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The Clarifier
WISCONSIN WASTEWATER OPERATORS’ ASSOCIATION, INC.

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

Green Bay Metropolitan Sewerage District, Green Bay & De Pere, Wisconsin
President’s Message

As I sit and write my last President’s Message, it is hard to believe how fast the year has gone by. It seems like I just finished writing my first message. It has truly been an honor and a privilege serving as President of such a great organization.

During the past year I have made many new friends and seen a lot of changes in our industry. With the poor economy, it seems like we are all expected to do more with less. With operating expenses increasing and revenues decreasing, it is a real challenge for any operator to overcome. It is unbelievable how ingenious wastewater treatment plant operators can truly be! The networking of operators across the state have helped many of us solve problems within our systems and saved tremendous amounts of time and money. As President, I have realized the networking extends far beyond the borders of our state. I recently had the opportunity to attend the Minnesota Wastewater Operator Association Annual Conference in Grand Rapids, Minnesota. Even though many of their challenges are different than ours, they too look to networking with their colleagues to find solutions.

Our own convention is just around the corner. I hope you are planning to attend. Dave Carlson and the Technical Committee have put together a great program. You will see several changes this year; such as online registration and additional opportunities for pre-conference sessions. Our technical sessions offer something for everyone. Dave has found a great keynote speaker and the after banquet entertainment is certain to be captivating. I for one am truly looking forward to the convention, and hope to see you there.

Serving as your President has been a very rewarding experience. This would not have been possible without the support of such a dedicated Board of Directors. It will be an honor to hand the gavel over to Bruce Bartel. Knowing Bruce, he will set the bar even higher for the organization. I again encourage each of you to consider getting involved in the WWOA, either at the regional or state level. It will be something you will never regret.

John Bond
WWOA President

Answers to June Brain Teasers

Intro:
Answer: b. 1.5 ml or <0.5% Reference: Standard Methods, 20th Edition

Advanced:

Wastewater Systems

- Facility Plans
- Sewer Planning/Models/Design
- Pump Station Design
- I&I/SSES/CSO/SSO Analysis
- Biosolids Management
- SCADA/Automation
- Energy Studies
- Funding Assistance
- Treatment Facilities
- Electrical/Mechanical/Security
Green Bay Metropolitan Sewerage District (GBMSD)

By: Lisa Evenson, GBMSD’s Communications and Education Coordinator

GBMSD - Green Bay Facility

Editor’s note: As the host sewerage district for WWOA’s annual conference, GBMSD was asked to provide a feature article for the September issue of the Clarifier. The following information helps provide some history regarding the formation of GBMSD along with recent performance awards and the newest initiative GBMSD offers its employees.

GBMSD History

GBMSD was created 75 years ago when community leaders became concerned about the diminishing quality of the rivers and Bay that surrounded the City of Green Bay. On September 3, 1927, a Green Bay Committee and the North Side Advancement Association inspected the East River and several of its sewers. The comments made by committee members were too numerous to mention; however, some comments include: Elm Street Sewer – “Water or river here is terrible. In fact it can no longer be called a river, but more in line of an open sewer… The only movement of water was from the boat or eruptions of gases in bottom of river. Oil noticed on water.” At North Madison Street sewer – “It is without a doubt a big percentage of bad odors in the East River… It is so bad that we touched a match to it and it ignited and threw a flame two feet high.”

Following the concerns raised about the local rivers and Bay, on December 4, 1931, GBMSD, which included the City of Green Bay, Town of Allouez, and Town of Preble, was officially created by judgment from the Brown County Court for the purpose of intercepting sewage and treating it at one central location prior to being discharged into the river system. GBMSD’s facility was built on twenty-two acres at the mouth of the Fox River, approximately 1,300 feet south of the Bay of Green Bay. An intercepting sewer system was constructed throughout its municipalities to collect and transfer wastes from homes and businesses to the treatment facility. In January 1935, GBMSD municipalities connected their existing sewers to the intercepting sewers and the facility formally began operations in February 1935.

At the treatment facility, sewage was pumped to the surface by three motor operated pumps, which could operate at 3, 5, and 10 million gallons per day (mgd) and then flow by gravity through the facility. The total amount of sewage treated in its first full year of operation was 920 million gallons (mg) for an average of 2.5 mgd. Maximum flow was 16.7 mgd and minimum flow was 1.025 mgd. The total cost for the treatment facility and interceptors was $1.8 million.

