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43rd Annual W.W.O.A. Conference
October 6-9, 2009 • Green Bay, Wisconsin
The Hotel Sierra, KI Convention Center
Green Bay Metropolitan Sewerage District - Host
President’s Message

It is great to see the temps slowly rising and the days getting longer. By the time this article comes out, we will have “sprung” ahead for daylight saving time, and spring will be knocking on our doors. I for one am looking forward to the warm days and green grass. I can hardly wait to put the pontoons in the water and chase a fish or two around the lake.

With changes in seasons brings changes to our industry. Treatment plants can operate totally different in warm weather than they do in colder temperatures. My experience has shown me that our WWTP operates far more efficiently in summer months versus the cold weather months. The activated sludge process reacts to changes in influent loadings with ease when the bacteria are warm and happy.

In recent weeks I have had conversations with a couple of our members about other changes in our industry. Kay Curtain (one of our past presidents) has noticed a big change in people attending classes to become certified operators. The classes have traditionally been filled with younger people, with a lot of them looking at specialized fields such as labs. She is now seeing more people in the older age bracket that are forced to look at career changes due to our failing economy. These people, who never thought much about wastewater in the past, are now helping to fulfill the need for certified operators.

Another member was commenting about one of our past keynote speakers that talked about change and our image with the public. It is amazing how changing a few words can affect the public’s opinion of our industry. A good example of this is how in the past we referred to our byproducts as sludge, but we now call that same product bio-solids and public seems to accept that more readily.

In the coming months I challenge every one of us to come up with new ways to create a more positive image of our industry. It may be simple things like changing a word or how we as employees appear to the public. I have noticed little things, like keeping the trucks clean, bring positive attention from the public.

Several years ago, a neighboring plant’s operator retired. It was about six months before I had the opportunity to go and meet the new operator. I was amazed at the changes at their plant. The past operator always ran a good plant, but this new person had a different outlook on things. When I commented on how great the plant looked, he said something that I will never forget. He said, “Just because it is a sewer plant, doesn’t mean it has to look like one”. With that attitude, the employees of that plant have gained great respect from the community and their City Council.

With the economy as it is these days, any positive changes we can make will benefit us all in the long run. Again, I challenge you to look for ways to improve our public image and share your ideas with the rest of our membership through an article in “The Clarifier” or by contacting me directly.

John Bond
New technology can allow existing aerated lagoon treatment plants to upgrade their plant to meet low BOD₅, TSS, and Ammonia Nitrogen limits year around without the high cost of converting to an activated sludge process. The Village of Wittenberg, in western Shawano County, is a prime example.

Wittenberg’s wastewater treatment facility (WWTF) was originally constructed in the early 1980’s and included a two-cell aerated lagoon, a settling lagoon, sand filtration, and chlorine disinfection. New effluent limits for Total Phosphorus and Ammonia Nitrogen along with significant growth, since construction of the original facility and anticipated for the future, required upgrading the wastewater treatment plant after twenty-some years of operation.

To address these challenges, a modified wastewater treatment facility was designed and placed into operation in spring of 2006. The modified plant features floating covers on the aerated lagoons to minimize heat loss from the lagoon water under winter conditions and to thereby allow the plant to meet the new ammonia limits. Fine bubble diffusers were also installed in the lagoons to enhance biological treatment performance and to minimize energy usage. The first aerated lagoon cell was converted into two reactors in series through the use of a floating baffle. Submersible mixers in the first lagoon cell are used to suspend biomass and increase the biological reaction rates.

Floating covers were also added to the settling lagoon to eliminate algae growth and to enhance solids settling. A “sludge stilling well” was added to the settling lagoon to concentrate settled sludge in a small area and to thereby allow sludge to be more readily pumped out of the lagoon.

A chemical phosphorus removal system was added to allow removal of phosphorus from the wastewater as required by the discharge permit. Ferric chloride is added to the wastewater in a mixing box located immediately upstream of the settling lagoon.
A reed bed system was constructed to allow for long term stabilization, dewatering, and storage of sludge removed from the settling lagoon. Four reed beds were constructed. Each reed bed includes reed plants, a sand bed, and a gravel underdrain. Water which drains from the sludge filters down through the reed beds to the underdrain system, is routed to a pump station, and is then pumped back to the aerated lagoons for treatment.

And finally, an Ultraviolet Radiation system was installed after the sand filters to accomplish effluent disinfection, without the use of hazardous chemicals.

Plant performance has been excellent with a significant improvement in Biochemical Oxygen Demand (BOD$_5$), Total Suspended Solids (TSS) and Ammonia Nitrogen (NH$_3$-N) removal compared to the performance before the modifications. Performance through two winter seasons has been excellent.

The WPDES permit for the Wittenberg WWTF specifies the following effluent limitations.

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<thead>
<tr>
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<th>Limit</th>
<th>Period</th>
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<tbody>
<tr>
<td>BOD$_5$ &amp; TSS</td>
<td></td>
<td></td>
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<tr>
<td>Monthly Average</td>
<td>30 mg/L</td>
<td>All Year</td>
</tr>
<tr>
<td>Weekly Average</td>
<td>40 mg/L</td>
<td>May – Oct.</td>
</tr>
<tr>
<td></td>
<td>45 mg/L</td>
<td>Nov. – April</td>
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<tr>
<td>NH$_3$-N</td>
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<tr>
<td>Daily Maximum</td>
<td>27 mg/L</td>
<td>Nov. – April</td>
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<tr>
<td></td>
<td>21 mg/L</td>
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<tr>
<td>Monthly Average</td>
<td></td>
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<tr>
<td>Total Phosphorus</td>
<td>1.0 mg/L</td>
<td>All Year</td>
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<tr>
<td>Monthly Average</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fecal Coliforms</td>
<td>400 per 100 mL</td>
<td>May – Sept.</td>
</tr>
<tr>
<td>Geometric Mean</td>
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During calendar years 2007 and 2008, the effluent BOD$_5$ concentration has averaged 6.3 mg/L, the TSS concentration has averaged 6.0 mg/L, the Ammonia Nitrogen concentration has averaged 0.44 mg/L, and the Total Phosphorus concentration has averaged 0.63 mg/L. The Village has struggled just a bit with Total Phosphorus – the monthly average limit was exceeded twice, in February and August of 2007. After working out the usual bugs and getting the correct chemical feed rate established, the facility has performed as intended for the past year, with no further exceedances of the limits. And there’s every reason to believe that it will continue to do so for many years.

The Green Bay Metropolitan Sewerage District has the following items to give away:

- Four newer style meters (Orbisphere model # 29092) and two of the older style (Orbisphere model # 26071)
- Seven D.O. probes related to both meter models. All probes are in need of a factory rebuild

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We goofed! On the cover of the February issue of The Clarifier, we had a photograph that was supposed to show the Heart of the Valley Metropolitan Sewerage District’s wastewater treatment facility. But the large circular clarifier that appears pretty much in the center of the picture actually is part of the wastewater treatment system for the Thilmany paper mill next door.

Our apologies to the people at the Heart of the Valley MSD and to the people at McMahon Associates who prepared and submitted the photos and the cover story.

I am reminded of the line from the movie Cool Hand Luke, when the prison warden tells Luke (Paul Newman) that, “What we have here, is failure to communicate.” Kari Dennis from McMahon sent the photograph to me, which I forwarded to Jon and Jean for layout. But I did not explain that the photo should not be “cropped” except perhaps a small part of the bottom of the photo with the clarifier and parking lot belonging to Thilmany. I knew that we had plans to change the appearance of the cover of The Clarifier, but I did not appreciate what that meant for the cover photo.

This second aerial photo taken from a different angle helps WWOA members gain a greater appreciation for the site constraints that Heart of the Valley MSD and McMahon Associates faced with this plant upgrade.

Answers to February Brain Teasers

Intro:
Answer: d. The bacteria in the mixed liquor and return activated sludge meet with the food source (influent BOD) at the beginning of the aeration basins, and adsorption of the organic soluble food onto the cell walls of the bacteria takes place. Absorption through the cell well of the bacteria takes place after the food had been broken down chemically and molecularly, farther along in the process.

Advanced:
Answer: c. High temperature (above 27°C) or toxic compounds may inhibit the nitrobacter sp. that change nitrite to nitrate, since they are more vulnerable to environmental changes than the nitrosomonas sp. that change ammonia nitrogen to nitrite. Typically, 1 mg/L of nitrite-nitrogen will consume 5 mg/L free chlorine during a reaction that forms a weak hydrochloric acid.

Bruce can confirm this by analyzing effluent nitrite and nitrate nitrogen and comparing results.
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EBARA
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On November 6, 2008, the Lake Michigan District held its final meeting of 2008 at Eagle’s Nest on the Bay Supper Club in Green Bay, WI. There were 84 attendees.

Tom Sigmund, Executive Director of the Green Bay Metropolitan Sewerage District (GBMSD) welcomed the group to Green Bay and presented a little history and updates of GBMSD.

The first speaker up for the day was J.R. Yde of Sioux Valley Environmental. His presentation was “Processing Bio Solids with a Rotary Drum Thickener” or “Why Sludge is My Life”. It concerned the various applications for a Rotary Drum Thickener including thickening Primary or WAS to improve digester performance and / or reduce the total digester or storage tank volume required, replacement of other methods of thickening to reduce power and O & M costs and how the equipment can be adapted to existing facilities. The process was also explained with emphasis on how to maximize efficiency.

Dale Marsh of Robert E. Lee & Associates followed with a presentation that addressed how to eliminate the need for confined entry equipment and procedures when installing flow measuring equipment in sanitary sewer manholes. Most communities avoid I/I studies because they do not have the equipment, work force, or money to allow them to install the flow metering equipment and collect the data.

The presentation showed how the equipment could be installed without confined entry equipment and the time it took to do it. The presentation addressed how to collect the data and to determine if the data from the field was good/bad data and how the bad data could be changed to get good data to evaluate the amount of I/I coming into the collection system. With the cost of treating wastewater, the importance of removing I/I is becoming a very high priority in wastewater treatment plants in Wisconsin. With this new technology, the municipality could now do the work and save a major portion of the cost of collecting field data for I/I Studies.

Right before break, Brian Helminger, Chair called the business meeting to order. First order of business was to review minutes of the August meeting and treasurer report read by George Kemmeter, secretary/treasurer. The motion was made and seconded for approval of both.
New Business: Jeff Haack gave DNR updates and John Schoen, Vice Chair announced the two LMD teams for the WWOA Operators Competition in Stevens Point in October 2008.

