the Wisconsin Wastewater Operators’ Association and is intended to inform and educate the membership on issues related to the treatment and control of wastewater. The Clarifier is produced five (5) times each year: February, April, June, September, and December. All members are encouraged to contribute to the mission of the Clarifier.

The Wisconsin Wastewater Operators’ Association is a non-profit organization dedicated to educating, informing, and advancing the wastewater profession. WWOA has approximately 2,000 members divided throughout six regions: Southeast, Southern, Lake Michigan, North Central, Northwest, and West Central.
Presidents message: Heartfelt thanks to everyone

As I write my last Presidents message for the Clarifier, I look out at my gardens and reflect. Where did the past few months go?? It’s been such a pleasure being President; I want to express my heartfelt thanks to all of you and my employer, MSA Professional Services, Inc., for providing me this opportunity. Having a resourceful Board of Directors and Regional Directors, willing committee chairs and a dedicated Secretary make everything run smoothly and I know they will continue to better this great organization.

I have attended meetings in most of the regions and am impressed with the level of commitment and professionalism. All the regions continue to offer quality education and training to the membership.

The meetings are well organized and the food is always outstanding. I encourage each of you to consider getting involved in the WWOA, either at the regional or state level. It will truly be something rewarding that you never will regret being a part of.

Vice President Sharon Thieszen has put together another fine conference technical program with excellent training and networking opportunities for the upcoming annual conference. All of the conference information can be found in this issue of the Clarifier or on the WWOA.org website.

We will have a great exhibitor area again this year with over 130 booths already reserved. Please, take some time to visit the vendors, as they are a major supporter of the conference. On Thursday evening at the awards banquet of the conference I will be passing the President’s gavel to my friend and President-elect, Lyle Lutz. We will also bid farewell to Past President Kevin Freber. Thank you Kevin for all of the years of dedication to the WWOA. Next year I will join you in the ranks of Presidents of the Past.

I want to remind you that the operator certification credits are handled electronically and you must remember to scan in and out at the WWOA conference registration area daily to obtain credits. This includes the Wisconsin Dells/Lake Delton Wastewater Treatment Facility tour on Thursday afternoon.

I am excited that the annual conference is returning to the Kalahari in Wisconsin Dells. Having the conference take place centrally located in the state tends to draw members from all over making it one of the best-attended conferences. I look forward to seeing you there!

I hope you have had a great and memorable summer. Now, it’s time for me to go relax by the pool. 😊

Kelly

Don’t forget to register for the 49th Annual WWOA Conference
Wisconsin Dells - Lake Delton Wastewater Treatment Facility
By: Dan Greve, MSA Professional Services, Inc.

History and Background
The neighboring communities of Wisconsin Dells and Lake Delton encompass one of the most popular tourist destinations in the Midwest. The natural scenic beauty of the Upper and Lower Dells of the Wisconsin River has drawn people to the areas since the late 19th century.

Since the 1970s, the development of indoor and outdoor water parks, convention centers, shopping, restaurants and other attractions has added greatly to the popularity of the area, which now attracts over 3 million visitors annually. Tourism in “the Dells” is a $1 billion industry that supports over 15,000 jobs.

For many years the City of Wisconsin Dells and the Village of Lake Delton operated separate wastewater treatment facilities. By the early 1970s, growth in both communities and changes in environmental regulations threatened to render both wastewater treatment facilities obsolete.

Officials from the City of Wisconsin Dells and the Village of Lake Delton began cooperative efforts to address the wastewater treatment needs of both communities, which resulted in the formation of the Wisconsin Dells-Lake Delton Sewerage Commission. Planning, evaluation of alternative treatment facility locations and technologies, and final design required several years. The Wisconsin Dells-Lake Delton Wastewater Treatment Facility was constructed on the north side of the Wisconsin River in the City of Wisconsin Dells, and was placed into operation in 1981.

Since the original construction, the wastewater treatment facility has undergone several upgrades to meet more stringent discharge limits and to increase capacity to accommodate the increasing commercial development in the Dells-Delton area. The most recent facility upgrade was conducted in 2006-07 at a cost of nearly $12 million and addressed nearly every aspect of the treatment process.

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Description of Facility
The Wisconsin Dells-Lake Delton Sewerage Commission owns and operates a wastewater treatment facility to produce a treated effluent that is discharged to the Wisconsin River. The wastewater undergoes a combination of mechanical, biological and chemical treatment prior to discharge to the river. Biological solids (biosolids) produced in the treatment process are stabilized, dewatered and stored prior to being applied to local agricultural land for the nutrient value and as a soil conditioner.

The wide seasonal variation in wastewater flows create challenges that required unique solutions in the design of the facility and in the way that it is operated. Average wastewater flows and loadings during the peak summer tourist season are two to three times the average flows during the winter.

Preliminary Treatment
The wastewater from the City of Wisconsin Dells and the Village of Lake Delton is pumped to the Headworks Building of the wastewater treatment facility through separate force mains and then flows through the entire treatment facility by gravity. In the Headworks Building, the influent flow from each community is metered and sampled separately. Sampling is provided by automatic flow-proportional composite samplers, after which the wastewater is combined in a single channel. The initial treatment processes consist of screening and grit removal.

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from the wastewater. The material collected by the screen is mechanically washed and compacted and conveyed to a dumpster. The screenings are sent to a landfill for disposal. The wastewater flows from the screening channel through a 12-foot diameter vortex-type grit chamber where grit, sand and other heavier inorganic materials are removed. Similar to the screenings, the grit removed is mechanically washed and conveyed to a container for disposal at a landfill.

The treatment facility also includes a septage receiving station, which provides for controlled discharge of holding tank and septage wastes to the headworks of the plant. Trucked-in wastes are dumped through a bar rack to a 16,000-gallon buried concrete tank, from which the waste is pumped to the headworks by a submersible pump.

Secondary Treatment
From the Headworks Building, the wastewater flows to aeration basins for biological treatment. The aeration basins consist of a series of concrete basins where the extended aeration activated sludge process reduces the biochemical oxygen demand (BOD) and ammonia concentration in the waste stream.

The treatment facility includes an oxidation ditch consisting of three concentric channels and provided with surface mechanical mixing and aeration. The speed of the surface aerators/mixers is controlled by dissolved oxygen sensors and variable frequency drives. The 2006-07 upgrade of the treatment facility provided three additional aeration basins, consisting of a series of rectangular concrete tanks containing fine bubble diffusers. The newer aeration basins are immediately upstream of the oxidation ditch, and provide additional capacity for biological treatment. The

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<table>
<thead>
<tr>
<th>Grit Removal Efficiency Comparison</th>
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<tr>
<td>50 mesh grit (300 micron)</td>
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<tr>
<td>PISTA® 270™</td>
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<tr>
<td>Any 270° unit with OPTIFLOW 270™</td>
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treatment plant operators can also use the new aeration basins as selector tanks by adjusting the amount of oxygen present, to optimize conditions for biological uptake of phosphorus, or change the number of aeration basins in operation to adjust for the seasonal variations in wastewater flow to the facility.