As the Green Bay area grew, a desire for improved water conditions led to several treatment facility expansions. In 1955, a secondary treatment system, using trickling filters, was installed to biologically treat the water and remove wastes more efficiently. The design capacity of the facility was then 22 mgd. Also during the 1950’s, community leaders had enough foresight to separate storm and sanitary sewers to prevent overflows from occurring and wastes escaping untreated into the Fox River and to the Bay of Green Bay. And even though water quality had improved, area residents were still concerned with the pulp mill waste that was being discharged untreated into the Fox River.

In 1958, the Charmin Paper Products Company began studying joint treatment of both domestic and pulp mill waste. In 1963, GBMSD purchased an activated sludge pilot facility to further study joint treatment. In 1967, federal funding was received to supplement other contributions made by area industries to continue this research. Finally, after years of experiments, in December 1969, treatment of domestic and pulp mill waste together was successful. In January 1971, it was determined that a new massive treatment facility complex was needed to meet the demands for the future. This effort culminated into a $72 million construction project, which utilized activated sludge in its secondary treatment process. This new process was not only more effective at removing waste from the water, but it allowed GBMSD to be the first facility in the nation to simultaneously treat domestic and pulp mill waste, setting a precedent in the fight for cleaner water. The new facility, with a design peak dry weather flow of 78 mgd and a maximum wet weather capacity of 172 mgd, went on-line in 1975.
With the new facility in full operation, GBMSD was able to handle both pulp mill and domestic waste without a problem until the 1990's when expansion was needed to meet more stringent effluent regulations. GBMSD added two aeration basins, two clarifiers, and an improved solids handling system. This upgrade greatly improved its effluent by decreasing total suspended solids, carbonaceous biochemical oxygen demand, and ammonia concentrations.

In January 2008, through cooperative negotiations with City of De Pere officials, GBMSD acquired De Pere’s wastewater treatment facility, major interceptors, staff, and annexed De Pere into its service area. Today, GBMSD treats wastewater from over 219,000 residents within a 277 square mile area. On average, the Green Bay Facility treats 30 mgd and the De Pere Facility treats 9 mgd. With the acquisition of an additional treatment facility, GBMSD has positioned itself to better manage future infrastructure and capacity needs for its customers. GBMSD's service area encompasses: the Cities of De Pere and Green Bay; Villages of Allouez, Ashwaubenon, Bellevue, Hobart, Howard, Luxemburg, Pulaski, and Suamico; Towns of Green Bay, Humboldt, Lawrence, Ledgeview, Pittsfield, Red River, and Scott; and two contract customers, Georgia-Pacific Corporation and Procter and Gamble Paper Products Company.

Performance Awards

For outstanding permit compliance records in 2008, GBMSD has received the National Association of Clean Water Agencies (NACWA) Platinum and Gold Peak Performance Awards. GBMSD's Green Bay Facility received NACWA's Platinum Award for six straight years of 100% compliance with its discharge permit. For an organization to qualify for a Platinum Award, it must have five consecutive years of 100% compliance with its discharge permit.

GBMSD’s De Pere Facility received its first NACWA Gold Award for one year of 100% compliance with its discharge permit. Tom Sigmund, GBMSD’s Executive Director said, “The NACWA Peak Performance Awards presented to GBMSD are a great honor. This is possible only through the dedication and hard work of all GBMSD employees. Together, we are a strong wastewater utility dedicated to protecting public health and the environment.”

Leadership Development

In a time when highly skilled workers are in demand, GBMSD has developed a Leadership Development Training Program to retain staff and enhance its recruiting effort. GBMSD developed this program for its employees to build and enhance their leadership skills and prepare them for future leadership opportunities as they become available. In 2008, GBMSD chose 16 employees as the first group to fulfill 68 hours of leadership development training. Following completion of the program, each participant will meet with their Director or Manager to design an on-going development plan to reinforce and continue their training.
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Randy Case Retires from WDNR

Randy’s tenure with the Department of Natural Resources is chronologically detailed as follows:

1974 – 1982
Developed and managed the NR101 Environmental Fee Program where industrial facilities report wastewater discharges to the DNR and are assessed a fee to partially recover wastewater program costs.

1983 – 1996
Developed and managed the Wastewater Pretreatment Program regulating industrial discharges into municipal wastewater treatment programs.