Upcoming Events: Government Affairs Seminar on February 19, LMD WWOA meeting on February 26, 2009 in Heart of the Valley, and Spring Biosolids Symposium on March 10, 2009 in Stevens Point was announced. LMD is still looking for a host site for the May 2009 meeting. The motion to adjourn was made and seconded.

Following our break, Troy Larson of Strand Associates delivered a presentation describing biological foaming in activated sludge wastewater treatment plants. Troy discussed the causes and triggers of foaming while focusing on filamentous organisms that are frequently involved when foam is observed. Troy described that foaming problems can be more than just an esthetic concern, especially if the foam causing organism is also impacting the settling characteristics of the mixed liquor as Microthrix Pavicella would. Solutions offered in the presentation included increased wasting (if practical), removal of grease from the system, and removal of foam traps within the activated sludge system.

Right before lunch Ron Dickrell, Superintendent of Marshfield WWTP presented the “Marshfield Story” – “Pharmaceutical Take-Back.” Conventional wastewater treatment systems have difficulty removing these contaminants without installing costly reverse osmosis, activated carbon, or other sophisticated treatment operations. Therefore, the most responsible practice to protect water quality is to keep these contaminants out of
Ron Dickrell, Superintendent of Marshfield WWTP

our wastewater before they reach the discharge body of water by controlling the sources. It is quite common for many medical professionals to advise, and even encourage, the general public to dispose of unused pharmaceuticals and prescription drugs by flushing them down the toilet. Solid waste disposal is sometimes suggested but still is not the best disposal method since they could also ultimately end up in landfill leachate. Therefore, a handful of citizens in the City of Marshfield, who are truly passionate and concerned about water quality, felt compelled to intervene to provide the most common-sense approach to assist in controlling these sources.

This group of concerned citizens developed a plan for a Pharmaceutical Take-Back Program that became the first of its kind in the State of Wisconsin. Most members of this group were already associated with the Groundwater Guardians for the Marshfield Area. With much research, numerous obstacles, and much planning, this group of citizens was successful in coordinating several take-back programs which has removed more than 1,400 pounds of pharmaceuticals from being discharged into the environment. This effort has evolved into the establishment of a permanent take-back depository located inside the Police Department lobby. More than 600 pounds per year of pharmaceuticals are being collected safely and conveniently for the public. This effort has also inspired many other take-back collection programs to be established around the State of Wisconsin. Thus, the goal of educating the public regarding the safe disposal of pharmaceuticals has been attained and our waterways have been protected from this source of contamination.

Last up, right after lunch was Dan Madigan, President of Feeco International. Dan started out by discussing how we handle waste and the challenges. He mentioned the
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FIELD SERVICE

<table>
<thead>
<tr>
<th>Name</th>
<th>Mobile</th>
<th>Pager</th>
</tr>
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<tbody>
<tr>
<td>Joel Smith</td>
<td>414-477-9795</td>
<td>242-775-0104</td>
</tr>
<tr>
<td>Rick Kutcher</td>
<td>262-951-6327</td>
<td>262-775-0106</td>
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Brown County Waste Transformation Project and the primary challenges that it faces, similar to the ones being faced across the nation. There is not enough suitable cropland for land application. He indicated that we have to view our wastes as resources. The Brown County Waste Transformation Project will use Waste Transformation Technology to change manure into fertilizers, erosion control products, or forest restoration products, which forever changes the economics of Waste Management in Wisconsin. In the future, manures will no longer be viewed as waste but as a valuable raw material in making new products. Waste Transformation Technology will remove moisture on the farm, retain the nutrients with the solids, efficiently transport the solids to a central processing facility, and dry the solids into new products that can be marketed worldwide. He ended his talk by summarizing the national significance of waste transformation technology.

Driving instructions were given to the group to get to Feeco International for a plant tour. Brian Helming thanked Robert E. Lee for sponsoring our break, adjourned the meeting, and credit slips were distributed. •

Respectfully submitted by,

George Kemmeter
LMD Secretary
Our pumps do a lot of heavy lifting. They have to. The demands for environmentally friendly solutions to water and wastewater management are getting heavier.

For more than sixty years, L.W. Allen pumps and Altronex control systems have been providing municipalities with wastewater treatment pumps and pump systems. Today, the greatest opportunity for cost savings is the efficient operation of your facilities. Our SCADA telemetry expertise lets you monitor potentially dangerous fluctuations, which lead to equipment and system failures and inefficiencies.

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Friends and colleagues, by now many of you may have heard that I am retiring from the DNR, and with that I am also leaving my post as one of the editors of The Clarifier.

It’s been great working with so many of you. During my “exit interview” with my supervisor I was asked to identify highlights of my career with the department. One of the most memorable highlights was receiving the Service Award from WWOA a couple of years ago. What an honor! Other highlights included working on administrative rule packages for Compliance Maintenance (NR 208) and Municipal Sludge (Biosolids) Management (NR 204) because that work involved some serious collaboration with the regulated community – including members of WWOA. I wish to extend my thanks to all of you. Please keep up the fine work protecting and managing our water resources.

But the bottom line is that thirty years as a “regulator” is enough. And I’ve always wanted to retire while I was still healthy enough to enjoy myself. I don’t have any firm plans for this year, except to ride my motorcycles and travel around a bunch. Perhaps our paths will cross!

Use the link below for general information on Wastewater and Municipal Waterworks Operator Certification Programs:

Use the link below for Operator Certification Continuing Education Information

Small Water System Operator Certification Program (for OTM/NN)

Siemens Water Technologies Intra-Link™ LC150 pump-control telemetry units for water and wastewater industry. Features include: 2 or 3 pump controls, alarm/event log, VFD control, volumetric flow calculator, security, telemetry ready and DF1 (Allen Bradley) protocol. Contact Siemens Water Technologies at 800.224.9474.
www.siemens.com/water

Water Technologies
McMahon Celebrates 100-Year Anniversary

The McMahon Group has announced that its Engineering and Architectural services firm, McMahon, is celebrating 100-years in business in 2009. The firm was founded by A.E. McMahon as a Civil Engineering Firm, based in Menasha in 1909.

Since ownership transition in the 1980’s, the firm has been led by current President and CEO, Denny Lamers, P.E. McMahon expanded in 1989 and 1993 with the opening of offices in Valparaiso, Indiana and Machesney Park, Illinois. The firm expanded its architectural services offerings with the acquisitions of Miller Wagner Coenen Architects in 1993, and Sachs Long & McMahon in 2005.

Today, McMahon has 150 employees, including 120 in the firm’s Corporate Headquarters located in the Town of Menasha. McMahon provides civil, environmental, water, wastewater, structural, electrical and industrial engineering, architectural and surveying services to public and private sector clients throughout the Midwest, including many municipalities in the Fox Valley. The company has been the recipient of many design awards and has been recognized nationally as an Engineering News Record (ENR) Top 500 Design Firm and CE News Best 50 Civil Engineering Firms to Work For.

<table>
<thead>
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<th>WWOA Conference Schedule</th>
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<tbody>
<tr>
<td>2009 - Hotel Sierra &amp; KI Center, Green Bay</td>
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<tr>
<td>2010 - Kalahari Resort, WI Dells</td>
</tr>
<tr>
<td>2011 - La Crosse Civic Center, LaCrosse</td>
</tr>
<tr>
<td>2012 - Kalahari Resort, WI Dells</td>
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April 2009 Brainteasers

SUBJECT: Phosphorus Removal

Introductory:
Operator Dale was informed by his consultant that one of the reasons that he is experiencing insufficient biological phosphorus removal is because the PAOs in his plant are hungry. What is their favorite food?

a. volatile fatty acids  
b. metal salts  
c. struvite  
d. calcium carbonate  
e. crème brûlée

Advanced:
The laboratory technician at Perfect Scents wastewater facility accidentally dumped the effluent sample that he was going to use to analyze the effluent total phosphorus for his facility. However, he had already completed several other analyses of the effluent, and was hoping that he could come up with an accurate estimation to avoid another reprimand for premature sample dumping. Using the data supplied, what is the estimated concentration of total phosphorus in the effluent of this facility?

The influent total phosphorus concentration is 7.2 mg/L.

The total suspended solids concentration of the effluent is 25 mg/L.

The phosphorus concentration of the mixed liquor in the facility is 6%.

The soluble phosphorus content of the effluent is 0.1 mg/L.

a. 0.3 mg/L  
b. 1.6 mg/L  
c. 4.3 mg/L  
d. 7.1 mg/L

Answers will be printed in the June 2009 issue.
Up until just one year ago, municipal dischargers were wholly exempt from the proposed revision to the thermal water quality standards rule. In the draft that went to public hearing last year, the municipal exemption was removed and a streamlined variance procedure was inserted for municipalities. The most recent draft rule, unveiled in January 2009, goes a step further and removes the variance procedure, subjecting all municipalities to the potential for thermal standards. This change was prompted by EPA concerns. A public informational meeting on the latest revision of the draft thermal rules was held in January 2009. At the meeting, the DNR emphasized its position was not meant to penalize POTWs, but to treat everyone equally. Unfortunately, this rule, as currently proposed, could result in limits for a significant number of POTWs. Facilities with discharges to effluent dominated streams or to cold water streams are the most likely to be affected. The new draft requires a permit by permit review and leaves substantive discretion to the permit writers in its application to municipal POTWs.

The Department is hoping to request approval of the rule this spring. We are hoping to work with DNR to be sure these issues are addressed prior to that time.

**Thermal Standards – Heating Up**

*By: Paul Kent and Julie Baldwin - Anderson & Kent, S.C.*

*Municipal Environmental Group - Wastewater*

The Lake Geneva Utility Commission (4,000 customers) is seeking a qualified individual for a full-time water/wastewater operator position. The ideal candidate is self-motivated, energetic, a team player willing to perform a wide variety of job tasks, possesses great people skills, and has a willingness to serve the public.