From the oxidation ditch, the wastewater flows to a splitter box and then to four 60-foot diameter clarifiers. As with the aeration basins, the treatment plant operators can change the number of clarifiers in operation to adjust for seasonal variations in wastewater flow. The two clarifiers that are provided with aluminum covers are utilized in the winter to prevent ice problems. The settled biosolids are returned to the aeration basins at a rate proportional to the influent wastewater flow rate. To maintain the optimal concentration of microorganisms in the activated sludge process, a portion of the biosolids is automatically diverted to the aerobic digesters.

Facilities are also provided for the addition of alum, to improve the effectiveness of phosphorus removal by chemical precipitation. Alum can be added to the forward flow in the splitter box prior to the clarifiers, to the return

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activated sludge, or to the filtrate sidestream from the sludge belt filter presses.

Disinfection and Discharge
Following the clarifiers, the treated wastewater is recombined in a single channel and is sampled by an automatic flow-proportional composite sampler. The wastewater effluent then flows to the disinfection tank. Disinfection is required from May 1 through September 30 of each year, and is accomplished through the use of an ultraviolet light system consisting of an array of low-pressure, high intensity ultraviolet lights. Two ultraviolet light banks are provided, each with 5 modules and eight lamps per module, for a total of 80 lamps. The ultraviolet light disinfection system includes automatic lamp sleeve cleaning equipment.

From the disinfection tank, the wastewater effluent is metered and then flows by gravity to the Wisconsin River through a buried pipe with a submerged outfall.

Biosolids Handling and Disposal
Waste activated sludge is pumped to two aerobic digesters. In the aerobic digesters aeration is provided via coarse bubble diffusers to further stabilize the biosolids. The two digesters are aerated intermittently based on time, as adjusted by the treatment plant operators. The contents of the digesters are occasionally allowed to settle by gravity, and decant from the digesters is returned to the aeration basin to reduce the volume of biosolids that must be processed further.

The stabilized biosolids are pumped from the aerobic digesters to the Sludge Processing Building for dewatering. Polymer is added to the biosolids to promote the flocculation of solids and subsequent dewatering. Two belt filter presses are located in the Sludge Processing Building, and mechanically dewater the biosolids to a “cake” with 14 percent solids concentration. Depending on the season,
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weather, and availability of agricultural land, the dewatered biosolids can be conveyed from the belt filter presses directly into a truck for land application. Otherwise, the dewatered biosolids are conveyed into the adjacent Sludge Storage Buildings and stored until land application at a later date. The dewatered sludge storage capacity is sufficient to allow storage when the ground is frozen or snow covered, and during other times when it is not possible to land apply the biosolids.

During the summer, when wastewater flows and biosolids production rates are highest, sludge stabilization can also be achieved in a thickened sludge digester. In this process, partially stabilized biosolids can be thickened by one of the belt filter presses by utilizing only the gravity belt portion of the machine. The thickened sludge is then pumped to the thickened sludge digester. The advantage of the thickened sludge digester is that a larger mass of biosolids can be stabilized in a relatively small digester volume, which avoids the sludge processing from being limited by the volume of the two conventional aerobic digesters. After digestion, the thickened sludge is pumped back to the belt filter press to complete the sludge dewatering process.

Biosolids produced at the Wisconsin Dells-Lake Delton Wastewater Treatment Facility are land applied to agricultural lands in the area. The biosolids land application program is conducted by the treatment facility operators. A total of 449 acres is currently approved by the Wisconsin Department of Natural Resources for land application. The facility currently produces approximately 3600 cubic yards of dewatered biosolids per year for land application.

Emergency Power
The wastewater treatment facility is provided with a 1200 kW natural gas-fired emergency generator. The generator is capable of providing the entire power supply needs of the treatment facility.

Wastewater Flows and Treatment Performance
The Dells-Delton area has seen steady growth. As a result, since 1990 the average winter wastewater flows have tripled and summer flows have nearly doubled. The current annual average day wastewater flow to the Dells-Delton Wastewater Treatment Facility is 1.72 million gallons per day (mgd), and the annual average BOD loading is 3300 pounds per
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day. The wastewater flows are highly seasonal due to the tourism-based nature of the local economy. In 2014 wastewater flow rates ranged from an average of 1.20 mgd during November to 2.63 mgd during July. Approximately 70% of the flow and loadings is from the Village of Lake Delton and the remaining 30% is from the City of Wisconsin Dells.

During the Commission’s 2013-14 fiscal year the average effluent BOD and TSS concentrations were 3.7 mg/L and 3.6 mg/L respectively, and the average effluent phosphorus concentration was 0.17 mg/L.

Future Plans
Plans and specifications are currently being prepared for the addition of biosolids dryer equipment. The thermal dryer would produce a finished biosolids with a solids concentration of 90 percent and meeting the U.S. EPA and Wisconsin DNR designation of Class A biosolids. The drying process will reduce the volume of biosolids for disposal by 75 percent. The Class A biosolids will increase the availability of agricultural lands by reducing regulatory requirements and improving public acceptance, and will allow opportunities for other end uses of biosolids besides agricultural land application.

Facility Operation
The Wisconsin Dells-Lake Delton Wastewater Treatment Facility is operated by John Brown (Superintendent), Paul Gregerson, and Mitch Vinz.

REMEMBER
To receive CECs for attending the conference, those with a BARCODE on their badge must be sure to have it scanned at the WWOA conference registration office.

You will need to be scanned when you arrive and when you leave each day. Scanners will be located at the registration office.
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Beloit hosts Southern WWOA district meeting on May 14
By: Jon Karch

Location: La Casa Grande Banquet Area
As attendees were enjoying morning refreshments courtesy of Energenecs; Larry Arft, the Beloit City Manager, welcomed the operators and guests. This led into the Chair of the Southern District, Nate Tillis, introducing the first speaker of the day, Bill Marten of Donohue & Associates.

Bill Marten spoke on the topic of unexpected consequences resulting from bio-p, digestion and dewatering. He brought up a few case studies with trouble shooting topics such as: sludge stacking characteristics, poor dewatering, and low solids content vs. free water ratios. Often times, dewatered sludges with solids contents of 12-13% appeared dry, but water could not be squeezed out easily. The suspected causes can be related to soluble P concentrations of digested sludge, divalent cation bridging, and extracellular polymer substances. The research into these matters is ongoing with hopeful remedies to be presented at a future time.

Keeping with the topic of digestion; James Goldhardt of Ovivo-USA discussed new developments in digester mixing and biogas storage. James began by pointing out that proper mixing is absolutely necessary for good sludge digestion. This can be done mechanically, hydraulically, or by using gas. James introduced the LM mixing system which uses linear movement and a disk to create a roll pattern which aims to completely and efficiently mix the digester. The system is low maintenance and easy to use. With proper mixing comes increased gas production which led into the second portion of the presentation. Membrane gas storage was presented as a quick and economical means of storage. While they may not last as long as steel storage containers; membranes can be cheap, more easily customizable and have very high gas storage capabilities.