1997 – 1998
Developed and managed the Wastewater Pollution Prevention Program with a special emphasis on reducing Lake Superior Basin bioaccumulating toxic pollutants.

1999 - 2009
Developed and managed Community Mercury Reduction Programs by working with municipalities and trade associations to reduce the public’s use of mercury-containing products and increase mercury recycling. Promoted superior environmental performance through the DNR’s Green Tier program.

The following resolution officially describes his dedication to his profession and role with the WDNR:

“WHEREAS, C. Randy Case has served the people of the State of Wisconsin faithfully, creatively and effectively well for over 35 years in the performance of duties and has thus earned the commendation due an exemplary public employee;

Randy has protected the resources of the State of Wisconsin, created innovative programs to deliver superior environmental performance and built partnerships that have been the envy of other states and a model for

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Image of Adaptor Services' website featuring Adaptor Inc. and Adaptor Services logos, with text about new chemical grouting service.
national approaches. He has distinguished himself in service to the State of Wisconsin in his development of staff technical capabilities, implementation of pollution prevention strategies and creating new superior performance environmental programs.

From his initial appointment in January 1974 until April 1980 Randy served as a Natural Resources Specialist managing pollution reduction related to industrial sources. In 1980 Randy was promoted to Natural Resources and then Environmental Protection Supervisor overseeing staff implementing DNR programs to reduce industrial waste, prevent pollution and accomplish waste reduction at the source. During that time he was consistently recognized for his efficient permitting processes, mentoring other employees and his depth of technical knowledge. He was generally recognized for his ability to work with staff to use new techniques to solve problems and numerous times for his talent for working across organizational boundaries to find solutions.

From 1997 until his retirement Randy has distinguished himself an exceptional innovator and collaborator. Randy pioneered the development of community mercury reduction that now stands as a national model. Through his work with the USEPA and other states, Randy has brought sound science to mercury management and practical approaches to mercury reduction and control. He was publicly recognized by Governor Doyle for his tireless work on mercury. Randy made pollution prevention a working concept at a time when little more than a vague definition was available. Randy has been the quiet but assertive force reminding us of the environmental results that we can achieve. His legacy will be felt for generations to come.”

The wastewater industry is better because of Randy’s collaborative efforts to improve pretreatment and pollution prevention programs.  

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WWOA LMD Meeting
Kaukauna, WI – February 26, 2009

By George Kemmeter

On February 26, 2009 the Lake Michigan District held its first meeting of 2009 at Starlite Club in Kaukauna, WI. There were 125 attendees.

The meeting started off with Mark Surwillo, District Manager of Heart of the Valley Sewerage District welcoming the group to Kaukauna.

The first speakers for the day were Brian Huza & Jack Fischer of ITT Water & Wastewater-USA covering a better way to pump wastewater.

The Village of Hartland, Wisconsin was experiencing a range of serious problems resulting from ongoing clogging of pumps in its collection system lift stations. The first and most obvious problem was that pumps required frequent unscheduled service calls at all hours, as many as 2-3 times per week to clear the clogging pumps. Personnel had to remove rags and hazardous stringy debris from the pump impellers. This was costly in terms of overtime hours and unplanned maintenance. In 2003, Hartland found a new type of pump and tried it in one of its pump stations. The new pump eliminated the problems. Based on this success, the Village replaced more pumps at another problem station in 2005. The problems were solved there too.

As a result of eliminating its clogging problems, the Village of Hartland realized many other more far reaching benefits. Hartland improved the efficiency of its overall operations. The problems solved and the resulting benefits are as follows:

1. Unscheduled service calls to clean clogged pumps were eliminated.
2. The risk for basement backups was eliminated.
3. Many hazards were eliminated. The stringy debris containing hazardous waste and blood-borne pathogens that pose health risks are now pumped away. Worker safety was improved as personnel no longer needed to clean the hazardous, stringy material off of the pump impellers. Emergency visits to the lift stations involve risks with traffic, slips, trips and falls, and hazardous conditions like night and bad weather. These are now a thing of the past.
4. Energy bills at each lift station were cut to less than half. The energy savings alone paid for the new pumps in three years.
5. The pumps now last longer due to reduced wear.
6. The cost of the new pumps is no more than the conventional style.

The new pumps employ a self-cleaning design. Because of the many benefits, the Village of Hartland is converting all six of its lift stations to the new type of non-clog pump. This presentation documented the improvements, demonstrated how the new pumps work, and offered guidelines for implementing changes of your own.