WDNR water certifications in groundwater and distribution and iron removal and wastewater certifications in activated sludge, laboratory, and mechanical sludge are all plusses. Successful candidate will be required to obtain the listed water certifications within one year of employment. Must have a good driving record and be able to obtain a valid Wisconsin Commercial Driver’s License (CDL) within six months. The Utility Commission cross-trains its operators and the successful candidate may be assigned to the wastewater plant after one year. Operators take turns on rotating on-call weekend shift one weekend monthly. Base rate for qualified operators in 2009 is $21.38/hour plus WDNR certification incentives. Excellent benefits package including vacation, sick, retirement, health, dental and more. Pre-employment physical and D&A screening.

Applications will be accepted until May 1, 2009 or until the position is filled. Send resume to Lake Geneva Utility Commission, P.O. Box 187, Lake Geneva, WI 53147 or email resume’ to lgwater@genevaonline.com. Lake Geneva is an equal opportunity employer.
Reduce Energy Cost with Manual Peak Shaving
By Ray Grosch
rgrosch@intellisys-is.com

Reducing the maximum power used at a wastewater facility can significantly reduce yearly power cost. The graph below depicts a typical 1.0 MGD activated sludge wastewater facility electric power use on a daily basis. This trend graph presents the 15 minute electric power meter readings used by the Electric Utility to measure the Demand Charge. Most Power Utilities have a Peak Demand Charge. The peak demand a 15 minute period can affect the demand charge on the monthly power bill for up to 12 months.

It’s easy to see by viewing the graph that a higher level of power consumption takes place during the hours of the day when the plant is staffed. The hours that the plant is staffed are associated with additional process operations. It is also the time of day when the peak demand is greatest. Because the plant is staffed during these hours, it is possible to keep a watchful eye on power consumption and manage the peak usage. When special operations such as tank mixing, truck loading, sludge thickening, etc. are required, it may be possible to turn off other operation temporarily in order to manage the peak demand. An example of a process which could be temporarily turned off is the aeration blowers for an aerobic digester.

Typical peak demand charges from Electric Utilities in Wisconsin (such as Wisconsin Electric and Alliant Energy) are in the $11.00 to $12.00 per kW.

In the example graph we can see that the peak demand for this date was established when the demand exceeded 250 kW for about 30 minutes. Normal usage is closer to 200 kW during hours when the plant is staffed and 150 kW during unmanned hours. A kW monitoring system which could alarm and notify operators when the 200 kW normal use is exceeded will allow the operation staff up to 15 minutes to take actions to reduce the peak demand.

The 50 kW short increase in Peak Demand shown on the graph will add about $550.00 to the monthly electric bill and can affect the billing for up to 12 months. The total cost for this one time event could be $6,600.00 for the year. That Peak Demand charge does not include the charges for actual kWh used.

Monthly electric utility bills usually contain several different billable categories. Bills may include:

1. Customer or Meter Charge – a fixed daily fee for providing service. This charge varies depending on the provider.
2. Maximum Demand Charge – the average kW in 15 consecutive minutes of greatest consumption during a billing period. This charge is typically $11.00 to $12.00 per kW.
3. Energy Charge – the actual charge for energy used. Many electric utilities charge different rates for different times of day to their large industrial users. Typically these rates range from about $0.075 per kWh during peak demand hours and $0.035 per kWh during non-peak hours. Additional savings can be achieved by shifting some operations to off-peak hours.

A typical electric power bill for this 1.0 MGD plant could include:

Customer Charge…..$1.52877/day $ 45.86
Demand Charge…..$11.205 x 250 kW $2,800.00
On-Peak Charge…$0.07 x 62,200 kWh $4,354.00
Off-Peak Charge…$0.05 x 92,800 kWh $4,640.00
Total monthly bill............................................$11,839.86

An Energy Monitoring and Management Plan could easily reduce the monthly billing in this example by 5 to 10 percent. With real-time energy monitoring on this plant energy costs could be reduced $6,000.00 to $12,000.00 annually.

For additional information on Energy Monitoring and Management systems, contact IntelliSys Information Systems. (800 347-9977).
Discharge limits for phosphorus removal are more stringent than ever and pose a definite challenge for treatment plants. In most cases, the degree of removal required by a facility is determined by the quality of the receiving stream. Although a high degree of phosphorus removal can be achieved with a sophisticated secondary treatment process such as an AquaExcel® system or AquaPASS® system, some plants require even lower phosphorus levels. In this case, tertiary treatment is essential and lower levels can be achieved with an Aqua Cloth Filter utilizing OptiFiber® cloth media, AquaMB Process® or Aqua-Aerobic® MBR system.

:: AquaExcel® BATCH REACTOR
- Advanced nitrogen and phosphorus removal in a single unit process, eliminating the need for separate secondary clarifiers.

:: AquaPASS® PHASED ACTIVATED SLUDGE SYSTEM
- Time-managed aerobic and anoxic reactions in a continuous-flow process schematic. Nutrient removal is expedited via Aqua's unique Phase Separator conditioning technology.

:: AquaDisk®/AquaDiamond® CLOTH FILTERS
- OptiFiber® pile cloth media provides advanced phosphorus removal.

:: Aqua-Aerobic® MBR MEMBRANE BIOREACTOR

:: AquaMB Process® MULTIPLE BARRIER MEMBRANE SYSTEM
- High-level nutrient removal utilizing multiple barriers, featuring filtration with cloth media filters followed by membranes.

:: IntelliPro® PROCESS MANAGEMENT SYSTEM
- Offers an essential link between operations, equipment and treatment objectives for efficient plant operation with integrated comparative analysis and operator guidance via a unique optimization program.

FOR MORE INFORMATION
CONTACT:
Tom Dennis
Hilbert, WI
Mobile 414.322.1567
Email tdennis@drydon.com

Jeff Williamson
New Berlin, WI
Mobile 414.881.3778
Email jwilliamson@drydon.com
NWWOA Fall meeting Minutes - Hayward WI
October 24, 2008

Chairman Jim Hall opened the meeting with a welcome to the group. Chairman Hall then introduced Joe Knisley from HD Supply who brought to the attention of all communities that there is a recall on Waterous hydrants manufactured between 1999 to 2004. There is a grease issue with corroding parts and that parts and labor will be supplied by Waterous to replace the grease and affected parts.

Chairman Hall then introduced the honorable Mayor Thomas J. Duffy Jr., who welcomed the group to Hayward and expressed his gratitude for all the work we do as wastewater operators.

Chairman Hall then introduced the first presenter, Jon Strand from S.E.H. whose topic was finding reliable water in the City of Hayward. Well records go back to the early 1900’s with five wells and one 150,000 gallon storage tank. The water tower had a boiler below it to heat the water in the winter to keep the tower from freezing. This boiler is no longer in service. The growth of Hayward demanded a system change. Well #6 was developed with a capacity of 95 GPM and a new 500,000 gallon water storage tank. Other well sites were needed but very hard to come by due to the geological information and the proximity to the existing system. Several sites were selected with great hurdles but good water was found. The two new sites, well #7 produced 700 GPM and well #8 produced 1500 GPM. Both the new wells are outside the city limits so there was some intergovernmental cooperation needed. The well structures contain submergible pumps, Mag meters, battery backup for controls, and a scada system. Once the new system was put on line the DNR order came down to abandon wells #1, 2, & 4. The City chose to abandon well #3 and never put well #5 on line. The total project cost was $2,267,000.

Chairman Hall introduced the next presenters, John McQue-Public Works Director, Roccy Raymond-S.E.H., and Paul Gont-S.E.H. The topic was on fine bubble diffusion at the Hayward treatment plant. Early history of Hayward WWTP and the finished product were as follows. Put in 1980 was a five mile force main to two aerated lagoons and four seepage cells. The wastewater flow doubles in the summer months due to tourism.

In 1990 forest irrigation was installed. In 2005 a major WWTP improvement took place. Lagoons were dredged, sludge was removed, coarse bubble diffusion was replaced with fine bubble diffusers, and new flow measurement was installed, new sampler and stand-by generation. In 2008 the main lift station was coated and cathodic protection was installed. The spray irrigation of effluent was upgraded with larger pumps for better PSI at the spray nozzles. All this provided better plant operations and continued environmental protection.

Chairman Hall introduced the next presenter, Matt Houston from Infretech. Matt's topic was on sewer spot repair. Matt talked about CIPP—cured-in-place pipe with advantages being cost savings, no disruption of sewer flow, no disruption of traffic flow, no disruption of business areas, no disruption of other utilities, much quicker than excavating, and is a long term fix. To do this procedure, you will need to clean the sanitary line by high
pressure jetting, then televise the line looking for cracks, mis-matched joints, pieces missing, sags, protruding taps and location of lateral connections, install repair sleeve and re-televise to finish job. If a pipe is more that 15% defective, you might want to consider a complete pipe replacement of slip lining from manhole to manhole rather than spot repair.

Chairman Hall introduced the next presenter, Brian Akason from Energenecs. Brian discussed the telemetry system installed for Hayward. The system has an adjustable antenna at the DPW building that can talk to all wells, towers, and WWTP. The system has an information diagnostic mode that continually monitors the communication system. The most important aspect is the main antenna and the master control. Their alarm system was tailored around what their needs are. Brian suggested not having remote control at the lift station because of added maintenance and the awareness of lock out/tag out. All system information is brought to DPW building and can be printed off or stored in the computer. The scales for chemical addition are also monitored and back to central, which was suggested by the DNR. A security system was also incorporated in the information highway.

A tour of the WWTP and well house facility was conducted along with equipment demos. It was a very interesting tour/demo that gave us a better idea of technology advancement.

The final presentation was by Dave Blumer. Dave’s topic was on invasive species in our lakes. Species is described as anything alive. Natural is described as always being found here. Invasive is described as invading or taking over. Some examples of invasive are the rabbits in Australia, snakes on certain islands, and insects that kill trees. How do they get here? Ballast water, stocking, nursery planting, bait industry, Aquaculture, and aquarium trading. The #1 invasive plant species in Wisconsin is Eurasian Water Milfoil. The main problem is it spreads quickly, and overtakes other native plants and it is an early grower in the spring. Other problem plants are Curly leaf pondweed and Purple loosestrife. The world’s worst aquatic plant is the Water Hyacinth. This plant will double in size in 6-18 days, and is on 35 states noxious weed list. Another invasive plant is the Hydrilla Verticillite, which is almost the perfect plant in that it can adapt to almost any water condition. Some other invasive species that are not plants are Chinese Musly Snail, the Banded Snail, New Zealand Mudsnail, and the fresh
water jelly fish (found in Viola Lake in Burnett County). Managing invasive species is a major investment; it is hard to get rid of these and requires lots of physical work, including mechanical and chemical means.