After a short break with refreshments from Energenecs; Mike Furst of INVENT Environmental Technologies

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talked about how aeration and mechanical mixers can be combined for energy savings. Mike used the case of the Rock River treatment plant in Rockford, IL. The plant treats approximately 40 MGD and its two centrifugal blowers used a total of 860 kW. Six high efficiency, gentle, hyperboloid shaped mixers were initially installed at the blower draw was reduced to 521 kW which dropped again to approximately 400 when the last two mixers were installed. The total mixer draw with all eight in service is 39 kW. The mixers also contributed to better settling in the clarifiers and reduced floc shear due to the slow and gentle movement of the mixers.

Patti Miller, a Beloit WPCF Environmental Specialist discussed public education and outreach programs. Patti started off by pointing out that wastewater employees take our knowledge for granted as the average person does not care until it directly affects them; for this reason, creating awareness is a very good goal. She showed a few different ways the information can be presented which included specific programs tailored to kids and families. In order to reach larger areas; radio spots and brochures can be used to help spread awareness. These can be combined with acknowledgement and incentives for the public’s effort and will increase the desire to become more aware of wastewater. Lastly, hands on displays and tours can also help give an up close and personal demonstration of wastewater treatment.

Following Patti we had the Southern District business meeting and WI-DNR update. During this time Harry Mathos recognized Emil Benz for his dedication and setting of the foundation for the Beloit treatment plant. The

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southern district is also looking for any award nominations, scholarship applications, and volunteers for the secretary position next year.

After lunch, Amy Garbe, a WI-DNR basin engineer, discussed wastewater inspections and what can be expected of them. Major plants need inspections every two years and minor plants need one every five years. Amy tries to visit all of the plants in her area every two years and these inspections have basically two parts: the paper work, and an inspection from the headworks to the outfall. In the future, additional parts which would include collection systems, lift stations, and biosolids might be added to plant inspections.

There is a checklist of conditions that need to be met for the permittee needs to remain in compliance with the discharge permit. Keeping up-to-date with paperwork includes having a preventive maintenance schedule, collection system maintenance, and land application records. Another important part of the inspection is building relations with operators, becoming familiar with WWTPs, and answering the questions of the operators at the plants.

The final talk of the day was by Harry Mathos, City of Beloit Water Resources Director. His presentation, “200 mg/L”, gave a history of the Beloit WPCF and how it was able to advance from an effluent that often reached 200 mg/L of solids, to a modernized facility which helped lead to the economic development of Beloit.

The treatment plant originally was located downtown, and had low resources and low funding. The plant was very basic and produced a lot of odors and a very poor effluent. This greatly affected Beloit and through a fair amount of political red-tape and big risks; the decision was made to fund an entirely new plant and allow the operators to run it. The risks were well worth it and the plant is successful and now produces a clean effluent.

Harry made it a clear point that Beloit would not be what it is today had the new plant not been built.

He ended the presentation with an introduction to the new plant; and the day ended with a tour of the facility.

December 2015 Clarifier Deadline is November 13
The WWOA Board of Directors cordially invites you to the 49th Annual WWOA Conference to be held October 6 to October 9, 2015. This year’s conference will be held at the Kalahari Resorts in Wisconsin Dells, WI. Anyone with a smart phone can download the Kalahari App to track the conference schedule and keep track of the technical sessions. You can go download the app from your smart phone’s app store, search for Kalahari Resort app. It is compatible with both iPhones and Android smart phones. WWOA activities kick off Tuesday morning with varied social activities: Golf Outing, Sporting Clays, and Bicycling. Then Tuesday afternoon, there are two Pre-Conference Workshops from 1:00 pm to 4:00 pm. The ever popular Rick Mealy and George Bowman duo will be presenting. Workshop No. 1, “What? BOD Again? The Thing That Won’t Go Away.” This workshop will focus on the solutions to the aspects of BOD testing that lab folks struggle with on a day to day basis. The session will also provide the knowledge that new operators/analysts will find invaluable. Workshop No. 2A, “Basic Electrical Troubleshooting with Digital Multimeter” by George Krause will provide an overview of the capabilities of a multimeter and will provide hands on training to participants. Thomas Jenkins will lead Workshop No. 2B, “How NOT to Conduct an Energy Evaluation.” This course will show operators and engineers common techniques used to evaluate energy conservation measures (ECMs) in water and wastewater treatment facilities.

Tuesday’s activities will conclude with the traditional Meet and Greet at 6:00 pm. This is an informal gathering of friends and colleagues featuring an open buffet of brats, burgers, and refreshments. Come rekindle old friendships and make new friends.

WWOA President, Kelly Zimmer, will officially kick off the conference on Wednesday morning at 9:00 am with the Welcome Address, followed by Keynote Speaker, Stuart Robertshaw (Dr. Humor). In 1987, Dr. Stuart Robertshaw, teacher, psychologist and attorney, read that “preschool children laugh or smile over 400 times per day, adults over the age of 35 - only 15 times per day.” That single quote started his personal journey to review scientific and medical research regarding the benefits of laughter and humor. Vendor exhibits will open Wednesday at 10:00 am and run through 5:00 pm and Thursday 8:00 am until 11:30 am. The Operator Competition take place on Wednesday from 12:30 pm to 4:30 pm. Get your teams together and registered by August 21, 2015 for this exciting and educational competition!

Concurrent Technical Sessions are scheduled for the mornings and afternoons on Wednesday and Thursday of the Conference. Thursday will include significant training opportunities for Phosphorus. Training opportunities for large and small system operators will be the primary focus throughout the Conference. Thursday will also include an opportunity to tour the Wisconsin Dells-Lake Delton Wastewater Treatment Facility from 1:30 pm—4:00 pm. The WWOA Operators Luncheon and Annual Business Meeting are scheduled for 12:00 pm. Thursday. Please note the cost to the luncheon has been reduced to $15.00 per person. This is our annual meeting and member participation is very important. In addition, WWOA will be giving away a 50” flat screen television to a WWOA member who registered for and is present at the business lunch. The Social Hour & Awards Banquet is scheduled for Thursday evening beginning at 6:00 p.m. We invite you to get involved in the organization and honor our fellow operators at the Awards Banquet. The Awards Banquet will once again close with social card and game playing with door prize and cash giveaways. The Conference will conclude Friday morning with the Farewell Breakfast and Closing Speaker, Dr. Leon Downing. Dr. Downing will present “Moving Towards Resource Recovery Facilities: Embracing the NEW Paradigm.”

The WWOA Board of Directors decided not to have a separate Guest Program this year due to declining participation and the multiple activities available at the resort.

