45th Annual W.W.O.A. Conference
October 4-7, 2011 LaCrosse, WI
LaCrosse Convention Center
Holman Wastewater Treatment Facility – Host
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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.
President’s Message

Time sure goes by fast. The 2010 WWOA Conference is now history. We had approximately 820 people attend the conference this year. I would like to thank Randy Thater for coordinating the technical program to include two pre-conference workshops, thirty five technical sessions and three tours. Randy and the technical program committee put together an outstanding program this year.

Kelly Zimmer did a great job coordinating local arrangements, the spouse/guest program, and the golf outing with assistance from Randy Herwig. Again we had a great turn out of fifty shooters at the sporting clays event coordinated by Jim Thalke. Kevin Freber is credited for his efforts coordinating the operator competition event. Hopefully next year the regions can have more teams competing. Everyone I have talked with, that has participated, says it's a worthwhile experience.

Everyone who helped out at the conference, thank you for all you do in making the WWOA a great organization.

I hope you were able to attend Brad Montgomery's keynote address. Brad made us laugh with his funny business of enjoying life. It sure is remarkable what humor can do for us. Remember that the technical presentations of the conference will be on our website again this year; www.wwoa.org. There were so many excellent presentations to choose from, but not enough time to attend all of them. Here's your chance to look over those you may have missed.

In early December, the WWOA Board of Directors met for the first time to begin planning the 45th Annual Conference to be held October 3-7, 2011 at the Radisson Hotel and La Crosse Center in La Crosse, Wisconsin. We look forward to provide another excellent conference next year. I welcome any input you may have to make the conference even better in 2011. Please email me or call me to discuss.

Fall is one of my favorite seasons of the year. I enjoy hunting grouse, woodcock, and pheasant like many of our members throughout the state. I hope everyone had a safe and productive deer hunting season. “Happy Holidays” and the best in 2011.

Dave Carlson, WWOA President

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*Process Equipment Repair Services, Inc.*
Madeline Sanitary District – Aerated Lagoon Upgrade

By: Madeline Sanitary District Staff

The Madeline Sanitary District encompasses all of Madeline Island in Lake Superior. It has a unique wastewater system with the community of La Pointe connected to a sanitary sewer collection system and the rest of the Island having their waste hauled to the Wastewater Treatment Plant (WWTP).

The WWTP has varied flows and loadings to be treated during the different seasons. During the winter, there are under 300 people living on the Island. During the summer, up to 3,000 people per day are on the Island to enjoy it and Lake Superior.

The soil on the Island has only a few areas that allow functioning septic systems, so most outlying houses, campgrounds, and business have holding tanks. Being an Island means all holding tank waste generated on the Island will need to be disposed of on the Island instead of hauled to the mainland.

Because of the clay type soils, limited fields, summer tourism industry, wetlands, and prevailing forests on the Island, hauled waste is almost exclusively treated at the municipal WWTP.

The existing WWTP was an aerated lagoon system with 2 ponds and coarse bubble diffusers that was constructed in 1976. All wastewater was pumped to the WWTP by the main lift station located next to the marina. Winter flows averaged 25,000 gpd and summer peak weekly flows were 132,000 gpd.

The WWTP was in need of upgrades due to age and new ammonia requirements that were put in place for the WWTP effluent that discharges to Lake Superior. In addition, waste haulers were using the main lift station as their dumping location. The main lift station is in a populated area by the marina, so it was desirable to put in a new hauled waste receiving station at the WWTP site, outside of populated areas.

The Sanitary District applied for US Army Corp Section 154 grant money and received a grant of 75% of the project cost. The remainder was funded through a WI DNR Clean Water Fund loan.

The project design needed to accommodate the large loading on a summer day and the lower loading in the winter. Ammonia limits are more stringent in the winter for the treated discharge to Lake Superior. The project required removal of sludge prior to improvements to the lagoons. The removed sludge was conditioned with polymer and pumped into Geotubes and allowed to naturally dewater and dry the sludge. This made less volume to haul to land spreading sites. The Geotubes were placed next to the lagoons for 1-year to allow the supernatant to flow down into the lagoons for further treatment. Results for reducing the volume and drying the sludge were favorable.

The Town of La Pointe Comprehensive Plan was used to estimate the 20-year design loading. A total of 1,220 households are estimated to be served in 2029. Approximately half of the households will be on holding tanks and waste haulers will bring their waste to the WWTP. Average summer flow was estimated at 163,000 gpd with a peak daily flow of 515,000 gpd. Winter flow was estimated at 49,000 gpd.

Both existing lagoons were used for the upgrade. Baffle curtains were installed in each lagoon to make a total of four (4) cells. Fine bubble diffusers were installed with new blowers to be energy efficient. The diffusers are attached to floating laterals on the surface.

continued on page 5
continued from page 4

Algae blooms on the lagoons during summer and fall caused the pH of the effluent to increase. Algae blooms would also limit the UV disinfection intensity. Floating covers were added to eliminate algae growth and lower the effluent pH. The covers were insulated to keep heat in the lagoons to allow ammonia removal in the winter. The covers have hatches positioned above the diffusers to allow easy access when maintaining each diffuser.

Other improvements were attached growth media hanging in the lagoons for ammonia removal, a fine screen, and a hauled waste receiving station. All influent flow, whether from the main lift station or discharged at the WWTP by waste haulers, will go thru the new fine screen.

The hauled waste receiving station has a circular driveway allowing haulers to drive through without needing to turn around. The hauled waste can be discharged directly to a quick disconnect with piping directly to the fine screen. Or they can bottom discharge to a drain structure that flows to a large receiving tank, which then discharges to the fine screen. The two methods are to accommodate the various types of trucks and individual preferred method of discharging of each waste hauler.

Construction started in the summer of 2009 with sludge removal and the lagoons were operational by the winter. Final sludge spreading occurred in the summer of 2010. A portion of the conditioned sludge was land spread on an approved field on the Island. But also a large portion of the conditioned sludge had to be ferried off the Island to mainland fields due to limited area of approvable Island fields to land spread.

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Mark your calendars to attend the 2011 Spring Biosolids Symposium. The Symposium will be held on Tuesday March 22, 2011. The Symposium will be held at the Stevens Point Holiday Inn. Another excellent program is in store with speakers on national, state, and local biosolids issues. Regulars Fred Hegeman, DNR, and Dick Wolkowski, UWEX are back again, along with the popular panel discussion.

Phosphorus, changing phosphorus regulations, and a review of the requirements of septage haulers are key topics in the upcoming Symposium. “Big Picture” such as the future of biosolids, waste to energy, and long range biosolids planning are also covered. Make your plans now to attend the nationally acclaimed Spring Biosolids Symposium, March 22, at the Stevens Point Holiday Inn.