A business meeting followed with election of officers for 2009:
- Chairman – Katie Goin, Cumberland
- Vice Chair – Joel Weber, Bayfield
- Secretary – Wally Thom, Rice Lake
- Treasurer – Mike Romsos, Barron

Tentative meeting dates and hosting communities are as follows:
- Spring – April 17 - Rolling Oaks in Barron WI
- Summer – July 17 - Siren
- Fall – October 16 - Park Falls

Meeting was adjourned.

Respectfully submitted by,

Wally H. Thom
Secretary NWWOPA

IN CONTROL - April 2009
Successful Operations through Process Control

By Jack Saltes, Wastewater Operations Engineer
Department of Natural Resources

CMOM IN WISCONSIN

Capacity, Management, Operation & Maintenance

Is CMOM another one of those four letter words in your wastewater vocabulary? Does it make you roll your eyes and shake your head? Just another one of those bureaucratic make-work ideas that environmental regulatory agencies dreamed up? Well, until you run that sewer TV camera down every one of your sewer pipes, you may have another opinion of things. I don't

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think any of you like having to respond to a basement backed up with sewage, sewage overflowing somewhere, a lift station not working, dealing with severe grease or debris in a sewer pipe or a wastewater treatment plant hydraulically overloaded and washing out solids. Reactive maintenance and angry residents are stressful.

Many of you have asked, “Exactly what is CMOM?” CMOM stands for Capacity, Management, Operation & Maintenance and is a holistic way of managing and operating your sewer system. Kind of an asset management, environmental management system and O&M program all rolled into one. For some of you though, CMOM can have another meaning, Crisis Management, O(zero) Maintenance but I hope not. With public infrastructure aging and deteriorating, and public work projects likely to receive more attention in the coming years, it is time you should be starting to put your sewer system in sight, in mind if it isn’t already. Maintaining and improving the performance of your sewer system is critical to protecting public health and property (eliminating basement backups) and protecting water quality (reducing SSOs) in your communities, not to mention protecting yourself from the work stress an improperly operated and managed sewer system can cause.

True to the intent of these regularly featured “In Control” articles, having a CMOM program will greatly help keep you in control of your sewer system and have successful operations of it. Throughout this year and next, you will be hearing and learning much more about CMOM, through webcasts, booklets, pamphlets, checklists and training sessions that we are developing through a USEPA grant we received. This information and education will be geared for our smaller communities across the state which is most of you. The Compliance Maintenance Annual Report (CMAR) too is being revised to include more questions about CMOM and what a CMOM program should entail, which you will see beginning this April in your eCMAR collection system section.

Capacity, Management, Operation & Maintenance (CMOM) consists of eight elements:

- Goals
- Organization
- Legal Authority
- Operation & Maintenance Activities
- Overflow Emergency Response Plan
- Capacity Assurance
- Annual Self-Auditing

The next eight installments of In Control through 2009-2010 will be focused on each of these elements of a CMOM program, one at a time, in hopes that you will better understand CMOM so that you will be able to develop a good CMOM program for your own community, not because DNR is telling you so but because it just makes good ŠenŠe. Many communities in Wisconsin are already doing so as they recognize the importance of maintaining and rehabilitating their sewer and water infrastructure and assets. While we are very good at building things, often we are not quite so good at maintaining them. The time has come that those “out-of-sight, out-of-mind” sewer systems become “in sight, in mind”.

“As we say in the sewer, if you are not prepared to go all the way, don’t put your boots on in the first place”

It’s spring, so get your boots on and let’s get to work!
The winter meeting of the North Central Region of the WWOA was held on January 29, 2009. The meeting was hosted by the Village of Marathon and the Village of Edgar. The meeting was held at the Rib River Ballroom.

Ken Bloom opened the meeting at 8:30 am, introducing Dave Joswiak, Marathon Village Administrator. Mr. Joswiak welcomed those in attendance and complimented them on their dedication to protecting the environment.

The first speaker of the day was Paul Kent, Municipal Environmental Group. Mr. Kent explained that MEG was formed to give a lobbying voice to municipal wastewater entities when dealing with environmental and regulatory issues. He detailed some of their lobbying efforts. Their efforts included monitoring the effort to implement phosphorus water quality standards.

The EPA started the initiative in the early 1990’s. The original intent if the initiative was to raise all the water bodies in designated water quality regions to the quality of the top 25% water bodies in the region. DNR used other factors in their effort to develop water quality standards for water bodies.

DNR’s proposed phosphorus water quality standards vary by water body classification and resulted in the following criteria: large rivers – 0.1 mg/L; small rivers – 0.075 mg/L; large lakes – 0.04 mg/L; stratified lakes – 0.015 mg/L; great lakes waters 0.005 mg/L. These levels represent the target concentration for phosphorus in the water bodies.

The proposal requires that any dischargers to water bodies with concentration exceeding its water quality criteria will
have a discharge limit of 0.10 mg/L phosphorus. There are some additional discharge conditions that may in fact decrease the discharge limits from this level.

In response to the proposed water quality criteria rules, MEG surveyed its members and found the typical discharge level are currently in the range of 0.3 to 0.8 mg/L. Current technology is not able to obtain removal to the level of 0.1 mg/L. The only current widely used technology able to meet the 0.1 mg/L limit level is effluent filtration.

MEG initiated a study to estimate the capital cost to upgrade existing facilities with filtration technology necessary to meet the 0.1 mg/L discharge level. The estimated statewide capital cost to meet the proposed effluent limit is $5 billion to $10 billion.

MEG went on to assess the water quality improvement attributed to the $5 billion to $10 billion capital expenditure by point source dischargers. They found instances such as 50% of the phosphorus load in the Fox River is traced to phosphorus leaving Lake Winnebago, and only 20% of the phosphorus in the Rock River is from point sources. MEG concluded that the excessive capital expenditure potential required of point source dischargers would have minimal impact on water quality unless non-point sources were also controlled. DNR has no plans to address non-point sources beyond existing programs.

Mr. Kent briefly mentioned the status of several other regulatory initiatives currently underway. Total maximum daily load allocation is underway on the Fox River and Rock River. The legislature is considering a phosphate ban for lawn fertilizer. Thermal standards are moving ahead and now have drawn municipal dischargers into the rulemaking effort.

Allen Bergles, Morton Safety, followed with a presentation on safety issues. He discussed the impacts of injuries, cited several safety statistics and discussed reasons for a safety program. He explained how the State of Wisconsin regulates safety for municipal workers through COMM 32 and how the State adopts OSHA rules and enforces them.

He went on to explain specific requirements of adopted OSHA rules and the program requirements to meet safety rules.

After a short break he detailed the SPLAT Theory, which shows in graphic detail why even falls are so devastating.
The theory clearly explains why an unrestrained fall of 10 ft. or more is likely to cause death. He finished his presentation with a lively question and answer period. Contestants were selected by audience member Darcy, who threw a dart at an attendance list attached to a dart board.

The next speaker was Randy Case, DNR. He explained the uses of mercury, the health issues and risks, and the environmental impacts of mercury pollution. The water quality standard for mercury is 1.3 nanograms/l (parts per trillion).

Wastewater treatment facilities are significant sources of mercury discharge to the environment. Over half the mercury in wastewater comes from waste dental amalgam that is released into sanitary sewer collection systems.

Mr. Case explained what the DNR Green Tier program was and the joint initiative between DNR and MEG to create a mercury green tier program to assist communities with developing and implementing voluntary mercury pollutant minimization programs.

Currently 15 municipalities are involved in the first Green Tier program. He explained the target sectors that were identified and the best management practices for each sector.

Rich Boden, Plover, and Ron Dickrell, Marshfield, briefly discussed their involvement in the Green Tier initiative and recommended the program to anyone that is interested. Jim Krueger, Antigo, related that Antigo was forced to implement a mercury pollutant minimization program due to a permit limit and expressed his belief that the voluntary program was a better way to go.

Eric Donaldson, Wausau DNR, reminded that the DNR is moving towards mandatory electronic DMR reporting, and is available to help with the transition. He discussed the DNR rulemaking process in general and the phosphorus and thermal standards rulemaking status. He closed with an explanation of the current area engineer stating situation with Joe Behlen taking a different post in DNR.

Lyle Lutz called the business meeting to order.

1. He thanked everyone for attending today’s meeting and thanked the speakers for sharing
their presentations with us. He thanked Edgar and Marathon for providing this morning’s refreshments, and gave a special thank you to Dan Dvorak and Ken Bloom for hosting today’s meeting and welcoming us to their facilities for tours later.

2. Lutz called for any questions/comments or changes to meeting minutes from our last regional meeting in Crandon on October 14, 2008 as posted on the WWOA website. Hearing none, the minutes were accepted as printed.

3. Treasurer’s report. As of 1/28/09 our escrow balance account is $794 and the checking account balance is $3407.

4. Lutz reviewed the November 11, 2008 Steering Committee Meeting. He welcomed Terry Vanden Heuvel to the steering committee.

5. 2009 officer assignments:
   • Lyle Lutz, Chairman
   • Matt Saloun, Vice Chairman
   • Ken Bloom, Treasurer
   • Rich Boden, Secretary

6. Lutz thanked Chris Helgestad for his service on the Steering Committee and his work on behalf of the Region over many years.

7. He recognized the North Central Operator of the year, Gus Strehlo.

8. WWOA annual conference will be October 6-9 at the KI Conference Center Green Bay. Registration is available online at the WWOA website.

9. Anyone interested in the Operator Competition Team should contact a Steering Committee member for details.

10. Upcoming meetings and events were listed.

11. Directory Update - a directory is available for changes/additions at the registration table. Please check and make any necessary corrections or contact a steering committee member for more info.

12. Plant update survey - these were mailed out in the fall and all are encouraged to complete and mail in if they have not yet done so. If you feel you have lost or not received the form, contact a steering committee member or Richard McKee on the State Board.

13. Membership for all non-members is encouraged.
Benefits include discounted rates to annual convention and training opportunities, student scholarships, tuition aides, the Clarifier Magazine, the Membership Directory, and eligibility for WWOA awards.

14. Scholarships - two of $1000 each available for either 2 or 4 year program students. Candidate must be a child or grandchild of a member and in an eligible program this academic year. More information available on the WWOA website.