PRE-REGISTRATION IS STRONGLY ENCOURAGED! On-line registration with credit card payment is available at www.wwoa.org. On behalf of the Board of Directors, Technical Program, and Local Arrangements Committees, we hope to see you this fall.
## WWOA TECHNICAL PROGRAM SCHEDULE

**Welcome Address – Kelly Zimmer and Keynote Speaker - Stuart Robertshaw (Dr. Humor)**

9:00 am - Rooms A / H

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<th>Session B: Instrumentation</th>
<th>Session C: Case Studies</th>
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<tr>
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<td>Bernie Robertson</td>
<td>Jeff Smudde</td>
<td>Kelly Zimmer</td>
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<tr>
<td>Room:</td>
<td>Tamboti / Aloeswood</td>
<td>Marula / Aralia</td>
<td>Guava / Tamarind</td>
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<tr>
<td>10:45-11:20 am</td>
<td>Energy Saving Opportunities &amp; Focus on Energy Incentives</td>
<td>Radar Level Measurement for the Wastewater Industry</td>
<td>Cumberland WWTP Upgrades - From Phosphorus Trading to Membrane Bioreactor</td>
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<td>11:25-12:00 pm</td>
<td>Power Load Profiling &amp; Energy Dashboards at Water Reclamation Facility</td>
<td>Your Bugs Are Doing Better Than You Think</td>
<td>Design and Construction of an MBBR System</td>
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**Walk Around Lunch - North Hallway Noon - 1:30 pm**

**Operators Competition - Rooms B / G 12:30 pm - 4:30 pm CECs 6 hours Wastewater**

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<th>TIME</th>
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<th>Session E: SCADA, Communication, &amp; WPDES Permit Review</th>
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<td>Moderator:</td>
<td>Bruce Bartel</td>
<td>Nate Tillis</td>
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<td>Room:</td>
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<td>Marula / Aralia</td>
<td>Guava / Tamarind</td>
</tr>
<tr>
<td>1:30 - 2:00 pm</td>
<td>Use of Compressed Gas for Cost-Effective Mixing &amp; Biological Nutrient Removal (BNR)</td>
<td>Can you hear me now?</td>
<td>Biosolids Dewatering Equipment Comparisons</td>
</tr>
<tr>
<td>2:05 - 2:40 pm</td>
<td>Mixing Guidelines for Biological Nutrient Removal</td>
<td>SCADA Upgrade-O-Rama - A Review of Key Components &amp; Options for SCADA System Upgrades</td>
<td>Maximizing Polymer Value in Sludge Dewatering</td>
</tr>
</tbody>
</table>

**Break in Exhibit Area 2:40 pm - 2:55 pm**

---

<table>
<thead>
<tr>
<th>TIME</th>
<th>How to Reduce the Operating Cost of Your Wastewater Treatment Plant: A Case Study which shows the Benefits of Intermittent Large Bubble Mixing with Aeration</th>
<th>Fiber &amp; Cellular &amp; Radio. Oh My!</th>
<th>Low Cost Improvements to Maximize Wet Weather Capacity - A Superior Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:55 - 3:25 pm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3:30 - 4:00 pm</td>
<td>Energy Savings by Combining Mixers and Aeration</td>
<td>Making the Most of Your Reissued WPDES Permit</td>
<td>Troubleshooting Activated Sludge Systems</td>
</tr>
</tbody>
</table>

---

**Social Hour - Rooms A / B / G / H 4:00 pm - 5:00 pm**
<table>
<thead>
<tr>
<th>TIME</th>
<th>Session G: Phosphorus</th>
<th>Session H: Anaerobic Digestion</th>
<th>Session I: Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Moderator: Jim Johnson</td>
<td>Moderator: Rusty Schroedel</td>
<td>Moderator: Rick Mealy</td>
</tr>
<tr>
<td></td>
<td>Room: Tamboti / Aloeswood</td>
<td>Room: Marula / Aralia</td>
<td>Room: Guava / Tamarind</td>
</tr>
<tr>
<td>8:00 – 8:45 am</td>
<td>Biological Nutrient Removal Leads to Energy Savings</td>
<td>Kankakee River Metropolitan Agency - Digester Improvements</td>
<td>3D Laser Scanning the Jones Island Water Reclamation Facility</td>
</tr>
</tbody>
</table>

Break in exhibit area 9:35am to 10:00am

<table>
<thead>
<tr>
<th>TIME</th>
<th>Session J: Phosphorus</th>
<th>Session K: Anaerobic Digestion</th>
<th>Session L: Poop-er-ee</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Moderator: Jeff Bratz</td>
<td>Moderator: Tom Fitzwilliams</td>
<td>Moderator: Randy Herwig</td>
</tr>
<tr>
<td></td>
<td>Room: Tamboti / Aloeswood</td>
<td>Room: Marula / Aralia</td>
<td>Room: Guava / Tamarind</td>
</tr>
<tr>
<td>10:00 - 10:50 am</td>
<td>Low Level Phosphorus Removal - Facts &amp; Figures</td>
<td>Anaerobic Digester Rehab: Real World Trials &amp; Tribulations</td>
<td>Make your lab like your phone . . . SMART</td>
</tr>
<tr>
<td>10:55 - 11:45 am</td>
<td>Biological Nutrient Removal Challenges at Small Wastewater Plants - Ellsworth, WI</td>
<td>Waste Not Want Not, Maximizing High Strength Waste Addition</td>
<td>City of Lodi Adaptive Management Plan</td>
</tr>
</tbody>
</table>

Operators’ Luncheon - Rooms A / B / G / H, Noon  Business Meeting - Rooms A / B / G / H, 12:30 pm

<table>
<thead>
<tr>
<th>TIME</th>
<th>Session M: Phosphorus</th>
<th>Session N: Collection Systems</th>
<th>Session O: Operator Technology</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Moderator: Kevin Freber/Tom Mulcahy</td>
<td>Moderator: Don Lintner</td>
<td>Moderator: Troy Larson</td>
</tr>
<tr>
<td></td>
<td>Room: Tamboti / Aloeswood</td>
<td>Room: Marula / Aralia</td>
<td>Room: Mangrove</td>
</tr>
<tr>
<td>2:20 - 3:05 pm</td>
<td>Maximize Oxidation Ditch Bio-P Performance</td>
<td>Force Main Condition Assessment, Corrosion, &amp; Repair</td>
<td>Maintaining Proper Servicing and Disposal Records - Part 1</td>
</tr>
<tr>
<td>3:15 - 4:00 pm</td>
<td>Upgrading Lagoons to Remove Ammonia, Nitrogen, and Phosphorus</td>
<td>CMOM Case History Kiel Wisconsin</td>
<td>Maintaining Proper Servicing and Disposal Records - Part 2</td>
</tr>
</tbody>
</table>

Social Hour 6:00 pm, Rooms A / B / G / H  Awards Banquet / Entertainment 7:00 pm, Rooms 3-6
CURRENT YEAR NAME BADGE REQUIRED FOR ADMISSION TO ALL CONFERENCE FUNCTIONS.