2011 Spring Biosolids Symposium Agenda
- Phosphorus 101, Phosphorus regulation changes
- Nutrient Management Plans, Requirements of Haulers
- Future of Biosolids, DNR Update
- Lunch-Wisconsin Valley Improvement Corp. speaker
- Co-digestion for energy, UW extension update
- Green Bay MSD Planning Experience

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This year’s competition was very exciting due to the scores in the events being so close. We had 3 teams compete this year they were “The Deuce is Loose” from the (Southern Region) Brian Skaife, Marc Zimmerman, and Jeff Wellnitz. The “Certifiable Operators” (North Central Region) Chris Helgestad, Vern Williams and Jason Schill. The “Water Warriors” (Lake Michigan Region) John Guadagni, Holly Blazer and Kim Williams.

Each Team competed in the 5 events

1. Pump Maintenance Event. Teams disassemble a Vogelsang positive displacement lobe pump supplied by RDM Municipal Supply and Service, they changed oil and reassembled a pump.


3. Safety Event: Teams will test the atmosphere of a confined space, assemble fall restraint equipment, and rescue an injured colleague from a confined space. The equipment was supplied by Vorpahl Fire and Safety and the scaffolding to create the effect that you were going into a manhole was supplied by J.F. Ahern Co.

4. Process Control Event. Teams will complete a written exam that covers various wastewater treatment processes and include three operational problems. The problems are taken from ten topics areas including Advanced Treatment, Disinfection, and Solids Stabilization. The Event Was sponsored by Strand and Associates.

5. Laboratory Event. Teams perform all steps of a BOD analysis including determination of pH, preparation of blank & seed correction series, and calibrating of dissolved oxygen meter. All Equipment was provided by North Central Labs.

The judges for this year were:

Mark Duerr - Mulcahy Shaw Water
Dan Waala - Waukesha WWTP
Roger Timm - Green Bay MSD
Kevin Skogman - Heart Of The Valley MSD
Tim Reel - Whitewater WWTP
Jim Gommand - Green Bay MSD
Ron Hicks - Sheboygan Regional WWTP
Pat Linssen - Green Bay MSD
Brent Bailey - Vogelsang USA
Judy Tholen - Watertown WWTP
Peter Borgo - Walworth County MSD
Kevin Freber - Watertown WWTP

Each event was judged and scored separately against established criteria. The scores of all events were totaled and the winners were The Deuce is Loose from the Southern District they took 1st in 4 of the 5 Events. There was a tie for second place with the Certifiable Operators and Water Warriors.
DISINFECTION – INTRODUCTORY
The definition of the term “chlorine demand” is:
A. The amount of chlorine in a specific hypochlorite solution
B. The amount of chlorine added to disinfect wastewater
C. The amount of chlorine used to disinfect wastewater after a given amount of contact time
D. The amount of chlorine remaining after a given contact time

Answer: C.

ADVANCED
Ammonia in effluent will react with chlorine to form chloramines which are not efficient disinfection agents, so that more chlorine dosage may be required for disinfection. Different chloramines are formed at different pH levels. At a pH of 5.4 in effluent containing ammonia, which chloramine(s) will be present?

A. Monochloramine
B. Dichloramine
C. Trichloramine
D. Monochloramine and dichloramine

Answer: B

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IN CONTROL – Successful Operations through Process Control
December 2010

By Jack Saltes, Wastewater Operations Engineer, Department of Natural Resources

Annual Self-Audit is the eight and last element of a Capacity, Management, Operation & Maintenance (CMOM) Program.

The success of your CMOM Program depends upon the careful review of your program annually. Where have you seen improvements and successes? How can you spend your budgeted money most effectively to make your program even better? What lessons were learned? Use information gathered during the annual self-audit to improve your CMOM program for next year.

The Compliance Maintenance Annual Report (CMAR) Collection System section is, in part, an annual self-evaluation or audit of your collection system CMOM Program. Once you have entered your facility’s data into the CMAR, it will create trend graphs for you. Trend graphs for various collection system performance indicators are:

- Lift Station Failures (failures/lift station/year)
- Sewer Pipe Failures (pipe failures/sewer mile/yr)
- Sanitary Sewer Overflows (number/sewer mile/yr)
- Basement Backups (number/sewer mile)
- Complaints (number/sewer mile)
- Peaking Factor Ratio (Peak Monthly:Annual Daily Average)

The performance indicator trend graphs can help you determine if your CMOM Program is effective. Your CMAR generates these graphs automatically by clicking the Graph buttons. In theory, an effective O&M Program over time should result in a reduction in I/I (peaking factors), SSOs, basement backups, complaints, and equipment and pipe failures. Be sure to generate and observe trend graphs to see if you are making progress toward an optimum performing collection system. Observe your graphs every year. Hopefully any trends are declining as these examples show.

This is the last installment of the collection system CMOM articles. By now, I hope many of you already have a CMOM program developed and are implementing it, especially by having a strong collection system O&M program.

I want to wish you all a relaxing and healthy holiday season. I’ll be returning with more wastewater treatment plant process control articles next year. Happy Holidays!
James E. Kleinschmidt, P.E., Joins Donohue & Associates, Inc.

Jim Kleinschmidt, PE joins Donohue & Associates as a Senior Project Manager in their Madison office. Jim has over 32 years of consulting engineering experience in the planning, design, construction and operation of wastewater treatment facilities. He has worked with numerous municipal and industrial clients throughout Wisconsin.

Recently, Jim served as the Technical Project Manager for the City of Fond du Lac’s $57 million Regional Wastewater Treatment Facilities Modifications. Through this project, the City was able to cost-effectively increase capacity and improve effluent quality while reducing their annual operating cost and carbon footprint.

In addition to his 32 years of wastewater treatment engineering experience, Jim has also assisted numerous communities with other aspects of wastewater utility operations including review of Wisconsin Pollutant Discharge Elimination System permits (including technical assistance in legal cases), rate reviews and rate studies, and long-range strategic planning.

A registered professional engineer in Wisconsin, Jim received B.S. and M.S. degrees in Civil and Environmental Engineering from the University of Wisconsin-Madison. He is a member of Central States Water Environment Association, Water Environment Federation, American Society of Civil Engineers, and the Wisconsin Wastewater Operators Association.

Headquartered in Sheboygan, Wisconsin, Donohue & Associates, Inc. is an employee-owned consulting firm specializing in water, wastewater, and transportation engineering services. Over 115 employees are located across 11 Midwest offices in Wisconsin, Illinois, Minnesota, Indiana, and Missouri.