15. Nomination forms for the regional operator of the year awards are available on the WWOA website. Scholarship applications can also be obtained from the website.

16. Tuition reimbursements - Six for $150 each academic year, credit courses or advanced non-credit seminars. Contact Wade Peterson for more information.

17. Anyone interested in having your community host a future meeting should contact a steering committee member for details. The steering committee members are available to provide you with as little or as much help, as you need. It is a great way to showcase your community and your facilities.

18. There was no new business. The meeting was adjourned at 11:53 am. Lunch was served.

The afternoon session started out with a drawing for door prizes.

Camille Johnson, DNR, discussed common deficiencies in laboratory audits under the revised NR 149 that became effective in September 2008. She discussed the role of the laboratory quality manual, and the component sections that are now required.

She discussed the need to document corrective actions when problems occur with testing. She gave several tips on things to look for and the importance of documenting whether the corrective action was effective. She briefly reviewed the new quality control requirements for the four major testing categories, suspended solids, BOD, phosphorus, and ammonia.

She informed the group that Orion redesigned its ammonia ion probe. The new probe has different handling and storage requirements that analyst need to be aware of. Ms. Johnson finished with several suggestions to make the procedures and QA go smoother and took several questions at the end of her presentation.

The last speaker of the day was Fran Bender, Account Executive for the Wisconsin Deferred Compensation Program. She explained what the WDC program was and how it worked. She compared and contrasted with several other available programs. That led to a spirited discussion of the various plans that were offered by municipalities. Ms. Bender was invited to visit several communities to explain the benefits of the WDC program to administrators during the course of the discussion.

The meeting concluded with tours of either the Marathon or the Edgar treatment facilities.

Submitted by Rich Boden, Secretary, North Central Region
Sludge problems? Who you gonna call?

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THE MOST RELIABLE AND COST EFFECTIVE SOLUTION FOR PUMPING SLUDGE.

Now, ITT Flygt Corporation, the world leader in pumping and mixing, offers wastewater treatment plants an unparalleled combination of sludge-busting technologies, service and support. Flygt's arsenal of sludge busters features our extraordinary N-Pump, with its patented N-impeller and a clog-eliminating, high-efficiency, open backswept design that makes it best for overall sludge handling. Flygt offers a new Progressing Cavity (PC) pump and macerator for heavier sludge. And to ensure maximum process efficiency in the most challenging situations, Flygt mixers and aerators lead the way.

Most important of all, you can count on your local, fully staffed Flygt office for the equipment, engineering and support that are suited best to your particular needs. Call the Flygt sludge busters. We're always here for you. Contact Mike Borgeois at 262-544-5875. ITT Flygt Corporation, N27 W23291 Roundy Drive, Pewaukee, WI 53072.

Engineered for life
February 25, 2009

WWOA Clarifier
Jon Butt - Symbiont
6737 W Washington Suite 3440
West Allis, WI 53214

Subject:
CHANGE - Letter to the Editor

The last edition of the Clarifier represented change. Wasn’t that great! Obama is promising change! At the 2007 WWOA in Green Bay, Channel 5 news director Tom Zalaski, gave the conference opening address and suggested we needed an image change. We’re not Ed Nortons, for those of us that remember Jackie Gleason (who worked in the sewers). The operator from Independence, WI told me that he is at the end of the pipeline and takes sh__ from everybody. Do we need a change?

The other day I’m driving by the wastewater facility in Richland Center and I saw and experienced change. I was blown away, even though the sign change has been there for eight years. It states: Richland Center Wastewater Recycling Center. That truly is change!

Here is Todd Fisher’s story behind the reason for change:

The staff in Richland Center felt the old term of “Sewer Plant” was interpreted as a negative by the general public. We also felt that “Wastewater Treatment Plant” was not reflective of what we were doing for the environment. So we decided to continue using the “Waste Water” as part of our name to separate us from other Utilities, but we changed the word “plant” or “facility” to “Recycling Center” because that is what we do. We recycle the water back to the environment whether it is from domestic or industrial waste streams. So instead of Richland Center Wastewater Treatment Plant, we became the Richland Center Wastewater Recycling Center and designed our new logo.

Do you know that Wisconsin was the first state in the United States to meet the visible goals of President Richard Nixon’s Clean Water Act of 1972? Do you know that most treatment facilities in Illinois are water reclamation center? Do you know that I’m tired of folks walking away after I tell them I work in the wastewater industry? Do we stink? Or what?

As an entity or association, you are the premier example of success to many other state operator organizations that are about to form. The success of the organization is a credit to many. But are we struggling for new growth or interest from the younger generations to join our industry? Just how are we viewed from the John Q Public? Do we need to change our image? Would it make a difference?

Thank you for this opportunity to share my feelings and with hope that more CHANGE is forth coming.

An excited member of WWOA to remain unnamed… Φ
The 22nd Annual “Classic” Collection System Seminar

WHEN: Thursday June 4, 2009

WHERE: Turner Hall, Watertown, WI

MORNING SESSION: Speakers on Collection System Issues

AFTERNOON SESSION: Vendor and Equipment Displays
Door Prizes
Product Demonstrations

TENTATIVE TOPICS:
Private Property Virtual Library
Chlorides in Collection Systems
Safety – Behavioral Based Safety
Components of a Successful SSES Program
How Storm Sewers Impact the Sanitary Sewer System
CMOM & CMAR
2008 Wet Weather Events – Lessons Learned

DNR CREDIT HOURS Credit hours will be available.

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Vendor Information: Bob Lecey
262-377-6360
Veolia Water Milwaukee Seeks Experienced Wastewater Operators

Veolia Water North America (VWNA), the contract operator of the Milwaukee sewerage treatment plants and collection system, is looking for Wastewater Treatment Plant Operators and skilled maintenance personnel for its Milwaukee, WI project.

The duties and requirements for the Wastewater Treatment Plant Operator positions are:

- The control of an assigned process by operation of wastewater treatment equipment on a rotating shift basis. The rotating shift consists of a twelve hour work day, where the individual works four days on and then has four days off. He/She is required to work one month of day shifts and one month of night shifts. In addition to the normal industrial type environment, the job may involve exposure to sewage, moving equipment, confined spaces, chemicals and odors.

- Qualifications include a high school diploma or equivalent along with experience in wastewater treatment. Skills in the operation and adjustment of valves, mechanical pumps, motors, chemical feed systems, and semi-automatic controls are required along with a valid WI driver’s license. WDNR license and appropriate sub-grades preferred.

We are also seeking operators with Power Plant Operating Engineer Class 1 certification.

For skilled trades positions (machinists, electricians, steamfitters) we require journeyman status.

VWNA offers a competitive compensation and benefits package, along with a dynamic work environment, challenging projects, and training to ensure success.

Please send your resume to: vwnamkejobs@veoliawaterna.com. To be considered, please enter the title of the position and Milwaukee in the subject line of the email. No phone calls please.

VWNA is responsible for public-private partnerships and industrial outsourcing contracts. The potential for growth reflects the trend for municipalities and corporations to outsource water services due to the ever-growing demand to upgrade the nation’s aging infrastructure, meet increasingly stringent regulatory standards, and save money. VWNA partners with more than 600 communities and hundreds of corporations to provide comprehensive water & wastewater services to municipal and industrial customers. These services include engineering, construction, operations, and waste recovery. Our parent company, Veolia Environment, is a worldwide leader in environmental services with 150 years of experience. Veolia is an EOE/AA-M/F/D/V employer.

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- 93 Ways to Kill Pumps and Over 50 Practical Ways to Prevent It

**EXHIBITORS:**

Thursday, May 14th
7:30am – 5:00pm.
Radisson Paper Valley Hotel, Appleton, WI

Register online craneengineering.net
In Memory of Willis Stubbe

Willis (Bill) W. Stubbe, a Past President of the Wisconsin Wastewater Operators Conference, passed away on Sunday evening, March 1, 2009 at the Sharon S. Richardson Hospice Center. Willis was born on May 8, 1922 in Sheboygan, a son of the late Herman and Magdalena (Landreth) Stubbe. He graduated from Sheboygan Central High School in 1940. On June 14, 1945 he was united in marriage to Helen M. Ewald, and she preceded him in death on May 12, 2002.

Willis was a member of St. Peter Claver Catholic Church and the VFW Post 9156.

Willis is survived by a daughter, Suzanne (William) Stapel of Sheboygan; four sons, Steve (Dianne) Stubbe of Welch, MN, Scott (Diane) Stubbe of Plymouth, Thomas (Cheryl) Stubbe of Sheboygan, and Robert (Tami) Stubbe of Oregon, WI; a sister-in-law, Beatrice Stubbe and a brother-in-law Harvey Lederer and twelve grandchildren.

A Memorial Mass for Willis was held on Thursday, March 5 at St. Peter Claver Catholic Church with Rev. Richard Cerpich as celebrant and Deacon Michael Burch, parish director, assisting. Inurnment will take place in Holy Cross Mausoleum with military rites accorded. In preference to flowers a memorial fund has been established in Willis’ name for the Sharon S. Richardson Hospice Center.

Willis had been employed by the City of Sheboygan for 39 years, and retired as the Superintendent of the Wastewater Treatment Plant. Willis was President of the WWOC, the predecessor organization to the WWOA. More information on Willis (Bill) Stubbe will be included in the next issue of the Clarifier.
Attention All Golfers

The Annual Golf Outing is Near!

Refreshments – Food – Prizes
Monday, June 22, 2009 (Rain date is June 29)
Tee-Off: 10:00am Shotgun Start

The Golf Club at Camelot
W192 Hwy 67, Lomira, WI 53048

Cost: $58.00 per person includes:
- Lunch (Burgers, Brat, Hot dog or Cheesburger)
- Dinner (Buffet, two choices of meat)
- 18 holes of golf with cart.

Sponsor Fee: $75.00 Required per firm, any non-municipal operator attending the event.
(This goes to door prizes and helps offset the cost of the event)
- Donated prizes encouraged as well.

NO REFUNDS

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Make Checks payable to: Tom Mulcahy

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Attn: Kristina Glocke
Career Development
Wisconsin School Counselor’s Conference

By Dale L. Doerr

As members of the Career Development Committee, WWOA Vice President Dave Carlson and I attended the Wisconsin School Guidance Counselor’s Conference at the Stevens Point Ramada Inn, February 19 – 20, 2009. More than 1300 Wisconsin school guidance counselors attended the two-day event. Our booth was located in the same place as the previous year, a short distance away from the snack stand. The traffic to the snack stand provided a great opportunity for Dave and I to talk to the counselors while they waited in line to grab a bite to eat. There was considerable interest from counselors about the educational requirements for a wastewater operator, the types of positions available, and the expected wages.