WWOA Conference Oct. 6-9 Kalahari Resort
Fee Schedule

<table>
<thead>
<tr>
<th>President</th>
<th>Kelly Zimmer</th>
<th>Director (2015)</th>
<th>Jeff Bratz</th>
</tr>
</thead>
<tbody>
<tr>
<td>President Elect</td>
<td>Lyle Lutz</td>
<td>Director (2015)</td>
<td>Jeff Simpson</td>
</tr>
<tr>
<td>Vice President</td>
<td>Sharon Thieszen</td>
<td>Director (2015)</td>
<td>Jeff Smudde</td>
</tr>
<tr>
<td>Past President</td>
<td>Kevin L. Freber</td>
<td>Director (2016)</td>
<td>Don Lintner</td>
</tr>
<tr>
<td>Executive Secretary</td>
<td>Karen Harter</td>
<td>Director (2016)</td>
<td>Jim Johnson</td>
</tr>
</tbody>
</table>

Pre-Registration: (On or before September 19, 2015)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>WWOA Member</td>
<td>$100.00</td>
</tr>
<tr>
<td>Non-Member</td>
<td>$155.00</td>
</tr>
<tr>
<td>Non-Member with Membership Offer</td>
<td>$150.00</td>
</tr>
<tr>
<td>Student, Retiree</td>
<td>$55.00</td>
</tr>
</tbody>
</table>

On-Site: (After September 19, 2015)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Member</td>
<td>$160.00</td>
</tr>
<tr>
<td>Non-Member</td>
<td>$215.00</td>
</tr>
<tr>
<td>Student, Retiree</td>
<td>$70.00</td>
</tr>
</tbody>
</table>
**2015 WWOA BICYCLE RIDE AND LUNCHEON**

**2015 WWOA BICYCLE RIDE REGISTRATION FORM**

**Ride on “400” State Trail**
Start/Finish 240 Railroad St. Reedsburg WI 53959
Ride contact’s phone: 920-266-5246

Lunch at Corner Pub
100 E Main Street, Reedsburg WI 53959

Date: Tuesday, October 6, 2015

Time: 10:00 a.m. Rider Meeting & Start Leisurely Ride
15 miles out, 15 miles back (30 miles total)

Cost: WWOA Members, Manufacturers, Engineers,
Suppliers and Conference Attendees – $30.00

Cost Includes: Snacks and drinks along 400 State Trail,
door prizes, meal and drinks after ride at:
Corner Pub, 100 E Main Street, Reedsburg, WI

Payment must be received no later than

No refunds after September 12, 2015. Bike ride is “rain or
shine.” Secure bicycle storage available in Kalahari Resort.

Decorate your bike in a wastewater utility vehicle theme after the
ride and display at conference. Mystery prize awarded to winner.

Waiver: In consideration of the registering for this event, I do hereby
waive and release the Wisconsin Wastewater Operator's Association and
all persons and agencies connected with the WWOA from all claims for
damages arising from my participation in and travel to and from this
event.

| Name: ________________________________ |
| Address: ________________________________ |
| City: ________________________________ |
| State/Zip: ________________________________ |
| Email address: ________________________________ |
| $30: ________________________________ |
| Bike storage: ________________________________ |

Register online with a credit card or make check payable to
WWOA.
Mail registration card and fee to:
Karen Harter, WWOA Executive Secretary
PO Box 451, Baraboo WI 53913

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800-876-8478 www.visu-sewer.com
2015 WWOA GOLF OUTING

Reedsburg Country Club, 3003 E. Main St., Reedsburg, WI 53959, 608-524-6000

Date: Tuesday, October 6, 2015
Time: 9 a.m. practice with free range balls
      10 a.m. “Shotgun Start”
Type: 18 Hole Scramble Format
Prizes: Flag prizes
Cost: $60 WWOA Members, Manufacturers, Engineers, Suppliers and Conference Attendees

Includes: ½ motorized cart, 18 holes golf, box lunch. Snacks provided and cash bar during award/prize drawing in club house.

Payment must be received no later than September 19, 2015 with names of foursome or individuals. (Committee will assign if not in foursome).

First 84 registered golfers by name get a WWOA souvenir golf ball.

No refunds after September 12, 2015 unless course is closed by decision of club management. Day of event, rain checks would be issued for play, accepted through 2015 season. Appropriate golf attire required.

2015 WWOA GOLF OUTING REGISTRATION FORM

Name: ______________________________________

Address: ____________________________________

City: ________________________________________

State/Zip: ___________________________________

Email: _____________________________________

Part of a Foursome? Yes No

Others in My Foursome:

___________________________________________

___________________________________________

___________________________________________

# paid _______ X $60 each

Register online with a credit card or make check payable to WWOA.

Mail registration card and fee to:
Karen Harter, WWOA Executive Secretary
PO Box 451, Baraboo WI 53913

Waiver: In consideration of the registering for this event, I do hereby waive and release the Wisconsin Wastewater Operators' Association and all persons and agencies connected with the WWOA from all claims for damages arising from my participation in and travel to and from this event.
2015 WWOA SPORTING CLAYS

Woods & Meadow N4335 Potter Road, Warrens WI 54666
262-955-9090

Date: Tuesday, October 6, 2015
Time: 10:00 A.M. “Shot Gun Start”
Prizes: 1st, 2nd, & 3rd place team, Best Individual Score
Cost: $40 WWOA Members, Manufacturers, Engineers, Suppliers, and Conference Attendees

Includes: 10 station/50 target shoot, (you may bring your own shells or purchase at Woods & Meadow), scorecards, lunch served during awards/prize drawing. Cash Bar after shoot!

Payment must be received no later than Sept. 19, 2015 with names of foursome or individuals. (Committee will assign if not in foursome).

Please RSVP early as we are limited to 80 participants. No refunds after Sept. 12, 2015 unless course is closed by decision of club management.

---

2015 SPORTING CLAYS
REGISTRATION FORM

Name: ________________________________

Address: ________________________________

City: ________________________________

State/Zip: ________________________________

Email: ________________________________

Part of a Three/Foursome? Yes No

Others in My Group:

# paid _______ X $40 each

Register online with a credit card or make check payable to WWOA.

Mail registration card and fee to:
Karen Harter
WWOA Executive Secretary
PO Box 451
Baraboo WI 53913

Waiver: In consideration of the registering for this event, I do hereby waive and release the Wisconsin Wastewater Operators’ Association and all persons and agencies connected with the WWOA from all claims for damages arising from my participation in and travel to and from this event.