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CREATIVE AWARD-WINNING SOLUTIONS
Iron River hosts NW District

The meeting started by a welcome announcement from Harvey Anderson representing the Iron River Sanitary District. Chairman Weber introduced the first presenter Bob Doll from ITT who presented lift station design considerations such as: total dynamic head, wet pit vs. dry pit, duty point=design point=operating point, static head=geodetic head=vertical lift, controls=pumps=force main-piping and, life cycle cost. Maintenance and problem issues were also discussed by Bob.

Anthony Aderhold from Insituform was the next presenter. Insituform constructs and rehabilitates water, sewer and other difficult to access pipes throughout the world using technologies that minimize digging and disruption. Anthony talked about installation methods and the benefits of pipe lining.

Chris Groth from Wisconsin Rural Water Association presented next. Chris’s topic was on the new Phosphorus rule NR 102 & NR 217. WRWA will be working on this legislation along with other organization on behalf of municipal wastewater systems in the state.

After lunch everyone toured the Iron River Nation fish hatchery. Guiding the group was Carey Edwards & Nikolas Grueneis. The hatchery primarily works with lake trout restoration, but over the past 10 years, has started to work costal brook trout restoration.

After the tour, Rich Schici presented in pipe technology. The sewer is part of the overall treatment system and the sewer can act as a biological per-treatment step. Rich discussed how enhanced biology improves the natural ability of the wastewater treatment plant.

The final presenter was Dan Mortensen from Cooper Eng. Dan presented a perspective on flood plain facility planning. Some issues with being in a flood zone include, lift station, wells, dry land access, other structures, buildings and don’t forget “insurance”.

Chairman Weber started the business meeting and as time permitted, filled in the voids. The treasurers report was presented and accepted. Past meeting minutes were accepted. The next meeting is in Butternut on Oct.15. The village of Cornucopia was interested in hosting a meeting in 2011. Meeting was adjourned.

Respectfully submitted, Wally H. Thom-NWWOA Secretary, and Sari Marks-NWWOA Vice Chair.
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Denmark hosts WWOA Lake Michigan District Meeting

By: Bernie Hengels

The November LMD meeting was hosted by The Village of Denmark and held at the 21 Gun Saloon on Main St. To kick off the meeting Chairperson Kari Dennis introduced Village President Robert Sekora, who welcomed everyone. Our first presentation was from Chad Olsen of McMahon. Chad’s presentation entitled “Upcoming Phosphorus Regulations & Removal Technologies” was well received by the attendees.

Our second presentation was from Jim Beier, account manager from Crane Engineering. Jim’s presentation was entitled, “Digester Mixing: To Foam or not to Foam.”

Chair Dennis then called the LMD business meeting to order. The first item was to approve the minutes from the August 19th Suring meeting. There were no questions or discussions from said minutes, so Chair Dennis took a motion to accept these minutes. The motion was made by Brian Helminger and seconded by Kevin Skogman. The membership all voted to accept the minutes as written. Motion approved.

The Treasurer’s report was made available at the registration desk. Treasurer Hengels read the report and presented it to the membership.

Chair Dennis then moved to new business. She thanked Denmark Village President Robert Sekora, WWTF operator Ericka Sisel and the Village of Denmark for hosting this meeting. Further she thanked AECOM for sponsoring our break time refreshments and to all of the presenters for their time and efforts. WWOA BOD Dale Doerr and DNR representative Dick Sachs and Bruce Oman were welcomed to the meeting.

Chair Dennis then welcomed Dick Sachs to present the DNR update. The new thermal rule is now in effect. If

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unsure how to implement this rule, go to http://drn.wi.gov/org/water/wm/wqs/thermalrulesrevisions.htm for further dialog and instruction. LMD is planning a DNR presentation on this subject matter to be offered at a future meeting. Stay tuned. Thirdly, the new phosphorus rule is effective on December 1. A presentation on this rule is being compiled for use at a future meeting.

Chair Dennis continued the business meeting with a regional coordinator report as provided by Dale Doerr. This report including all upcoming WWOA events was shown on the screen. It was also stated that Kelly Zimmer was our new incoming regional coordinator. Chair Dennis mentioned that LMD had a team for the Operators Challenge at the annual conference and was pleased to announce that our team tied for second place. Also from the annual conference, LMD presented its Operator of the Year award posthumously to James Nenahlo who sadly passed away in September. James was from St. Nazianz and his family was present at the banquet to accept his award.

Lastly, Chairperson Kari Dennis thanked both Vice Chairman Kris August and Treasurer/Secretary Bernie Hengels for all the time and effort they’ve committed to the LMD this year. It has been a real pleasure working with them. And welcome to Jeff Smudde who will be stepping into the Vice Chair position for 2011.

Chair Dennis then accepted a motion from Kevin Skogman and a second from Brian Helminger to adjourn the business meeting.

Break time – with refreshments provided by AECOM.

Following break we were treated to an interesting presentation from Gary Hanson of AECOM, Ericka Sisel of the Village of Denmark and Eric Hanson of Land O’
continued from page 15

Lakes. The program was entitled “Cooperation Mitigates Disaster”. The presentation outlined events which occurred during a 150,000 gallon milk spill at the Land O’ Lakes facility and ensuing cooperation between the Village of Denmark, Land O’ Lakes, Green Bay Met, the DNR, AECOM and the many area septage haulers preventing a major environmental problem.

Next up was Michael Christensen of SolarBee, Inc. with his presentation on Benefits of Solar Powered Circulators in Wastewater Treatment Systems. Michael’s presentation included a look at applications in municipal water reservoirs, storm water ponds, and municipal and industrial wastewater treatment systems.

Following lunch the members were able to visit with the eight vendors who had set up their table top displays in the bar area of the facility.

Following lunch, we welcomed Dale Doerr and his presentation entitled, “Sheboygan Regional WWTP’s Journey to Energy Independence.” Dale’s presentation included many examples of past and current energy usage and the savings that have been earned.

Following Dale’s presentation, Gary Hanson of AECOM introduced the upcoming Denmark WWTF plant tour and Chair Dennis adjourned the meeting.

Respectfully submitted by:
Bernie Hengels, LMD Secretary/ Treasurer
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2010 Northwoods Collection System Seminar a Success

The Third Annual Northwoods Seminar was held at the Clearwaters Hotel and Convention Center in Marshfield, Wisconsin on July 29. Our hosts, again, were the staff of the Marshfield Wastewater Utility, graciously led by the tireless efforts of both Ron Dickrell and Jean Coy.