We suggested that students interested in becoming a wastewater treatment operator should take mathematics and science courses in high school, especially if they are interested in becoming a certified wastewater treatment plant operator. We also suggested that students work summer jobs or even intern at their local WWTP to gain an insight on the wastewater profession.

We provided information on our partnership with the UW Library System and that anyone interested in learning more about wastewater can obtain wastewater training manuals from the UW Water Resources Library.

This is not a job for the squeamish or for those who are averse to the idea of being surrounded by chemicals and contaminated water. Not only will you be surrounded by wastewater at all times; but you may also be required to collect samples, perform chemical tests and lab analysis, work on equipment and clean tanks, etc…

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Southern Region WWOA Meeting
Hosted by the Dodgeville WWTP at Dodger Bowl Lanes
Thursday – February 26, 2009

There were 61 people in attendance at the meeting. We were greeted by Joe Zakovec – Southern District Chairperson who introduced Mayor Jim McCaulley of the City of Dodgeville. Joe recalled the situation in the City of Dodgeville where sewer bypasses were common events and a subsequent forfeiture to the Department of Justice “motivated” the City of Dodgeville to update their wastewater treatment plant and to begin improvements to their collection system. Joe indicated that these were long overdue and improved the quality of life in Dodgeville. One other notable event was the rebidding of the project, which resulted in the project being completed one year ahead of schedule and $1 million under budget!
Our first presentation was by Bernie Hengels – Great Lakes Underground Equipment Company. Bernie’s PowerPoint presentation was titled Best Practices: Use, Care, and Repair of High Pressure Hose (which is the standard today for cleaning sewers). WASTEC (Waste Equipment Technology Association) is the trade association which oversees the industry standards. As part of the presentation, hose samples and menders were passed around amongst the audience. Emphasized topics were Collection, Mounting, Identification, Use, Inspection, Service, and Repair of hose. Most important is the safety of those using the equipment. Remember, outside color of the hose does not determine compatibility with other hose but the pressure rating of the hose (inner core coloring identifies manufacturer).

After our break, Fred Hegeman from the Department of Natural Resources spoke to the group about Bio-Solids Updates. The General WDNR Update included the reminder that the Annual Land Application Forms (55’s, 52’s, and some 49’s) were due by January 31, 2009. The Dept. is expecting to have electronic reporting for these forms soon. Timing is dependent upon other programming needs/changes currently underway. Fred also mentioned the large number of retirements within the DNR during 2008, which resulted in a loss of institutional knowledge, experience and historical connections. Coupled with the hiring freeze within state government, services will undoubtedly be slowing down.

Nutrient management is also becoming a huge issue. With the further regulation of phosphorus, the land application of nutrients will be impacting everyone, as will effluent limits at WWTPs. A reminder was also given about the EPA Audit Process and the 308 Letter requirements that could be required. DComm is going to be requiring all counties to identify all septic systems and have required maintenance performed. This is going to result in more septage being hauled to wastewater treatment plants. Last week two large septage investigations took place with several ongoing criminal investigations related to land application with cases being referred to the Dept. of Justice. Large fines are being proposed with jail time. Fred also gave a thorough review of the land spreading programs, which included NR 113, Septage; NR 204, Municipal Biosolids; NR 214, Industrial By-Product Solids & Sludges; NR 518, Solid Waste Land spreading; and NR 243, Animal Feed Operations.

Dave Taylor, Madison Metropolitan Sewerage District,
gave the morning’s final presentation – Pharmaceutical Round-up. Drivers for Collection Programs: Information gathered by USGS throughout the United States shows that pharmaceuticals, hormones, and other organic wastewater contaminants were measured in 139 streams in 1999 and 2000. Numerous detects were at the ppb or ppt level, with 60% of the 36 pharmaceuticals not detected in any sample. An AP study also found the presence of pharmaceuticals in drinking water. An EPA Biosolids Survey of 84 samples found 72 PPCPs analytes, 3 analytes detected in all samples, and 9 analytes detected in at least 80 samples. Abuse/misuse/accidental poisoning is another huge driver for collection programs. MedDrop© is the copyrighted name for the Dane County Program. The idea was “born” in 2005 by a pharmacist, and with collaboration with MMSD and Clean Sweep, a program was begun. Other organizational assistance and grant money helped to allow the first collection to begin in October 2007. A local marketing and design firm helped with the name, logo, and website design. The first event (4 hours) resulted in 566 cars, 180 lbs. of controlled substances, 1,5210 lbs. uncontrolled substances, 5 lbs. of sharps and 18 hg thermometers. A short survey was provided to gather information about how participants learned about the event, why they were disposing medications, how they would have disposed of the medications if MedDrop weren’t available. The event has been held three times in Madison with the following lessons learned; Build it and they will come; Be organized; Make it a partnership; Drive thru service; and keep it simple. Final Thoughts; Drivers will continue to be there; Learn from others; Networking value; It takes work and organization; It feels good to contribute!

After lunch, Joe Zakovec conducted the business meeting for the Southern Region. After approval of the agenda, minutes, and the Treasurers’ Report, Joe told the group about upcoming events of interest. The 43rd Annual WWOA Conference will be held in Green Bay from October 6 to October 9. The Spring Biosolids Symposium will be held March 10 in Stevens Point. Managing Nutrients on Wisconsin Soils Workshop will be held March 11 in Madison. The next Southern Region WWOA meeting will be held on May 14 in Janesville, followed by the August 13 meeting in Baraboo. The Annual Collections System Seminar (Classic) will be held on June 4 in Watertown (August 6 in Marshfield). Be sure to check WWOA.org website for details of all upcoming events.
events and other newsworthy happenings. Joe reminded the group about submitting nominations for the George Bernauer Award, the Koby Crabtree Award, the Statewide Wastewater Operator of the Year Award, and the Regional Operator Award. Joe presented Eric Rohowetz a plaque acknowledging the appreciation of the Southern Region for hosting the meeting in Dodgeville. Presently we are looking for host communities for next year. After adjournment of the business meeting, door prizes were then drawn. Thank you to all of our vendors for the many prizes and support with their displays at the meeting and a special thanks to Strand Associates for the use of their projector and assistance with the meeting!

DNR Update: Larry Benson, Basin Engineer for the Wisconsin DNR Operators Certification, reported there have been a few changes. May 6 is the exam date and the deadline to register for the exams is April 8. Go to the DNR website to get more information or call Alice or Mary (Wagner), who’s phone numbers are on the website. A few of the notable exam changes: Phosphorus Intro and Advanced exams have been rewritten with new comprehensive study guides available. Introduction to Labs has been rewritten with a new Study Guide available. Advanced Labs and a new study guide should be available this fall along with Disinfection. The Activated Sludge workgroup just met yesterday and are hoping to have their work/new exam ready by May 2010. WPDES permit applications are being submitted electronically (similar to CMARs and DMRs). Another change is the use of the DNR switchboard (which allows you to make changes to your info. if necessary). Remember to see Alice’s newsletter “The Privy” for regular updates. Also, only send in one copy of the certification sheet to the Department. The CMAR season is rapidly approaching – the end of April. The former SCR permit drafter (Roger Schlessler) retired last year so we have a temporary replacement (Diane Figiel). Permit reissuance may not be as timely as they once were.

Our next speaker was Troy Larson from Strand Associates and his topic was Potential Impacts of Water Quality Based Phosphorus Limits. The proposed draft criteria shows criterion numbers of 0.10 mg/L for Rivers (nonwadeable); 0.075 mg/L for Streams; 0.04 mg/L for Non-stratified Reservoirs; 0.03 mg/L for Stratified Reservoirs; 0.015 mg/L for Stratified Lakes; and 0.005-0.007 mg/L for the Great Lakes. The message is that the resultant phosphorus effluent limit in a permittee’s WPDES permit will be reduced. Treatment plants are being “penalized” for upstream sources, which includes agriculture, urban runoff, other WWTPs and sediments. The technology to get to 0.5 mg/L average phosphorus will require a mechanical treatment plant, additional chemical with multipoint feed. The technology to get to 0.25 mg/L will require even more chemical addition and cloth disk filtration. The technology to get to 0.05 mg/L will require even more chemical and membrane filtration.

Thank you.
Government Affairs Seminar 2009

By Randy Thater

The 2009 Government Affairs Seminar was held February 19 at the Marriott Madison West in Middleton, WI. Wisconsin Section of Central States Water Environment Association and the Wisconsin Wastewater Operators’ Association co-sponsor this annual seminar. The Wisconsin Department of Natural Resources, League of Wisconsin Municipalities, and the Municipal Environment Group are contributing organizations.

The keynote address was given by Fred Andes of the Barnes and Thornburg law firm. He spoke about clean water issues from a federal perspective. Included in the discussion were nutrients, climate change, new source permitting, stormwater permit limits, WET, mixing zone restrictions, and thermal limits.

Next were a series of talks about phosphorus issues. Russ Rasmussen from the DNR, Betsy Lawton from Midwest Environmental Advocates, and Jane Carlson

Eric and Joe

Lagoon type treatment plants will be the largest affected group, with the need to be replaced by mechanical plants. The incremental costs associated with a 20 mgd POTW currently meeting a 0.6 mg/L limit escalates rapidly. Approximately $5 million to reduce the effluent to 0.5 mg/L, over $10 million to 0.4 mg/L, and $60 million to obtain 0.1 mg/L (note that these costs exclude more land, poor soils, and high peak flows). The incremental costs for a lagoon system meeting a 4 mg/L limit is $1 million to meet 3.5 mg/L, $3 million to meet 2 mg/L and $4.5 million to meet 1 mg/L. Statewide Aggregate Costs are $3-5 billion in capital costs and $4-7 billion in 20-year present worth costs. DNR discussions for implementation include phased implementation (similar to chlorides), alternative limits (similar to NR 217 based on economics and other factors) or a TMDL-like approach. Troy strongly suggested that operators contact/write their legislators prior to rule development to voice their opinion and the potential economic impacts to their customers.