Right before break, Chairperson John Schoen conducted his first business meeting for the LMSD District. First order of business was to review the minutes from the November 6, 2008 meeting and the Treasurer’s report was read by George Kemmeter, Secretary/Treasurer. Bruce Bartel made the motion and Brad Rokus seconded it, to accept both items as presented. John then presented Brian Helminger with a plaque for his service as Chairperson in 2008. A short tribute was paid to Tom Vik, who passed away in...
November 2008. John announced the retirement of Jeff Haack from the DNR. John then recommended beginning nominating people for Operator of the Year to Brad Rokus, Vice-Chair. Also contact Brad about being on the LMD team for Operator Competition. The next LMD meeting will be in Kiel on May 21 at Millhome Super Club.

Richard Sachs of the DNR announced the following updates:

- DNR is now accepting applications for the May 6 Operator Certification exams. The deadline for submitting those applications is April 8.
- Note that there is a new Phosphorus Removal Study Guide, and that exam will likewise be revised beginning with the May exam. The study guides can be downloaded from the DNR website, or by contacting Dick Sachs at 920-662-5176 or richard.sachs@wisconsin.gov.

John ended the business portion by asking the attendees to review the “Arrears List” on the back table to make sure your dues are paid. Jeff Haack made the motion to adjourn the business meeting and Ron Austreng seconded.

Right after the break which was compliments of McMahon Associates, Brad J. Van Schyndel of Centerline, Inc. gave a presentation on Vibration Analysis & Laser Alignment Technologies.

Vibration analysis is an established and proven technology that helps identify existing and imminent problems on rotation machinery. It allows for determination of machine condition without disturbing normal operation. A good
vibration analysis program helps detect an approaching problem, analyze its cause, and take appropriate corrective actions before failure occurs.

Precision laser shaft alignment has clearly proven to be a money-saving technology. It reduces the load on bearings, therefore extending bearing life. Proper alignment also reduces damage to seals, couplings, and other machine components. Using this proactive approach to machine maintenance, longer equipment life can be achieved. A few of the added benefits of these technologies include reduced downtime, increased production, and lower energy costs.

Just before lunch Steve Arant of Earth Tech-AECOM gave a presentation entitled, “Managing Phosphorus in a World of Increasing Chemical Costs and Lower Limits”. Steve presented information on how to improve the efficiency of your chemical and biological phosphorus removal processes, including characteristics and availability of different chemicals; how to calculate dosage requirements, methods of reducing chemical dosage such as multi-point chemical addition; and methods to monitor and improve your biological phosphorus removal process, including process descriptions and pre-fermentation technology. Steve also provided an update on Wisconsin’s efforts to develop lower effluent limits for phosphorus.

A short break and came back for a chicken and beef tips lunch.

The final speaker for the day was Tom Kispert of McMahon Associates. His presentation was entitled “High Rate Treatment & Bio-solids Technology” (Heart of the Valley). Tom started off by reviewing the needs, constraints, criteria, and to design the upgrade to the Heart of the Valley Wastewater Plant. He then reviewed the treatment performance on both of the liquid with Actiflo and Biostry process and ATAD on the solids trains. Tom then presented a chronological review of the construction progress of the HOVMSD WWTP. Improvements from December 2005 to December 2007. Tom presented this with a slide presentation.

After Tom’s talk, he gave the group driving instructions to HOVMSD WWTP. John asked for a motion to adjourn the meeting and Jeff Haack motioned and

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Plant Tour

Ron Austreng seconded it. The group picked up their DNR slips on the way out to the plant.

Respectfully submitted by,

George Kemmeter - LMD Secretary

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Clarifier Due Date

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By Jack Saltes, Wastewater Operations Engineer
Department of Natural Resources

Ownership and Governing Body Description
Ownership and governing body description should be presented in a narrative format that describes the community, its governing body, and committees that serve it. Discuss the governing body decision-making process, especially as it pertains to wastewater matters, namely the collection system and wastewater treatment plant. The ownership of the collection system should be stated including policies regarding private laterals, easements, and right-of-ways.

Organizational Chart
An organizational chart typically shows the chain-of-command in the organization, especially the collection system workforce, managers, supervisors, and committee chairs.

Organization is the second of the eight elements of a Capacity, Management, Operation & Maintenance (CMOM) Program.