The agenda for the seminar included morning presentations on such topics as Septic Hauling and its effect on the Collection System, Private Property I&I, Sewer Rate Surveys and Horizontal Directional Drilling. After a catered lunch by the staff at Clearwaters, the 130 attendees were encouraged to walk through an exhibit hall of over 40 table top vendor exhibits and outdoor equipment static displays and demonstrations. The day was capped with an ever-popular, nearly-everyone-wins-one raffle.

To encourage participation in this still-new event, the seminar organizers enlisted the assistance of Jim Thalke of the Sussex Wastewater Treatment Plant and Tom Mulcahy of Mulcahy/Shaw Water. Jim set up a popular sporting clays event and Tom a best ball golf scramble event – both were held the day before the Northwoods Seminar on July 28th in the Marshfield area. Over 24 attendees took part in the sporting clays and golf events this year helping make the two-day Northwoods event even more popular.

The Collection System Committee receives its guidance from a joint charter as its members come from both the CSWEA Wisconsin Section and the Wisconsin Wastewater Operators Association. This committee is tasked with encouraging discussion and the sharing of ideas relating to the operation and maintenance of sanitary sewer collection systems. Its major focus includes the administration of two annual Collection System Seminars. The Classic Seminar has been held in Watertown since 1988 and has a grand following in southeastern Wisconsin with over 230 attendees. The committee started this second “Northwoods” Seminar on the 20th Anniversary of the Classic Seminar in 2008 to help reach collection system owners and operators in the north-central part of the State.

The committee will be holding its initial planning meeting for both 2011 seminars in January. We always need help in finding the right topics and presenters, so we encourage you to reach out and contact our chairperson, Andy Craven, with your suggestions or ideas at (608) 251-4843 or andrew.craven@strand.com. We hope to see you at a seminar next year.

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2010 Operators of the Year Award

Lake Michigan Region
Kris August presents Lake Michigan award to St. Naziana Village Trustee, Yvonne Kaelin (middle) and Jody Reister, (right) daughter of recipient James Nehahlo from St. Nazianz.

North Central Region
Lyle Lutz, (left) presents North Central award to Charles Soltis, (right), from the Village of Union Center.

Northwest Region
Chairman Joel Weber (left) presents Northwest award to John Stack (right) from the Village of Lake Nebegamon.

West Central Region
Paul Sterk, (left) presents West Central award to Rick Weikel, (right) from Black River Falls.
Southeast Region

Jim Bergles, (right) presents Southeast award to Tom Steinbach, (left) from the city of Oconomowoc.

Southern Region

Roy Swanke, (left) presents Southern award to Joe Zakovec, (right), from the city of Janesville.

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2010-2011 Board of Directors

2010 to 2011 WWOA Board: (left to right) Kevin L. Freber, Dennis Egge, Lyle Lutz, Wade Peterson, Bruce Bartel, Dave Carlson, Kelly Zimmer, Randy Thater, and Dale Dorr

At Trojan, we believe clean water is an invaluable resource. That’s why we are passionately pursuing groundbreaking UV solutions to help municipalities safely and reliably deliver water confidence to their communities. With the largest installed base of UV systems on the planet, many Trojan innovations define the industry standards for protecting our water from microbial and chemical contamination.

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Region of the Year Award

Ray Swanke (left), presents the Region of the Year award to Berne Robertson (right), of the Southern District.

George Bernauer Award

Tom Foltz (left) presents the George Bernauer award to Ken Johnson, (right) from the Rib Mountain MSD.

Koby Crabtree Award

Rick Mealy, (left) presents the Koby Crabtree award to George Bowman, (right) who is retired from the State Lab of Hygiene.

Lifetime Members

Front row (left to right) John Fales, Bill Collins, Dale Marsh, Joseph Burress, Gary Buntrock. Back row (l to r) Joel Jodarski, Carol Stackbien, Kathy Garfinkel, Dave Sasada.
Not pictured: Kent Vorahl, Mike Urbancic, Joe Tennissen, Jim Schreiber, Pat Rezin, Ed Manning, Bill Joyce, Gerald Gray, Gary Gatton, Phill Hoopman, Paul Fahey

Newcomer Zach Montagne

Zach took over as the operator of the Madeline Sanitary District collection system and wastewater treatment plant in 2009. His collection system duties include operation and maintenance of several miles of pipeline and ten lift stations. The wastewater treatment plant that he operates is a covered, aerated lagoon with fine screening and septage receiving facilities and ultraviolet disinfection.

Zach has an exceptional work ethic as well as superior mechanical skills, and is accustomed to providing inventive solutions in an isolated environment. He took over operation of the plant with very little time to acclimate, and had everything change with a major plant upgrade within the first year of operation.

Zach couldn’t attend the 2010 conference. The Madeline Sanitary District has a narrow window of time between tourism season and winter for annual sewer-rodding of the collection system. Since Zach is in charge of heading up this work, he couldn’t get away, but he would have liked to.
Past WWOA Award Recipients

Past Bernauer Award

Front row (l to r) Dan Busch, Leo Tempelton, Dan Landis, George Bowman
Back row (l to r) Ken Johnson, Pete Albers, Wally Thom, John Leohnard,
Dean Falkner

Past Koby Crabree

Front row (l to r) Kay Curtin, Dan Busch, Roy Lembcke
Back row (l to r) Paul Lange, Rick Mealy, George Bowman,
Ken Sedmack, Bill Marten

Past Service

Front row (l to r) Kay Curtin, Carol Strackhein, Leo Templeton. Back row (l to r) Lamont Albers, Georgia Paul,
Judy Tholen, Dale Nies, Randy Herwig

Past Presidents

Front row (l to r) Dan Busch,
Carol Strackhein, Kay Curtin, Leo Tempelton, Dale Nies, Bruce Bartel
Back row (l to r) Lamont Albers, Jim Krueger, John Bond, Jim Thalke, Pete Albers, Randy Herwig, Judy Tholen,
Wally Thom, John Leohnard, Dean Falkner
2010 Operators Ride...
Between the Lakes with Style

The 2010 Operators’ Ride was held on the weekend of Thursday, August 5 – 8 and was hosted by Tom & Patty Goetsch and Keith & Brenda Mueller.

The festivities began on Thursday evening with the annual cookout at Tom & Patty’s house, outside either Elkhart Lake or Plymouth, depending on how you want to look at it. Everyone renewed old acquaintances and made new ones until they were all talked out.