Troy then gave a brief overview of the Dodgeville wastewater treatment plant and directions on how to get to the site.

Finally, the members were given a tour at the plant by Eric, Greg, Brian and Troy.

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from Strand Associates addressed the issue from the state, environmentalist, and plant perspectives. No matter what the perspective, there is little doubt that the days of the state-wide 1.0 mg/L limit are numbered and that at least some plants will have to deal with lower limits and higher costs in the future.

Dr. Chris Kucharik of the Gaylord Nelson Institute for Environmental Studies spoke about climate change as it specifically related to Wisconsin. He presented facts and figures showing that simply saying there is a warming trend is a simplification. For example, since 1950 the bulk of the warming is due to increasing winter and spring daily minimums, while summer and fall daily maximums are more stable or even slightly lower.

The next two talks focused on the June 2008 flooding in the state. Steve Zibell of Reedsburg and Gene Laschinger of Town and Country spoke about the flood in Reedsburg and the follow up efforts to get the local treatment plant back in full operation. Then Ken Johnson of the DNR covered the experience throughout the South Central district.

Following lunch (not rat roast), Dan Thompson talked about the financial crisis and political effects on funding. Dan presented figures showing that while the state has a reputation as a ‘tax hell’, that state and local revenues as a percentage of personal income are exactly average compared to national totals. This is because Wisconsin relies more on taxes and less on fees, and receives a low percentage of federal dollars.

Lisa Bacon of CH2M Hill presented Effluent Trading. She gave several examples nationwide that demonstrated different approaches used to implement trades.

Doug Nelson of Ruekert – Mielke spoke about pharmaceuticals and trace contaminants. This followed up on talks from previous years about drug take-back programs conducted throughout the state. Doug focused on a general overview including fate and transport of these compounds, treatment methods, and potential for future action.

The seminar was wrapped up with the traditional DNR update presented by Bob Masnado. Bob stepped in for the retired Roger Larson who gave the update for many years.

The Government Affairs Seminar has been keeping professionals in the water environment business informed on cutting edge regulatory issues for over twenty years. We hope all attendees profited from the 2009 edition. The planning committee has already scheduled the next seminar for February 23, 2010 at the same location. Note that this is a Tuesday which is a move from the traditional Thursday date. Please be sure to mark your calendars, and hope you will consider attending.
Energy Management Planning
By Ray Grosch
rgrosch@intellisys-is.com

The recent CSWEA/USEPA Energy Workshop held in Madison on December 4th 2008 provided an excellent opportunity to learn about the EPA recommended energy management programs. While focus of wastewater facility management has traditionally been to meet effluent discharge standards, in the future we will be taking a more holistic view and developing Environmental Management Solutions that do not trade one type of pollution for another.

With steadily increasing energy costs and concerns about global warming this is a need for all utilities to search for methods that can reduce the environmental impact of their operations. The U. S. EPA has developed an "Energy Management Guidebook for Water and Wastewater Utilities" that provides a systematic approach to reducing energy consumption and energy cost. The recent seminar included an opportunity to go through some of the planning exercises in the workbook.

An import component of any plan is measurement. You cannot manage it if it is not measured. Real-time measurement of energy use is crucial to a good plan.

The suggested Energy Management plan includes the traditional steps in any successful program management: Plan, Do, Check, Act.

Successful Energy Management

Planning Step
Planning involves getting a management and employee commitment, establishing a team leader, choosing an energy fenceline and selecting goals. The plan also needs to include assessing current energy use (baseline) and comparing that to industry benchmark values. Finally a plan should include the development of an energy policy, priority energy saving projects and SOPs for all future operations.

Do Step
This step is simply developing the action plan for operational changes and equipment upgrades, then executing that plan.

Check Step
This is the validation step where the results of operations, process and equipment changes are documented. Continuous monitoring is required to ensure that goals and objects are being met.

Act
The success of the Energy Management program should be advertised to the stakeholders as well as the local community. Articles in newsletters as well as local newspapers make for excellent public relations. This step also requires that the program leaders continuously monitor technology improvements in the industry and compare utility performs with industry benchmarks striving for performance in the top quartile of the industry.

The seminar included a discussion of BMP (Best Management Practice) in the industry including a presentation from Joe Cantwell, P.E. who works in the Wisconsin Focus on Energy Program.

A sampling of a few BMP topics which came up in discussions include:

1. Providing real-time and historical trends for energy use.
2. Reducing energy use through process modifications such as DO control on blowers.
3. Using more renewable energy sources such as biogas, wind and solar power.
4. Converting lighting systems to low energy CFL (compact fluorescent) or LED systems.
5. Establishing a premium efficiency motor replacement program.

For additional information on Energy Monitoring and Management systems contact IntelliSys Information Systems. (800 347-9977).

WWOA Annual Awards

It is that time of year where the WWOA is looking for qualified applicants for the various annual awards that are given out during the Awards Banquet at the Annual Conference. Please consider nominating a deserving individual.

The awards are as follows:

The George Bernauer Award is named after Mr. George F. Bernauer and the criteria includes successful plant performance, and/or successful solution of important or complicated operational problems, and/or outstanding contributions in the field of wastewater technology in the State of Wisconsin.

The Koby Crabtree Award is named after Dr. Koby Crabtree and is given out to recognize excellence in technical support provided to others in the field of wastewater treatment.

The Service Award is presented to a person who has made an outstanding contribution to the WWOA in the areas of promotion, operation, management, program participation, or education.

The Newcomer of the Year Award is given out to a person who is new to the wastewater field (less than three years of experience) and has shown higher than average growth in their place of employment, a willingness to learn, and exceptional enthusiasm for their profession.

Regional Operator of the Year Awards is given out to someone who has demonstrated excellent plant performance, and/or successful solution to a problem, and/or contributions to the wastewater field.

An award nomination form is included in this issue of the Clarifier. All of the award nominations, except the Operator of the Year, need to be received by August 1 and should be sent to Bruce Bartel. The Operator of the Year deadline is July 1 and the nomination form should be submitted to each individual region.

There are plenty of people who fit the criteria for the above awards in the wastewater field. It is the membership that knows best who these people are. Please take the time to submit the name of a deserving individual.

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## WWOA Award Nomination Form

**Deadline:** August 1, 2009, except Regional Operator July 1, 2009

Check Award Nomination: Bernauer _____ Crabtree _____

Newcomer of the Year _____ Service _____ Regional Operator _____

(Regional affiliation) _____

Nominee’s Name: ________________________________________________________________

Address: ______________________________________________________________________

City: __________________________ State: __________ Zip: __________________________

Home Phone: __________________________ Work Phone: __________________________

Employer: _____________________________________________________________________

Occupation/Job Title: ___________________________________________________________

Date Joined WWOA: __________________________ WWOA Membership Number: ________

Regional Affiliation: __________________________ Regional Officer Positions? __________

Brief Description of Nominee Activities and Achievements: (attach sheets if needed)

_______________________________________________________________________________

_______________________________________________________________________________

_______________________________________________________________________________

Why Do You Feel Nominee is Deserving of Award Being Nominated For?

_______________________________________________________________________________

_______________________________________________________________________________

_______________________________________________________________________________

_______________________________________________________________________________

Please Complete the Following – Submitter Name: ________________________________

Address: _____________________________________________________________________

City: __________________________ State: __________ Zip: __________________________

Please mail or email nomination forms –

**For Bernauer, Service, Crabtree, and Newcomer of the Year to:**

Bruce Bartel – President Elect
Green Bay MSD
P.O. Box 19015
Green Bay WI 54307-9015
Work 920 438-1006
Fax 920 438-3006
bbartel@gbmsd.org

**For Regional Operator to:**

Regional Award Contact
Please see page 48
Regional Operator awards contacts are the regional chairs unless otherwise noted:

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<tr>
<th>Region</th>
<th>Chair</th>
<th>Vice Chair</th>
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<td>Lake Michigan</td>
<td>Brad Rokus</td>
<td>Clintonville WWTP</td>
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<td>305 E. 15th St., Clintonville, WI 54929</td>
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<td>715-823-7641</td>
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<td>North Central</td>
<td>Lyle Lutz</td>
<td>Village of Amherst WW Utility</td>
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<td>Katie Goin</td>
<td>Cumberland WWTP</td>
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<td>1165 St. Anthony St., Cumberland, WI 54829</td>
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<td>Southern</td>
<td>Joe Zakovec</td>
<td>Janesville WWTP</td>
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<td>123 East Delavan Dr., Janesville, WI 53545</td>
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<td>W: 608-755-3120 Ext. 3460</td>
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<td>Southeast</td>
<td>Dave Piquett</td>
<td>Hartford WWTP</td>
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<td>1600 Liberty Avenue, Hartford, WI 53027</td>
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<td>West Central</td>
<td>Steve Skinner</td>
<td>New Richmond WWTF</td>
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<td>156 East First Street, New Richmond, WI 54017</td>
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The regional awards committees are to forward the selected nominee to Bruce Bartel by August 1, 2009 for approval by the board.
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Process Equipment Repair Services, Inc.
As the cold grip of a Wisconsin winter finally comes to an end, the meeting season begins. On February 12, 2009 the SE WWOA District held its first meeting to a full house at the Five Pillars Supper Club in Random Lake. In attendance were 13 vendors and over 100 attendees. It seems the operators were eager to get out and take in several very informative speakers and a few new vendors to the WWOA. The new vendors were happy to be there and made a few new business contacts as well. It is what it’s all about. Several of the new vendors have made requests to present topics to speak on also.

Chairman Dave Piquett called the meeting to order at 8:04 a.m. Dave introduced the Superintendent of Random Lake, Mr. Dan Klotz. Dan did a fine job on the welcoming address considering the Mayor had to cancel his welcoming address at the last minute. Dan gave a brief historical breakdown of how Random Lake got its start, when the plant was built, and where they are now. He then relinquished the podium to the first speakers.

The first topic presented was from Ruekert & Mielke. Greg Bolin and Dave Arnott presented the topic of Water Disinfection - New Technologies and Regulations along with chlorination and ultraviolet disinfection. This was a very informative topic. One item I found of interest was that hydrogen sulfide adds to the chlorine demand. That could be why the O21N filament that was living on the H2S coming from my collection system was taking so much product to kill? That is another story for another time.

Following the first break, Randy Belanger from Visu-Sewer gave the second presentation. He started out with informing us that Visu-Sewer will be changing its name to the WS Trenchless Solutions.