---

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Hawkins Water Treatment Group

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612-331-6910

Eldridge, IA
563-285-6234

Fond du Lac, WI
920-923-1850

Superior, WI
715-392-5121
Pre-Conference Workshops
Tues., Oct. 6, 1 to 4 p.m.
Registration Form

Name: ________________________________
Address: ______________________________
City: _________________________________
State/Zip: _____________________________
Phone: _______________________________
Employer: _____________________________
DNR#: _______________________________
Workshop #: ___________________________

Cost: $25 Pre-Registration  
$30 On-Site  
No refunds issued after Sept. 12, 2015  
Includes refreshments between workshops  
DNR credit hours available for full 1 to 4 p.m. workshop attendance.

Register online with a credit card or make check payable to WWOA.

Mail registration card and check to  
Karen Harter, WWOA Executive Secretary  
PO Box 451  
Baraboo WI 53913
**Credit Card Information:**

<table>
<thead>
<tr>
<th>Card Type</th>
<th>Name on Card</th>
<th>Card No.</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>VISA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MasterCard</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discover</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Circle one of the above)

Don’t forget to include your WDNR Certification # if you require CEC’s for attending the WWOA Conference. We will be scanning barcodes on conference badges for CEC attendance verification. CEC’s will be given for wastewater, septage, and water.

We will also be giving PDH certificates for those PE’s that require them. You will have to check in at the Registration Office at the Conference in order to receive them.

---

**WWOA 49th Annual Conference Registration**

October 6 - 9, 2015 – Wisconsin Dells, WI

Registration Form *(fill out one registration form for each person attending)*

Name (Last, First, M.I.) __________________________ Email Address: __________________________

Employer/Firm Name (if Manufacturer or Consultant): __________________________

Mailing Address: __________________________

Phone: __________________________ Position/Title: __________________________ WDNR Certification # __________

Regional Affiliation: SE NW SO LM NC WC

Member Affiliation: Municipal Consultant Industrial Operator Manufacturer/Sales Educator Septage Operator DNR/EPA Student

2015-2016 Directory: circle one: Hard Copy ($15.00) or USB Drive ($15.00) $ 15.00

**Pre-Registration (On or Before September 19, 2015)**

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>WWOA Member</td>
<td>$100.00</td>
</tr>
<tr>
<td>Non-Member</td>
<td>$155.00</td>
</tr>
<tr>
<td>Non-Member plus WWOA Membership (see form following page)</td>
<td>$150.00</td>
</tr>
<tr>
<td>Retiree (Must be at least 60 years old &amp; retired from wastewater industry)</td>
<td>$55.00</td>
</tr>
<tr>
<td>Student (Must send copy of valid student ID)</td>
<td>$55.00</td>
</tr>
</tbody>
</table>

**On-Site Registration (After September 19, 2015)**

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>WWOA Member</td>
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</tr>
<tr>
<td>Non-Member</td>
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</tr>
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<td>Retiree (Must be at least 60 years old &amp; retired from wastewater industry)</td>
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</tr>
<tr>
<td>Student (Must provide copy of valid student ID)</td>
<td>$70.00</td>
</tr>
</tbody>
</table>

**Additional Functions**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operators Business Lunch <em>(Rosemary Roasted Turkey)</em></td>
<td>$15.00</td>
</tr>
<tr>
<td>Awards Banquet</td>
<td>$30.00</td>
</tr>
</tbody>
</table>

**Circle Meal Choice:** Roasted Top Sirloin - North Atlantic Haddock Polonaise - Ivory Pork Tenderloin

**Farewell Breakfast** *(Included in registration; Please note no. of tickets needed)*

<table>
<thead>
<tr>
<th>Event</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Hour - Thursday</td>
<td>No Charge</td>
</tr>
<tr>
<td>Pre-Conference Workshop <em>(Please include separate registration form)</em></td>
<td>$</td>
</tr>
<tr>
<td>Sporting Clays <em>(Please include separate registration form)</em></td>
<td>$</td>
</tr>
<tr>
<td>Golf Outing <em>(Please include separate registration form)</em></td>
<td>$</td>
</tr>
<tr>
<td>Bicycle Outing <em>(Please include separate registration form)</em></td>
<td>$</td>
</tr>
<tr>
<td>Meet &amp; Greet - Tuesday <em>(Please check if planning to attend - No Charge)</em></td>
<td>$</td>
</tr>
</tbody>
</table>

**WWOA Dues – Two Years Renewal (If Applicable)**

<table>
<thead>
<tr>
<th>Membership Type</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>$50 regular Membership</td>
<td>$</td>
</tr>
<tr>
<td>$40 Lifetime Members</td>
<td>$</td>
</tr>
</tbody>
</table>

Total Enclosed $
Manufacturers & Consultants Registration

**Sponsorship Fee (In Addition to Conference Registration)** $125.00

All manufacturing, Consultant Firms, Sales Firms, Exhibitors, and Contract Operation Firms *NOT exhibiting at the Annual Conference* must pay the Sponsorship Fee (*one fee per firm*).

**Exhibit Fee (Sponsorship Fee Included)**

- **On or Before June 30, 2015 – 8’ x 10’**
  (One conference registration fee included) $425.00

- **After June 30, 2015 – 8’ x 10’**
  (One conference registration fee included) $625.00

*NO REFUNDS WILL BE ISSUED AFTER SEPTEMBER 12, 2015*

**New Membership Option (Registration/Membership Package)**

This package is available to non-members only and is available through pre-registration only.

Package includes: Conference registration and a two-year membership in WWOA for **$150.00**. You must fill out the Membership Application section AND the Conference Registration section. Take advantage of this opportunity to add a WWOA Membership – save $5.00 when compared to non-membership registration and save on registration for next year.

**New Membership Application Form**

Name (Last, First, M.I.): ________________________________

Email Address: ____________________________________________

Employer: __________________________ Company Name: __________________________

Mailing Address: __________________________

Phone: __________________ Position/Title: __________________ WDNR Certification # _________

Regional Affiliation: SE    NW    Southern    LM    NC    WC

Member Affiliation: Municipal    Consultant    Industrial Operator    Manufacturer/Sales

            Educator    Septage Operator    DNR/EPA    Student

This applicant is recommended by:

Member Name: ________________________________

City: __________________________ State: _____

Send Membership Application along with Conference Registration

Enter credit card information in box at top of registration form.

Make checks payable to: WWOA

On-line registration available at [www.wwoa.org](http://www.wwoa.org)

Mail registration form(s) and fees to:

Karen Harter
WWOA Executive Secretary
PO Box 451
Baraboo, WI 53913-0451

**VOL. 212, SEPTEMBER 2015**  The Clarifier
WDNR Continuing Educational Credits (CEC) Procedures –
WWOA Conference

As everyone should be aware of by now, the WDNR implemented a new electronic CEC tracking system. In order for those WWOA Conference attendees to receive their required CECs the following program will be in place for this year’s conference. It is imperative that everyone that has a DNR Operators Certification Number included on their registration (no matter how they register – either on-line or by mail in registration form). If you do NOT know your number, you can find it by going to the DNR website and look it up: http://dnr.wi.gov/elcpublic/optcertlookup.aspx?pg=opcert. You can find your number and training history here. All of the Certified Operators in attendance will have a special barcode, based on their DNR Operator number, added to their badge for scanning purposes. They will be the only attendees with Barcodes.