Twenty-two bikes met at the Baymont Inn parking lot in Plymouth at 8:00 am on Friday, and hit the road around 8:30 am. Keith chose a route that wound around in an easterly direction, eventually running along the shores of Lake Michigan, and some beautiful scenery, past the “Whistling Straits” golf course, where there was a buzz of activity, with TV network crews setting up for the P.G.A. Tournament to be held the following week.

Swinging west, we ended up at a beautiful place called “The Cedars,” on Cedar Lake for a great buffet-style meal. Leaving there, the direction was northerly for a gas stop in Reedsville, followed by a stop at a bar called “The Iron Buffalo Saloon” in Menchalville. Have you ever heard of Menchalville? The Iron Buffalo is about the sum of the place. Nice bar, small town.

The next destination was Bill’s Harbor Bar at Stockbridge Harbor, where everyone enjoyed a gorgeous view of Lake Winnebago from atop the hill while relaxing and mingling with other customers on the deck.

Saturday’s ride was planned and led by Tom & Patty.

Twenty-four bikes left the motel at 8:30am and headed east to a bar/restaurant called ‘Steve & Rose’s, just outside Sheboygan Falls for another good meal followed by the usual group pictures.

Leaving there Tom headed generally west, choosing roads for their scenic value as much as could possibly be expected (he was very successful at that!). He also followed a very safety conscious approach, at some times going so slowly that Judie Schulfer was able to pick flowers growing along the roadside without John having to stop the bike.

Eventually the ride ended up north of Rosendale at a huge dairy called “Milk Source,” where 8,000 cows are milked 3 times daily, a very interesting tour. This place features a ‘Carousel’ milking system, and air-conditioned free stalls, among other unique features.

The closing banquet was at the Bublitz Restaurant. Naturally the annual “Reidy” awards and joke session followed this.

Things concluded Sunday morning with all the good-byes, handshakes and “See you next year”s being said.

All-in-all a fitting end to a well-planned, safe, and enjoyable weekend. ☺

2010 Operator’s Ride Bikers
**Making Wastewater Solutions**  
**From Phoenix Contact**

**Fieldbus**
A modular approach to Fieldbus physical layer components from Phoenix Contact provides infrastructure connection between the process Fieldbus controller and field devices. This new concept combines industrial electronic packaging and data communications competencies to deliver high-value Fieldbus infrastructure solution.

**nanoLine**
nanoLine is a small programmable controller/relay with unique features such as Ethernet connectivity, removable operator display and easy flow-chart or RRL programming. The modular design allows for connections of up to 3 I/O expansion modules (RS 232, RS485, USB). It allows for easy data exchange with Modbus TCP or Modbus RTU master devices.

**Managed Ethernet Switch**
Economical managed Ethernet switch supporting SNMP, RSTP, Web Based Management capability are standard features. This Switch supports applications where Multicast traffic is a concern (like Ethernet IPv6), a “-E” version is available with default enabled IGMP Snooping.

**SFN Switch**
The SFN family of unmanaged Ethernet switches provide low cost, fully industrially hardened, entry-level switch functions with 5 or 8 ports (10/100 Mbps) in a narrow housing width. Complete range of 100 Mbps glass fiber configurations to support 1 or 2 ports with SC or ST style connectors. The new SFNT group of Ethernet switches are for applications where extreme temperature conditions (-40C to 75C) exist.

**Ethernet Modem**
The Ethernet modem makes remote servicing and diagnostics of distant ethernet network devices as simple as dialing into an Internet connection. Ethernet control systems and operation panels anywhere in the world can be controlled remotely via a modem and a telephone line.

**UT Terminal Blocks**
UT screw connection terminal blocks are designed in a compact profile for easy, maintenance-free handling. UT terminal blocks have a dual bridging channel for power distribution (chain, skip, step-down). Manufactured with nickel and tin plated copper alloy components to protect against corrosion and eliminate thermal expansion issues.

**WLAN Radio**
IEEE 802.11 WLAN radios are ideal for high speed data networks. The high power variant of the product family provides the extra power needed in long range application while maintaining the highest levels of security and can easily form into Mesh networks. The WLAN technology opens the door to many different bandwidth intensive applications such as video surveillance, remote monitoring and control and mobile networking.

**GSM GPRS Modem**
The GSM GPRS Modem is ideal for remote monitoring of alarm contact and data acquisition. The GSM GPRS modem is approved to be used on AT&T network and can easily interface with RS232 serial connections or can be used standalone to monitor digital alarm contacts. Phoenix Contact has partnered with Diversenet to allow for easy activation of the modem’s SIM card on the GSM GPRS cellular network.

1220 Washington Ave., Cedarburg, WI 53012  800-558-7033  
818 Lambeau St., Green Bay WI 800-242-6303  
www.aa-electric.com
The fourth annual WWOA Sporting Clays event was held on Tuesday the 19th of October at Woods and Meadows Game Farm in Warren, WI. The morning proved clear and cold and provided great weather for 53 of our members to hone their shotgun skills.

Woods and Meadows provides several options of courses to shoot, with varying degrees of difficulty. The Blue Course was chosen as it provides enough difficulty for the experienced gunner while not be too much frustration for casual shooter.

Teams consisted of no more than four members. For scoring purposes, only the top three scores of a four man team were counted. This year’s top team scored a 110 of a possible 150 targets. Congratulations to Tom Duell, Jim Mertens, Troy Hatlestad and Gary Smith. This was a repeat performance as these same foursome won the 2009 event. With the 2011 Conference being in La Crosse, WI all odds the 2011 event will be held at Woods and Meadows again. Plan accordingly, as there is plenty of room for more shooters!
**Help Wanted-Operations Manager**

Midwest Contract Operations, Inc. is a professional contract operations firm seeking a qualified individual to fill the position of an Operations Manager within our company. Responsibilities to include: conduct evaluations and develop reports for improvements in water and wastewater treatment systems, develop long-term capital improvement programs and SOPs for water & wastewater treatment systems, provide system troubleshooting and technical support to operations staff, provide staff training, client liaison, and management oversight of multiple facilities. The person we are looking for will have the qualifications of either an engineer with design experience interested in operations or an experienced operator with strong operational background and troubleshooting skills. Midwest Contract Operations, Inc. offers an excellent employer paid benefit package which includes health, life, disability, dental, retirement, and 401k. All applications kept confidential. Send resume and salary requirements to: Randall Much, Midwest Contract Operations, Inc., P.O. Box 418, Menasha, WI 54952-0418 or via email to: rwvoigt@mco-us.com.

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**WWOA 2010 Golf Outing summary**

The weather was great for the 94 golfers that participated in the annual golf outing that was held on Tuesday, October 19th, 2010 at Trappers Turn. There were eight hole events, and first, second and third place team winners.