It’s the same company, same people, and same quality service, just a different name. Randy’s presentation covered reducing I&I through rehabilitation and reconstruction. As always, the guys who televise bring with the videos of wild animals in the sewer. They are always fun to watch. He also demonstrated what happens when the grout is mixed together with a very simple, but to the point demonstration. These samples were passed around the room for the attendees to look at. This gave us a better picture of what the grout really does when it is injected outside a manhole.

We then moved into the business meeting. Chairman Piquett called the meeting to order. The usual business items were discussed and approved. Jim Fratrick then spoke on the DNR update portion of the meeting. It was pointed out that Mr. Saltes has made some needed changes to the CMOM area of the eCMAR. Mr. Fratrick then called Judith Gottleib up to the stage. Jim informed us that Judy has retired from the DNR. From that point he thanked her and praised her for her years of service. She has worked for the DNR for some 30 plus years. Treasurer Jeff L. Deitsch presented her with a big hug and a plaque thanking her for the years of service to the SE WWOA. Judy received a well-deserved applause from the people in attendance. Thank you Judy; you will be missed.

Randy Thater was next to take the floor. Randy went over the upcoming events. The list is as follows: Oct 6 – 9 Annual WWOA Conference; Spring Biosolids Symposium March 10 in Stevens Point; Managing Nutrients on Wisconsin Soils March 11-12 in Madison; Education Seminar April 7 in Madison; CSWEA annual meeting May 18-22 in IL; and Collection Systems seminars on June 4 in Watertown, WI and on August 6 in Marshfield, WI.
The new SE District officers for this year were then introduced: Chairman Dave Piquett, Vice Chairman Jim Bergles, Secretary Paul Gagas, and Treasurer Jeff Deitsch.

The future meetings were then covered. Sussex will host the spring 2009 meeting. Mr. Thalke has a newly upgraded plant that should make for a great tour. The August Pig Roast will be held in Burlington, WI at Connie Wilson’s plant. This is another plant that is currently in the last stages of its upgrade. It will make another great tour. February 2010 the Village of Slinger will host the winter meeting. The spring meeting spot is still open in 2010. I am hoping it will be a plant south of Milwaukee somewhere. All this Northern driving is hard on all the Southern folks. The pig roast for 2010 will be hosted by West Bend.

Dave Piquett then presented recognition plaques to Random Lake and Mr. Klotz for hosting the meeting. Dave also presented Mr. Tim Zimmerman from Germantown with his plaque for two years of unequaled leadership as an officer for the SE District. Thank you to both of them.

Meeting adjourned.
After the mighty tasty lunch, we sat down to our last speaker, Dave Misun from Kapur and Associates. He presented GIS Applications for your municipality. GIS is kind of like the recession, when will it end? There are so many items that you can put into a GIS system now, that it can be overwhelming at times for someone new to it (me). If you do not have a GIS system or always wondered what it is about, you need to sit in on a GIS presentation. I look forward to the day all my maps will be in a laptop that I can travel with. There is nothing more fun than using shovels and rocks to hold the maps down on a tailgate while the wind is turning them into a kite. And at the same time, mark the sewer without loosing the maps. If you know someone with their maps in GIS, ask them to show them to you. I know it will start the gears clicking as to how can I get this?

The meeting was called to a close and the tour began. It was a short drive into Random Lake to where the plant was located. I left my map at the hall so I went by my rule of thumb after I could not find the plant from memory. I just drove to the lowest point in town and there it was. Random Lake is a small plant set up right in the North edge of the town. Mr. Klotz and his staff had the plant all in order for the tour. It was good to see RBC’s still running strong and chain drive skimmers sliding down the rail. The way technology is changing, who knows what we will be using a few years from now?

A great thank you goes out to Random Lake for hosting the winter meeting. It was a job well done. We hope to see everyone at the Sussex spring meeting on May 7, 2009.

A short video of the meeting and plant tour is up on youtube. The link is: http://www.youtube.com/watch?v=fPWg_8GglBI


James T. Bergles VC SE WWOA
On February 11, 2009 the West Central District meeting was hosted by the City of Eau Claire and was held at the American Legion Post 53.

The meeting opened with a welcome address from Jeff Pippenger. Jeff is the Utilities Administrator for the City of Eau Claire. Jeff gave a brief history of Eau Claire and the Eau Claire Wastewater Utility. Jeff stated that the Eau Claire Wastewater Treatment Facility serves the Cities of Eau Claire and Altoona. The city maintains 319 miles of sanitary sewer, of which 50% is concrete, 34% is PVC, and about 8% is vitrified clay pipe. Jeff highlighted the importance of knowing the age of your system and being proactive with your maintenance program to prevent sewer back ups. Jeff finished by asking everyone to enjoy the meeting, to be sure to network with fellow WWOA members and visit the vendors, enjoy the catered meal of barbequed chicken, and for all of us to realize the impact each of us has on our communities.

West Central District President Steve Skinner then opened the business meeting. Steve noted that Rita passed away November 13, 2008. Rita was the lab technician at the Sparta Wastewater Treatment Plant and will be greatly missed by all who knew her.

The next WCD meetings will be in Ellsworth on May 12, and Alma Center on August 19. The WCD is planning to put together a team for the operator’s competition and WCD members are encouraged to participate. We are also looking for award nominees, so if you have someone who you feel deserves an award, please nominate them.

Kathy White was the first speaker. Kathy is the Chemist and Industrial Pretreatment Coordinator for the City of Eau Claire. Kathy elaborated on the history and hazards of mercury, then Kathy described the development and implementation of the Mercury PMP for Eau Claire.

Bob Manowski of L & S Electric gave us a short run down of their company and the services that they provide. Bob then pointed out a few maintenance tips:

- Know whether your motors have roller or ball bearings because service is different for each bearing type.
- Do not over grease your motor bearings.
- When roller bearings fail, it is usually catastrophic to the motor, in other words, more than just the bearings themselves get damaged.
- Improper coupling alignment will ruin bearings. A laser alignment done properly will prevent this.
- Do not leave motors sit in an unheated space for extended periods of time without running them. Condensation will form and cause damage.

Kathy White, City of Eau Claire

Bob Manowski, L & S Electric

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The next speaker was Dan Olson, Regional Sales Engineer for Yaskawa Electric. Dan pointed out that Yaskawa, formerly Magnatec, is the world’s largest manufacturer of variable speed drives. Their P7 line of variable speed drive is designed for normal duty fans, pumps, and blowers. Dan stressed the importance of making sure the air filters and fan that cool a VFD are clean. Fans can be cleaned with compressed air, once the power to the VFD is shut off. VFD’s have many safety features built into them that will shut the VFD down if a fail condition exists. Dan recommended not trying to repeatedly start a VFD that fails; you can damage the drive by doing so.

Steve Hayden of the City of Eau Claire gave the last talk of the morning. Steve is the Utilities Engineer for the city and his topic was electrical safety. Steve emphasized some of the recent changes to the National Electrical Safety Codes. Steve reviewed the steps of creation and documentation of a facility electrical safety plan, training, and identifying hazards. Steve also covered the personal protect equipment and distance requirements for electrical work.

After lunch, Craig Capper discussed Eau Claire’s biosolids land application program. Craig is the Utilities Chemist for the City of Eau Claire. Eau Claire produces Class B biosolids that meet the high quality limits for metals. Last year they land applied 4,961,000 gallons of biosolids at a concentration of 5.5%. 90% of this sludge gets injected, while 10% is surface applied to hay fields during the summer. The City owns a Terra-Gator tanker that holds 3,200 gallons, is GPS guided, and injects the sludge into the soil at a rate that is predetermined and computer controlled.

Jeff Pippenger then gave a presentation on the recent and future upgrades to the Eau Claire Wastewater Treatment Plant. The design firms involved are Donohue and Ayres Associates. The Phase I project addressed the need for more sludge storage space to meet the 180 day requirement. It also included the addition of a carbonic acid process to reduce the effect of ammonia toxicity and an upgrade to the Otter Creek Lift Station. Phase II will include the following upgrades: replacing the RBCs with an activated sludge system, gravity thickener sludge pumps, digester covers, digester pumps and motors, replacement of two generators, safety and code compliance updates, odor control, new water lab, SCADA system, clean and inspect the plant electrical system, a dewatering wetwell, and upgrades to the Eau Claire River lift station. Design will take place during 2010 and 2011, with construction during 2012 to 2013. The project is expected to cost thirty-three million dollars.

The last speaker of the day was Steve Thon of the Wisconsin DNR. Steve talked about the CMAR, CMOM, EDMR, and TMDLs. Steve put his psychology training to good use by throwing candy bars to anyone who answered his questions correctly.

The day ended with a tour of the Eau Claire Wastewater Treatment Facility.

Thank you to all the speakers, vendors, donators, and the City of Eau Claire for hosting the event.

Paul Sterk
Vice President
West Central District, WWOA
A Message from the Editors....

Pictures are a great way to communicate, and an important service of the Clarifier involves assisting with communication between regions, sometimes through pictures. The digital cameras of today make taking and transferring pictures very, very easy.

The editors of the Clarifier make every effort to include as many pictures in each issue as possible, but it is not possible to include all the pictures received from all the regions. For example, we received 42 pictures for the April issue. Of these, 13 were from the north central region and 11 were from the west central region. We are happy to receive the pictures, but we need some help.

When you send us pictures, please consider the following:
1. We cannot print every picture you send us so please make sure you tell us which pictures you would like included with your article. If we have the space, we are happy to include more pictures. Typically, we can only include two or three pictures for each article or regional meeting minutes.
2. Do not assume that we know everyone in your pictures. Make sure to include captions with each picture and make sure to let us know who is in the picture. It will save us time if this information is provided before we start the assembly process.
3. Finally, we need the picture files. Do not embed your pictures in a word file. It is fine if you wish to include a word file showing the captions and the pictures, but just make sure to send us the picture files as well.

With your help, we will continue to make the Clarifier the best that it can be.

Translated from French, Belleville literally means “beautiful village,” and folks these days seem to think the name fits. Belleville’s high quality of living and authentic small town atmosphere is attracting additional residents and businesses. The new wastewater treatment plant is designed to grow as the community grows. Now, folks around here can rest easy—and play a little harder. Laissez les bon temps rouler!* 

*Let the good times roll!
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