Your organization, its structure, and communications is very important to how your collection system is managed, operated, and maintained. Decisions, especially capital projects and budget decisions, usually come from the governing body of elected officials or owners of the collection system. Committees that serve the governing body are often formed to address and deal with specific issues, such as water and sewage matters. The decisions are usually implemented by those employed by the municipality. The successful implementation, in this case, of a CMOM program, is directly related to the organization structure, the team of workers, and communications. For instance, in some communities the collection system team is part of the wastewater utility while in others it is part of the Streets Department. For larger communities, it may be a separate entity. For a CMOM Program, whatever the organizational structure and field team, communications, both internal and external, are vital to productivity and success.

ORGANIZATION:
As asked in the Compliance Maintenance Annual Report (CMAR), do you have the following written organizational elements?
Personnel and Position Descriptions
Position descriptions of each worker and manager should clearly define collection system work duties and tasks as well as communication responsibilities.

Internal Communication Procedures
Given how spread out a collection system is and the numerous tasks involved, written internal communication procedures should be known to all employees. Like a spider web of underground pipes, all employees and supervisors should know who is doing what, where, and when. When a basement back-up or sewage overflow occurs, it is critical good internal communications occur as well as providing information and answering questions from the media.

Public Information and Education Program
The key to any program, such as a CMOM Program, is public information and education (I&E). This becomes ever more important with a large community asset that is out-of-sight, out-of-mind. Communicate the benefit of a CMOM Program, what work is done and why, and your program will likely be supported and successful. This can be done through mailings, informational meetings, and the community website, as well as person-to-person contacts. Public perception of an organization is often viewed on the proactive work that gets done and goes largely unnoticed. In the case of collection systems, that work involves conveying wastewater to the treatment plant without any overflows and basement backups. It always involves good communications (I&E) with customers.

With baseball championship playoffs and World Series about to begin, the best baseball organizations and teams will be there. May your utility organization field the best collection system team it can, one that works and communicates well together, taking pride in what they do, striking out I/I, FOG and roots, and you too will certainly make the World Sewers, err, Series of collection system teams.

Take the I/I out of the sewers
Take the stress out of the rain
Buy me some rodders and cctv
I don’t care if it rains,
There’ll be no insurance claims

For its roots, roots, roots in the sewer
If they win it’s a shame,
For its one, two, three inches of rain
And the wastewater flow stays the same
The West Central Region of WWOA organized a benefit golf outing to help Kay in her battle with breast cancer. John & Jane Bond and Dennis Holtz were the primary leaders in this heartfelt effort. This picture includes many of the approximately 100 people who attended during the event at Badlands Golf Course in Roberts, Wisconsin.

The event included golf, pig roast, and silent auction. Many thanks to those who either contributed directly or donated items for the silent auction. The event was successful, not only because of John, Jane, and Dennis, but because so many Board members, Operators, and friends participated.
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43rd Annual Conference

The Hotel Sierra, KI Convention Center
Green Bay, WI

October 6 to October 9, 2009

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Dear WWOA Member, Associates, and Guests:

The WWOA Board of Directors cordially invites you to the 43rd Annual WWOA Conference to be held October 6 to October 9, 2009. This year’s conference will be held at The Hotel Sierra and KI Convention Center in Green Bay, WI. WWOA activities kick-off Tuesday morning with the ever-popular Pre-Conference Workshops. There are two interesting workshops to choose from: Workshop #1 scheduled from 10:30 a.m. to 12:00 p.m. is titled “Communication Success - Colors” and Workshop #2 “scheduled from 1:00 p.m. to 4:00 p.m. is titled “Establishing and Implementing a Collection System CMOM Program’. The workshops will be held at The Hotel Sierra and KI Convention Center in the Breakout Meeting Room 8 Auditorium.

At 6:00 p.m. Tuesday evening, please join us for the traditional “Meet and Greet”, an informal gathering of friends featuring an open buffet of brats, burgers, munchies and refreshments in the Pre-Function Lobby of The Hotel Sierra and KI Convention Center. Come rekindle old friendships and make new friends.

Wednesday morning activities will begin at 9:00 a.m. with an Opening Address by WWOA President John Bond. Following will be our Keynote Address provided by Eric Alexander, an award winning motivational speaker, adventurer, and mountaineer. The title of his speech is “Reaching Your Higher Summit; Trust, Courage, Teamwork and Integrity”. Vendor exhibits will open at 10:00 a.m. and run through 5:00 p.m. In addition, the vendor exhibits will be open Thursday morning from 8:00 a.m. until 12:00 p.m.