In order to receive CECs for the Conference, everyone with a BARCODE on their badge will have to scan in and out on Wednesday and Thursday. All barcode scanning will be done at the WWOA Conference Registration Office. We will have special lines set up for scanning purposes. Everyone going on the plant tours will have to return to the KI Center and scan out in order to receive the CECs for that day and for the tour(s). If you plan on attending the Farwell Breakfast Speaker on Friday, you only need to scan out on Friday to receive that session’s CEC hour. NOTE: We will only scan one badge per person. You must bring your own badge to the Registration office for scanning. We will NOT scan multiple badges presented by one person.

The WWOA Registration Office will be open the following hours during the convention:

<table>
<thead>
<tr>
<th>Date</th>
<th>Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuesday, October 6, 2015</td>
<td>2:00 pm to 4:00 pm (pick up registration packets only)</td>
</tr>
</tbody>
</table>

**Exhibitor/Vendor** packets will be available in their booths starting on Tuesday afternoon. However, any Exhibitor/Vendor that has a barcode on their badge will have to pick up their badge at the Registration Office.

<table>
<thead>
<tr>
<th>Date</th>
<th>Times</th>
</tr>
</thead>
</table>
| Wednesday, October 7, 2015 | 7:00 am to 5:00 pm  
Pick up Registration Packets  
Scan In and Out for CEC Hours |
| Thursday, October 8, 2015 | 7:00 am to 5:30 pm  
Pick up Registration Packets  
Scan In and Out for CEC Hours |

**DO NOT FORGET TO SCAN OUT AFTER THE TOUR**

<table>
<thead>
<tr>
<th>Date</th>
<th>Times</th>
</tr>
</thead>
</table>
| Friday, October 9, 2015 | 7:00 am to Noon  
Scan Out for CEC Hours |

Everyone that signed up for the **Pre-Conference Seminars**, check in and check out will be handled in the hallway outside of the **Tamboti/Aloeswood** and **Marula/Aralia rooms**. **Operator’s Competition** will be handled separately.

Every participant will receive CEC’s based upon their scan in and out times. If you scan out early, you will only receive CECs for the time that you are in attendance at the WWOA Conference. There will be signs placed throughout the facilities reminding everyone to scan in and out. Ultimately, this will be the responsibility of each attendee to do.

Everyone that requires **Professional Development Hours (PDHs)**, please check in at the Registration Office.
Room guide for 50th WWOA conference at the Kalahari
2015 Conference Committees

Technical Program: Chair: Sharon Thieszen
Lyle Lutz          Kelly Zimmer          Tom Kruzick          Kevin Freber          Tom Mulchay
Jeff Bratz        Randy Herwig        Jake Becken         Jeff Smudde          Bernie Robertson
Jeff Simpson      Karen Harter         Eric Lynne           Don Lintner          Troy Larson
Rick Mealy        Randy Thater

Exhibit &Manufacturers & Consultants Committee:
Chair: Tom Mulcahy, Co-Chair: Carol Strackbein, Kevin Freber, Dave Dodge

CURRENT YEAR NAME BADGE REQUIRED FOR ADMISSION TO ALL CONFERENCE FUNCTIONS.

Future Annual Conference Dates

2016 LaCrosse, Oct. 11 - 14
2017 Middleton – Madison Marriott West Oct. 16 - 20

NUTRIENT REMOVAL

OPTIMIZATION

EFFICIENCY

REHABILITATION

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Operators competition is approaching! Register teams now!

Some of you Competition Competitors have heard the call of the wild and turned in your applications. I have a verbal commitment from five teams and possibly a sixth. Get those Competition registration forms in.

Tell your Region President to get out the checkbook. It’s time to start practicing. I hope by the time you get this issue, all of the teams have registered. If not, give me a call and we will see if you can squeeze in under the wire.

The Deuce is Loose! Southern Region is gearing up for the repeat. Show them they aren’t the only team that can win this competition.

We will be offering four events to the competitors again this year. We are hosting the same events that we had last year: the lab event and those pesky BODs, maintenance event with another seal failure, process control event because I don’t know why there is foam on the plant, and the most popular event in our competition, the collection system event.

In the collection system repair event; each team is to cut and replace a broken section of PVC pipe. By the way, you will also have to add a lateral connection to the repaired pipe.

Everyone will tell you how much fun it is. I would like to have all entries for the event in by our WWOA Board of Directors meeting on August 13, 2015. Again, entries are available on our WWOA website. If you are interested, don’t hesitate to call a couple of buddies and enter the event.

Contact Jeff Bratz, Competition Coordinator at, 262-206-1323 or email me at wrcsd@tds.net and I will get your team in, but don’t wait too long, preparation for the competition is already under way.

We move water.

Full Service Process Control Integration and Service Expertise for Fresh Water and Wastewater Treatment Plants

- Aeration
- Alarm Systems
- Calibrations
- Chemical Feed Systems
- Controls
- Cross Connections
- Instrumentation Devices
- Level Measurement
- Lift Stations
- Process Equipment
- Pumps/Rotary Equipment
- Remote Monitoring
- SCADA/Telemetry Panels

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- Removal of existing lift station
- Bypass pumping
- New pumps/pipes/valves
- New controls
- Start-up / Training
- Local subcontractors

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ARE YOU GETTING THE MOST FROM YOUR LIFT STATION?
Wisconsin Department of Natural Resources

Wastewater Operator Study Guides and Exam Schedule (2015-2017)

Given the significant time and effort needed to revise study guides according to the new subclasses that became effective July 1, 2015 under Wisc. Adm. Code NR 114, study guides will be released and available in phases as given below. Only exams for which study guides are available will be given on the exam date. Note: These are tentative dates.

For questions about the study guides and their availability, contact Jack Saltes, Wastewater Operations Engineer at Jack.Saltes@Wisconsin.gov or 608-264-6045.

Expand your phosphorus options!

Madison MSD will soon be utilizing struvite harvesting to lower its operating costs and recover this valuable resource.

Contact Bill Ericson at (262) 784-7690 or waericson@ati-ae.com to discuss this groundbreaking project!

Available now
- Basic General Wastewater [PDF]
- A1 - Biological Treatment - Suspended Growth Processes [PDF]
- A3 - Biological Treatment - Recirculating Media Filters [PDF]

Available by September 1, 2015 (for November 2015 exam date)
- A4 - Ponds, Lagoons and Natural Systems
- D - Disinfection
- L - Laboratory
- P - Nutrient Removal - Total Phosphorus
- Advanced Wastewater 100 Question Exam

Available by February 1, 2016 (for May 2016 exam date)
- A2 - Biological Treatment - Attached Growth Processes
- B - Solids Separation
- C - Biological Solids/Sludge - Handling, Processing and Reuse
- U - Unique Treatment Systems

Available by February 1, 2017 (for May 2017 exam date)
- N - Nutrient Removal - Total Nitrogen
- A5 - Anaerobic Treatment of Liquid Waste

Available by August 1, 2017 (for November 2017 exam date)
- Sanitary Sewer Collection System
The Clarifier needs you, your stories, your opinions

Do you have something to say?  
Have you solved a unique problem at your plant?  
Won recognition for a job well done?  
Hired someone new?  
Wish to share your opinion on an issue?  
How about telling us about in the Clarifier?