The winners of each event were as follows:

- Lake Hole #1 (longest putt) ......................... Jim Hart
- Lake Hole #5 (closest to the pin in 2 shots) ............. Jerry Weedman
- Lake Hole #8 (Closest to the marker in the fairway) .... Bob Redelings
- Lake Hole #9 (longest putt) ........................ Jerry Foellmi
- Canyon Hole #2 (Longest Drive in the Fairway) .......... John Szyszskiewicz
- Canyon Hole #5 (Longest Putt) ..................... Bill Balz
- Canyon Hole #7 (Closest to the Pin in Par three) ........ John Jensen
- Canyon #9 (longest putt) ............................ Dean Zanon

First place team: Adam Lechner, Quinn Kennedy, Tom Loeser, Jerry Rider

Second Place team: Tom Davy, Ray Johnson, Tim Holzer, Dan Waala

Third Place team: Dean Zanon, Steve Jacobson, Joe Burress, Dennis McPhail

Snacks during the award and prize give away were provided by Bruce Municipal Equipment.
City of West Bend hosts WWOA Southeast Meeting

Did somebody say Pig Roast?! On August 25th the WWOA SE district enjoyed a great fall meeting along with the 11th annual pig roast hosted by the City of West Bend. It was the biggest turnout of the year by both operators and vendors with over 130 people attending. It was a great opportunity to catch up with old friends and learn about current events.

The meeting was held at the Columbian restaurant/conference center in West Bend and everyone enjoyed plenty of hospitality and plenty of food to make it another remember able meeting.

Chairman Bergles called the meeting to order and thanked the City of West Bend for their efforts in hosting the meeting. Then Kristine Deiss, the Mayor of West Bend, stepped in to reinforce a big welcome and briefly discussed how critical the wastewater industry is for the longevity of our rivers and lakes.

Afterwards, Chairman Bergles went through the meeting agenda for the day and discussed several upcoming events for the year. Once everyone was up to date the first presenter was introduced.

David de Casteele from High Voltage Maintenance was first to present. He discussed power system safety and reliability through testing (how to avoid the unexpected).

His presentation discussed how four specific types of regular preventative maintenance could prevent failure (time-directed, condition directed, failure finding, run-to-failure). He said it’s critical to develop or modify your PM programs on a regular basis to insure an effective maintenance strategy. Preventive and predictive maintenance programs will identify factors that lead to equipment deterioration.

continued on page 31
David said there are many types of electrical PM tests that should be instituted regularly for monitoring the condition of your electronic devices. Infrared inspection is a common way to check the condition of breakers and/or cable connections before a failure occurs.

Some of the common maintenance problems occur because sound practices are not institutionalized, or unnecessary and conservative PM persists. It’s important that the program has traceability and/or visibility.

The second presenter of the day was Jack Fury from Fury Filter and Pump. They’re a distributor, service center, and fabricator for various pumps, filters and seals. The fabrication side of their business specializes in modular design equipment that they custom manufacture based on in house engineering.

Jack Fury said many pumps become obsolete within a relatively short period of time, and the parts for rebuilding the obsolete pumps tend to be very expensive. In this case, he said take the time to research the cost of a new pump because it may be less expensive than the replacement parts on the used one. He said he gets lots of calls for parts on obsolete pumps, and people are continually surprised to find out the costs of going new are less than rebuilding the old ones.

After the second speaker we took a break to visit with the vendors and to hand out a few donated raffle prizes. The WWOA is thankful for the vendors support through their contributions, and by showing off their latest products and services.
The third presenter was Mike Zubarik from Toepfer Security Corp. Mike discussed the WWOA and Homeland Security. He said there’s 18 core security areas that need to be addressed to satisfy your site security plan to be in compliance with H.R 2868. The water plant should consider insider and outsider adversaries when designing their security program, and gave a list of examples that should be implemented to reduce the possibility of terrorism and increase public safety. Some examples of this are electronic gate access controls, name badges, and high quality zoom cameras that pan & tilt automatically once an object is in the field of vision.

Next chairman Bergles called for the business meeting to begin and all the usual reports were given and accepted. Then nominations were taken for next years WWOA SE committee and the following people were elected for 2011: Dave Bogie – Chairman, Jeff Deitsch – Vice Chair, Paul Gagas – Treasurer, and Jeff Downs – Secretary. Please congratulate these guys for taking the time to volunteer and coordinate next years meetings.

Jack Saltel presented the DNR update report focusing on current CMOM guidelines, and the limited resources the DNR is facing.

Recognitions were handed out to Dave Piquett for his support and achievements as past chairman of the WWOA SE district in 2009, and to the City of West Bend staff for hosting the meeting and allowing operators to tour their WWTP.

Then a motion was given to close the meeting, and lunch followed with no delay.

After lunch we enjoyed listening to David Kliber, President/CEO, from S-F Analytical Laboratories, Inc. Dave discussed the vision of Milwaukee becoming a leader in fresh water sciences. He stated a counsel has been formed with the mission to align local fresh water researchers to serve as a world’s hub for the benefit of development, economic value, and education. Milwaukee hosts approximately 120 water-related companies, which equates to over 20,000 jobs, and is home to the largest academic freshwater research facility of the great lakes.

The last speaker was Steve Arant from AECOM. Steve is a senior process engineer and was involved in increasing the City of West Bend’s WWTP capacity. Steve gave us an overview of the plant and prepared everyone for the tour.

The plant was amazing and in immaculate condition.

In closing, the WWOA SE officers wish to thank everyone that attended to make it another successful fall meeting of 2010.

Submitted by Vice Chairman, Dave Bogie, 10/09/10
The Kalahari Resort & Convention Center, Wisconsin Dells, Wisconsin was the setting for the 44th annual business meeting, October 2010.

President Bartel called the meeting to order at 12:05 p.m. Roll call was taken. All Officers and Directors were present. Approximately 275 members were present. President Bartel asked Jim Miller Secretary and Howard Jacobson President of Minnesota Wastewater Operators Association to stand up and be recognized.

President Bartel asked for a moment of silence for all the members who have passed away in the past year. Minutes of the October 8, 2009 meeting were presented for approval. A motion was made by Randy Herwig, seconded by John Leonhard to dispense with the reading of the minutes and to approve the minutes as written and published. Motion carried.

Executive Secretary R. McKee distributed copies of the Financial Report. McKee reminded the membership that this is an unaudited statement and is as of December 31, 2009. McKee reported the revenues for this fiscal year ending December 31, 2009 is $152,269.02. Expenditures totaled $191,190.88, with excess expenditure over revenue of $38,921.86. McKee explained that the deficit is largely due to the web site upgrade and is a one time expanse. A motion was made by Paul Borgo to approve the Financial Statement as presented. Dean Falkner seconded the motion. Motion carried.