Concurrent Technical Sessions are scheduled for the mornings and afternoons on Wednesday and Thursday of the Conference. Training opportunities for large and small system operators will be the primary focus throughout the Conference. The Annual Operators Competition will be a featured event of Wednesday’s program beginning at 12:30 p.m. in Meeting Room B1 and B2.

The WWOA Operators Luncheon and Annual Business Meeting is scheduled for 12:00 p.m. Thursday; the Social Hour & Awards Banquet is scheduled for Thursday evening beginning at 6:00 p.m. We invite you to get involved in the organization and honor our fellow operators at the Awards Banquet. The Awards Banquet will close with the return of magician David Seebach. David provided the entertainment three years ago at the Kalahari Resort and had an outstanding performance. We will be holding the popular Farewell Breakfast once again on Friday Morning. Scott Stein of Leonard & Finco will be discussing PCB Clean Up of the Fox River.

Plant tours will feature Heart of the Valley MSD in Kaukauna and the Feeco International/Encap plant in Green Bay on Thursday afternoon beginning at 1:15 p.m. Space for both tours will be limited, so be sure to sign-up in advance. This year’s Spouse/Guest Program will offer a great mix of planned excursions to enjoy the many opportunities that the area has to offer. Please review the Spouse’s Program schedule for a complete list of activities and offerings.

Enclosed are the Conference Information and Registration Forms. PRE-REGISTRATION IS STRONGLY ENCOURAGED! On-line registration with credit card payment is available at www.wwoa.org. On behalf of the Board of Directors, Technical and Local Arrangements Committee, we hope to see you this fall.

Sincerely,

David R. Carlson
Technical Program Committee Chair

Bruce Bartel
Local Arrangements Committee Chair
Dear Spouse/Guest:

As the guest of someone attending the 43rd Annual Wisconsin Wastewater Operators’ Association (WWOA) Conference to be held at the Hotel Sierra – KI Convention Center in Green Bay on October 6-9, 2009, we are pleased to invite you to take part in this year’s Spouse and Guest Program. We have an exciting program planned for you! You are invited to join us for the Conference kick-off “Meet and Greet” on Tuesday evening in the KI Convention Center for brats, burgers, munchies, and refreshments with old and new friends.

On Wednesday morning, the Spouse and Guest Program starts with the Spouse Hospitality Room opening at 8:00 a.m. in Ballroom 4 of the KI Convention Center. You are invited to attend the Keynote Address at 9:00 a.m. given by motivational speaker Eric Alexander. At 10:30 a.m., a Zumba Class, a cardio class thru dance for all ages, will be taught by a YMCA instructor. To complete the morning, enjoy a walk-around lunch, courtesy of the manufacturers and consultants who are exhibiting.

After the walk-around lunch, the bus will board at 1:00 p.m. for a guided tour of the beautiful Green Bay Botanical Gardens. The Botanical Gardens offers over 47 acres of beautiful gardens and natural areas. The display gardens capture the beauty of Northeastern Wisconsin’s four distinct and wonderful seasons. Outstanding garden architecture sets the stage for an all-star performance by plants – perennials, roses, trees, shrubs, annuals, and more – specially chosen for their ability to thrive in the upper Midwest. We will return to the KI Convention Center by 4:00 p.m. For more information on the Green Bay Botanical Gardens, please visit www.gbbg.org.

On Thursday morning, the Spouse and Guest Program will once again start with the Spouse Hospitality Room opening at 7:30 a.m. in Ballroom 4 of the KI Convention Center. At 8:30 a.m. we will be taking a motor coach bus ride to Oshkosh. The morning will entail a tour of the EAA AirVenture Museum. The museum is one of the most extensive aviation attractions in the world. It features 100 historic aircrafts beginning with the Wright Flyer and continuing through the latest innovation, which is the civilian space travel. Also included is the Eagle Hangar, a tribute to World War II aviation. More information on the museum can be found at museum.eaa.org. Lunch will follow at the Air Academy Lodge.

Thursday afternoon will also include a visit to the Paine Art Center and Gardens in Oshkosh. The Paine is a historic estate with art galleries and display gardens. The Paine will be featuring the “Seeing Ourselves: Masterpieces of American Photography from George Eastman House Collection” exhibition. The exhibit includes over a hundred iconic images from the internationally acclaimed George Eastman House collection of Rochester, New York. You can find more information about the Paine on their website at www.thepaine.org. The bus will return to the conference from a wonderful day in Oshkosh at 4:00 p.m.