The front cover of every issue includes the following statement:

“The Clarifier is the publication of the Wisconsin Wastewater Operator’s Association and is intended to inform and educate the membership on issues related to the treatment and control of wastewater. All members are encouraged to contribute to the mission of the Clarifier.”

Submitting an article can be as easy as mailing a letter or sending an email. Perhaps you are not a typist or do not have access to a computer? No problem, just write your thoughts down on a piece of paper and we will do the rest.

Experts through Experience

In the last 10 years, Ahern has completed more than

**665 wastewater treatment plant projects**

in Wisconsin, ranging from $100 to more than $20 million.
MOUNT PLEASANT - Stanley Budrys, 91, left his earthly life on June 28, 2015, and was joyfully reunited with his family that was separated in 1941 when they were deported to Siberia. He was born in Kybartai, Lithuania, on June 9, 1924, the son of the late Ceslovas and Hedwig (nee Ilenda) Budrevicius.

As a child Stan would help his father at the pharmacy, acquiring skills which he used later in life. When he was 16, Stan wrote a poem making fun of the Communist Government, was arrested and put in jail. His family was deported that same week to Siberia. He escaped from jail and moved in with his uncle. He had an opportunity to flee on the German ship Wilhelm Gustloff. The Russians torpedoed that ship on Jan. 30, 1945, taking as many as 9,400 lives, the greatest maritime disaster on record today.

At the age of 25, he was sponsored by a Racine native and immigrated to the United States where he became a faithful and active member of St Casimir’s Church and met and married his love, Ann Shepikas in 1950. He was first employed at Belle City Malleable. In 1953 he took a job for the City of Racine where he worked for 41 years as a chemist and then as the superintendent at The Racine Wastewater Treatment Plant. If you wanted a stiff cup of coffee and a piece of kringle you just had to stop and see Stan!

He served on the Board of Directors, of the Wisconsin Wastewater Operators Association from 1973 - 1979, serving as President in 1977 - 1978. He received the George F Bernauer in 1979, one of the highest awards given to a WWOA member.

Stan was a member of the Water Environment Federation (WEF). He attended many conventions, remembering the 1989 earthquake in San Francisco while attending a WEF convention. He also belonged to the Holy Name Society, the Knights of Columbus, and the City of Racine 20 Year Club.

He was proud of his Lithuanian heritage and helped to further political freedom of his homeland. He loved to share stories of his youth in Europe, his escape from Communist oppression and the desire to come to America for a better life.

Along with his enthusiasm for life, his appreciation of freedom, and strong work ethic, Stan enjoyed World War II history, opera music, photography, aviation, and keeping up with current events. He loved to dance the polka, enjoyed coffee with friends and if they serve dessert in heaven, he will be the first in line.

Above all, Stan knew and treasured the true value of family and friends and cherished every moment together with them. His legacy of love, generosity and kindness will be remembered by those who knew him.

Surviving are his devoted wife of 64 years, Ann; his loving daughter, Ruth (Joseph) Mandala; cherished grandchildren, Paul (Kristy) Mandala and Lisa (William) Cummings; and precious great-grandchildren, Noah, Jake, Luke, Evan, Dominic and Alexander.

Further survived by sister-in-law, Fatima Budrevicius; nephew, Edwardas Budrevicius; niece, Marija Burinskas, and their families in Lithuania; cousin, Victor (Janice) Ilenda, along with other dear relatives and many friends. In addition to his parents, he was preceded in death by his brothers, Edwardas, Vytautas and Paul.
Moraine Park Water Quality Technology Courses

Hello Everyone,

I hope all of you have had a great summer and this email finds you in good health. To all those passing their exams this last cycle, congratulations, it was great hearing from all of you that have taken recent courses.

Our courses are starting again the last week of August. This is a great time to plan on either a continuing education course or a certification exam preparatory course. If you know of anyone desiring to take a course, please share this email with them and or post for other colleagues to see. There are still seats available, so register soon. Use the course number on the schedule for ease of registration. If having a problem registering, please feel free to ask me for help as I will direct you to someone that can resolve those problems. After registering, expect a letter explaining meeting times, room location, and a map, the week prior to the course start date.

The following is a link to our certification preparatory courses http://libs.morainepark.edu/docs/academic-affairs/ww-operator-schedule-fall-2015.pdf Not only will they prepare you for the exam with specific exam related information, the courses can also be used for continuing education.

Moraine Park also has a two year Water Quality Technology Associate of Applied Science Degree program. This is an online program, so you can complete it in the comfort of your home, or where your computer takes you. This is a great program for those wishing to enter the profession as well as those in the profession that hope to advance their standing within an organization or to increase their potential for desired career placement. Advanced standing is available to those already working in the career field. If you have interest in furthering your education our accredited program is also transferable to a number of four year colleges.

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Enviro-Care Company is Exclusive Sales Agent

Enviro-Care Company is pleased to announce that it has been awarded exclusive North American sales distribution rights for the products of FSM Frankenberger GmbH & Co. KG of Pohlheim Germany. FSM was founded in 1970 and is a recognized leader in the design and manufacturing of mechanical water and wastewater treatment equipment.

“Enviro-Care continues to expand its product line to include different types of equipment and larger equipment with the ability to handle larger flows. FSM gives us that capability and we are delighted to welcome them to the Enviro-Care family of products.” explained Philip A. Thompson, President of Enviro-Care Company. “In order to serve this market properly, it is important to have the correct equipment for each application and that is our goal.”

“Enviro-Care is very focused on headworks equipment which is our core competency. We think this partnership will be an excellent fit.” Enviro-Care will be exhibiting in Chicago at WEFTEC 2015 in Booth 1016. Equipment from each of its brand partners will be on display.

Water Quality Technology program link: http://www.morainepark.edu/programs-and-courses/programs-of-study/Water+Quality+Technology/

If you have problems accessing the links, try the MPTC website at: www.morainepark.edu

If you are an employer and desire interns, we may have the student to fit your need. Just let me know, and I will relay the information, as many students plan ahead for spring and summer internships.

Well, I certainly hope this email finds all of you enjoying the summer, and if you have any questions, do not hesitate to call or email.

To register for a course call 1-800-472-4554 or 920-924-3207. Take care and enjoy! See you in class.

Mark A. Schmidt  Water Quality Technology Instructor  Moraine Park Technical College  235 North National Avenue, PO Box 1940  Fond du Lac, WI 54936-1940  920-924-3283
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