**NOMINATIONS**

**ELECTION OF VICE PRESIDENT AND DIRECTORS**

Nomination Chairperson, John Bond placed into nomination the name of Wade Peterson for Vice President. President Bartel called three times for nominations from the floor. There being none John Leonhard made a motion the nomination be closed and a unanimous ballot be cast electing Wade Peterson to the office of Vice President. Dean Falkner seconded the motion. Motion carried. Wade Peterson was elected Vice President.
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Events. He thanked all the participants. Kevin Freber introduced the teams. “The Deuce is Loose” (Southern) Brian Skaife, Marc Zimmerman, Jeff Wellnitz; “Certifiable Operators” (North Central), Chris Helgstad, Jason Schill, Vern Williams; “Water Warriors” (Lake Michigan), John Guadagni, Holly Blazer, Kim Williams. “The Deuce is Loose” is first place and the “Certifiable Operators” and “Water Warriors” were tied for second place. Kevin Freber thanked all the team for a great event.

NEW BUSINESS

John Leonhard Chair Person of the Resolutions & Bylaws Committee reported that the Board is asking for an increase in the membership dues from $40.00 to $50.00 for a 2 year membership and Student membership from $20.00 to $25.00 for a 2 year membership. J. Leonhard expanded that this would be a Bylaws change and would require approval by the membership attending this business meeting. A discussion ensued. After discussion Dean Falkner made a motion to approve the dues increase, John Leonhard seconded the motion. Motion Carried. The dues increase will take effect January 1, 2011.

ADJOURNMENT

There being no further business John Leonhard made a motion to adjourn, Dean Falkner seconded the motion. Motion carried. The Meeting adjourned at 1:15 p.m., October 21, 2010.

Respectfully Submitted,
Richard D. McKee, Executive Secretary

OLD BUSINESS

No Old Business
**Kalahari Resort Water Park Tour of Waterworks Facility**

The Kalahari Resort Waterworks tour included one of the Water Park’s five (5) pump rooms, led by Assistant Water Park Manager Nick Huebing and Water Park Maintenance Manager Brian Ammerman.

The tour was informal, and attendees were free to explore the pump room on their own, with information provided by our tour guides and questions answered. The particular room we toured contained around 20 pumps, and equipment for sand filtration, liquid chlorine feed, water heating, and UV treatment. A few quick facts regarding the Waterworks at Kalahari:

- Three pump and filtration rooms serve the indoor water park
- Two pump and filtration rooms serve the outdoor park
- Municipal water from the Village of Lake Delton provides the park with water
- Level sensors in the various water park attractions initiate a “fill” cycle from the municipal water system

Through an automated valve:
- About a million gallons are in circulation at any given time
- 87 pumps serve the various attractions at the Resort, ranging from ½ hp to 60 hp
- Sand filtration provides cleaning of recirculated water
- UV Treatment is incorporated to destroy chloramines, supplement disinfection, and reduce chlorine dosages required
- The most common maintenance item is mechanical seal replacement, ranging around 1 pump per month.

Thanks to all who attended the tour and thanks to Kalahari Staff Members Nick and Brian for being our tour guides – knowing they had a few other irons in the fire at the time!

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BioIonix’s exclusive electrochemical process provides an effective solution for difficult wastewater disinfection challenges. It eliminates the risks and maintenance headaches of chemical methods or UV.

A major advantage of the BioIonix process is that it reliably disinfects turbid and opaque liquid streams, even those containing suspended solids. It also has been proven by an independent research laboratory to effectively remove pharmaceutical residuals.

Contact us to discuss how the BioIonix process may solve your specific operating challenges.
Portage Wastewater Plant Hosts WWOA Conference Attendees

Thank you to all who attended the Portage WWTP tour on Thursday, October 21st. The bus was full and the weather was great! General Engineering Company of Portage provided cookies, bars and soda for all who attended. Superintendent Skip Poster and operators Dave Hornischer, Brian Berger and Jeff Wilson were tour guides for the roughly 50 visitors. Jerry Foellmi of GEC assisted in explaining the two recent plant upgrades that he was involved with.

It was an opportunistic time for the visit as Brian was running the belt press at the time and the groups could see the unit in action. Others checked out the new RBCs that utilize secondary sludge recycle to enhance treatment. Skip is able to run his process with only 12 of the 16 RBCs in operation at this time. Better flow characteristics of the media and a reliable supplemental aeration system are factors to better treatment. Attendees liked the enclosed motor/drive ends of the RBCs which allow the crew to work on the units in poor weather without problems.

Thanks again to the staff of the Portage WWTP for giving a great tour and answering lots of questions.

Portage Wastewater Treatment Plant

WWOA Operators’ Ride 2011

With the 2010 Ride behind us, it is time to begin planning for 2011.

Our hosts will be the Salmis and Nichols.

The date has moved into August for the 2011 Ride. The cook-out is Thursday August 25, 2011 and the Ride is Friday and Saturday August 26-27, 2011.

The host hotel is the Super 8 Darlington, 201 Christensen Drive, Darlington, WI 53530. Phone 608-776-8830. Tell them you are with the Wastewater Operators Ride.

Hope to see you there.

Please contact Reid Snedaker at William/Reid Ltd., 262-255-5420 with any questions.
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ITT Flygt Corporation  N27 W23291 Roundy Drive, Pewaukee, WI  53072  (262) 544-5875
October 27, 2010

Dear Fellow WWOA Member:

The WWOA Technical Program Committee is requesting your assistance in developing the Technical Program for our 45th Annual Conference to be held October 4 - October 7, 2011. The La Crosse Center in La Crosse, WI will be our conference site.

Technical papers are being solicited at this time for the Technical Program. The Committee is especially encouraging members actively involved in the day-to-day operations of a wastewater facility to prepare and present technical papers at the Conference. The following are major subject areas that presentations may cover. Papers dealing with other topics will also receive consideration by the Committee.

1. Activated Sludge
2. Biosolids Handling
3. Nutrient Removal
4. Process Control and Automation
5. Design Concepts and Implementation
6. Staff Training and Development
7. Utility Management Skills
8. Computerization & Internet
9. Industrial Waste Issues
10. Maintenance Practices & Methods
11. Safety & Health Issues, Personnel & Process
12. Regulations, Watershed Issues
13. Laboratory Practices
14. Plant / Process Upgrades
15. Utility Benchmarking
16. Receiving Water Quality Issues
17. Collection System O&M / Programs Management
18. Operator Ingenuity and Everyday Problem Solving

Submit your outline(s) on the 2011 Conference Submittal Form (via e-mail, fax or mail) by January 6, 2011 to:

Wade D. Peterson
Baraboo Utilities
450 Roundhouse Ct.
Baraboo, WI 53913
Phone: 608-355-2740
Fax: 608-356-0518
Email: wpeterson@cityofbaraboo.com
(Word file for e-submission at wwoa.org)

Please consider responding to this request or forwarding it on to someone who may be interested in participating. The strength of the WWOA is in the sharing of ideas and information. The success of this organization is dependent upon you the individual member. Please consider making a difference!

Sincerely,

Wade D. Peterson

2011 Technical Program Committee Chair
At the October WWOA Board of Directors meeting, the WWOA Board of Directors approved a dues increase for 2011.

Membership dues for WWOA have increased from $40.00 to $50.00 for a two year membership. Student memberships increased from $20.00 to $25.00 for a two year membership.
On Saturday, September 11, 2010 Walworth County Metropolitan Sewerage District (WalCoMet) opened its treatment plant to the public with tours, demonstrations, equipment displays, a lift station tour, and its version of a tailgate party with refreshments and brats.

It took most of the staff, volunteers from the UW Extension, J.F. Ahern, and Donohue & Associates to make the event a success.

Tours began at the administration building where people were greeted and displays could be viewed on WalCoMet's history.

Groups toured the facility as a WalCoMet employee explained the processes and equipment used in treatment.

In the lab, testing requirements were explained and tourees viewed the activated sludge under the microscope. Guests could then “tail gate” as they viewed displays and a special demonstration from the UW Extension called, “Water, Water Everywhere.” Visitors also had the option of listening to a video put together by staff. Kids had their own area with a video, coloring book and crayons. As guests left they could visit one of the nearby lift stations. WalCoMet’s staff was pleased to have over 100 people tour its facility.

As a metropolitan sewerage district, WalCoMet serves 11 entities including: Delavan Lake Sanitary District, City of Elkhorn, Walworth County Institutions, City of Delavan, Mallard Ridge Landfill, Village of Williams Bay, Inspiration Ministries, Geneva National Sewerage District, Village of Darien, Town of Darien Utility District #1, and the Lake Como Sanitary District.

The District owns and maintains 31 miles of force main, 7 miles of gravity sewer and 10 lift stations.
North Central WWOA District Meeting Races Ahead

The fall NCD WWOA meeting, hosted by Northern Lake Service, Inc. was held at the Crandon International Off Road Raceway on September 16. Ron Krueger from NLS welcomed everyone to Crandon and provided refreshments and pastries. Ron was the first speaker of the day covering Sampling and Laboratory Documentation. Importance of the necessary data records to maintain accountability of reported results was shown. Doug and Steve from NLS then continued on with Low Level Mercury Testing. They covered an overview of the entire test from sampling techniques to the detailed lab test and analysis.

Next Eugene Laschinger from Town & Country Engineering highlighted the design of Rhinlander's new Wastewater Treatment Facility. Many new energy efficient technologies and extensive collection system improvements were shown. Rhinlander’s upgrade was made financially feasible through stimulus funds.

The group then welcomed Dan Peerenboom from the WDNR and his presentation on the upcoming Phosphorus and Thermal rules. Much concern was voiced as to the timing of these regulations and how the upgrade expenses to meet regulatory limits might not be feasible in these economic times. It was noted though that the phosphorus rule may not be imposed into a treatment facility's discharge permit for up to three permit renewals cycles.

Lyle Lutz then opened the business meeting calling for acceptance of the minutes to the 6/17/10 Spencer meeting. Seeing none, the meeting moved on. Lutz also mentioned that if anyone was interested in hosting a meeting to contact a steering committee member. The upcoming winter meeting will be hosted by Wausau. Lutz also thanked all the speakers and vendors for their support. Lutz then introduced Dave Carlson from the WWOA Board, who shared details about the organization and upcoming events. Lutz once again recognized the NC district as WWOA’s region of the year. Congratulations went out to Ken Bloom who will be competing at WEFTEC in the National Operators Competition. Lutz adjourned the business meeting and everyone proceeded to a great grill out lunch put on by the NLS staff.

After lunch the meeting continued with Ray Grosh from Intellisys speaking on ways to monitor energy efficiencies. It is possible to monitor plant energy loadings to track peak loadings which could cost extra money for the next year. With energy costs on the rise, the payback on energy management is a rather short period of time.

The final speaker of the day was Steve Arant from AECOM. Steve covered a range of alternatives to meeting low level phosphorus limits. Most of the advanced methods of phosphorus removal carry a hefty price tag and but will be necessary for many to meet upcoming discharge regulations.

Northern Lakes, Inc. then invited everyone to their Laboratory for a tour of the facility and they thanked everyone for coming to the meeting hosted in Crandon.

Submitted by Lyle Lutz, North Central Region Chairman
### WWOA REGIONAL OFFICERS 2010 - 2011

#### Lake Michigan
- **Chair:** Kris August  
  Kiel WWTP  
  100 Park Avenue  
  Kiel, WI 53042  
  W: 920-894-2133  
  kas81@wi.com

- **Vice Chair:** Jeff Smulde  
  GBMSD  
  2331 N. Quincy Street  
  Green Bay, WI 54302  
  920-438-1003  
  jeffsmulde@gbmsd.org

- **Secretary/Treasurer:** Bernice Hemple  
  Great Lakes Underground Equipment  
  12777 W. Silver Spring Road  
  Butler, WI 53007  
  W: 262-424-2963  
  hemplee@midwest.net

#### North Central
- **Chair:** Terry Vanden Heuvel  
  Merrill WWTP  
  1004 E. First Street  
  Merrill, WI 54452  
  W: 715-536-5259  
  tvandenheuvel@ci.merrill.wi.us

- **Vice Chair:** Matt Salamun  
  Whiting Utilities  
  8600 Water Street  
  Stevens Point, WI 54467  
  W: 715-344-4545  
  whitingutilities@att.net

- **Treasurer:** Ken Bloom  
  Marathon Wastewater Utility  
  104 Chestnut Street  
  Marathon, WI 54448  
  W: 715-443-2223  
  gcwwtp@dwave.net

#### Steering Committee
- **Chair:** Ron Dickrell  
  Marshfield Wastewater Utility  
  2601 E. 34th Street  
  Marshfield, WI 54449  
  W: 715-634-4612  
  pa@centurytel.net

- **Steering Committee:** Lyle Lutz  
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