We hope you will join us for a great time in the Green Bay area!

Sincerely,

Jean Van Sistine
Spouse/Guest Program

Bruce Bartel
Local Arrangements
Sludge problems? Who you gonna call?

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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.
## WWOA Technical Program Schedule

**Wednesday, October 7, 2009**

**Welcome Address** – President John Bond – 9:00 a.m.
**Keynote Speaker** – Eric Alexander

### Exhibits 10:00 a.m. – 5:00 p.m.

<table>
<thead>
<tr>
<th>Time</th>
<th>Session A: Collection Systems</th>
<th>Session B: Energy Savings</th>
<th>Session C: Potpourri</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderator</td>
<td>Wade Peterson</td>
<td>Sacha Tetzlaff</td>
<td>Brian Helminger</td>
</tr>
<tr>
<td>Room</td>
<td>Ballroom A1</td>
<td>Ballroom A2</td>
<td>Ballroom A3</td>
</tr>
</tbody>
</table>

10:45 – 11:20

- Infiltration/Inflow Reduction Success at the Village of Coleman
  - Thad Majkowski

11:25 – 11:55

- How to Cut Your I/I Study Costs in Half
  - Dale Marsh, Kris August, Jeff Elrick

- Saving Energy Through Process Improvements
  - John Leonhard, Jim Kleinschmidt, Jim Fischer

Update on Green and Sustainable Design
  - Karl Hokanson, Nathan Cassity

### Walk Around Lunch: Exhibit Hall – 12:00 - 1:30 p.m.

**Operators Competition: Meeting Rooms B1 & B2 – 12:30 - 4:30 p.m.**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session D: Plant/Process Upgrades</th>
<th>Session E: Nutrient Removal</th>
<th>Session F: Laboratory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderator</td>
<td>Wally Thom</td>
<td>Jim Thalke</td>
<td>Don Lintner</td>
</tr>
<tr>
<td>Room</td>
<td>Ballroom A1</td>
<td>Ballroom A2</td>
<td>Ballroom A3</td>
</tr>
</tbody>
</table>

1:30 – 2:00

- Cannibal Process Reduces Sludge at the Village of East Troy
  - Philip Korth

- Madeline Island Lagoon Upgrades/Ammonia Removal
  - Jeremiah Wendt, Joe McCarthy

2008 NR149 One Year Older and Wiser
  - Tom Trainor, Camille Johnson

2:05 – 2:40

- From Rags to Residuals: Preliminary Treatment Case History
  - Ken Sedmak

- Practical Considerations for Optimization of Phosphorus Removal Processes
  - Troy Larson

Laboratory Practices
  - Mike Raynovic

### Break: Exhibit Area 2:40 p.m. – 2:55 p.m.

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Session</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:55 – 3:25</td>
<td>Upgrades to Enhance Production and Utilization of Biogas at Kenosha Water Utilities WWTP</td>
<td>Cold Weather Biological Nutrient Removal</td>
<td>Advancement in the Optical Measurement of Lab BOD</td>
</tr>
<tr>
<td>Steve Arant, Steve Mills</td>
<td>Alan Grooms</td>
<td>Steve McCuskey</td>
<td></td>
</tr>
</tbody>
</table>

| 3:30 – 4:00  | Municipal Wastewater Treatment Plant – Anaerobic Digestion | Membrane Bio-Reactors (MBR) Pilot Testing to Achieve Very Low Levels of Phosphorus | Lab Equipment Warranties |
| Paul Schoessow | Dan Schaefer | Jerry Cooke |

### Social Hour: Exhibit Area 4:00 p.m. - 5:00 p.m.
# WWOA Technical Program Schedule

**Exhibits 8:00 a.m. - 12:00 p.m. / Plant Tours 1:15 p.m. - 4:00 p.m.**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session G: Troubleshooting</th>
<th>Session H: Plant Assessment/Regulatory Issues</th>
<th>Session I: Design Concepts</th>
</tr>
</thead>
</table>
| 8:00 – 8:45 | **Moderator:** John Schoen  
**Room:** Ballroom A1 | **Moderator:** Ken Sedmak  
**Room:** Ballroom A2 | **Moderator:** Dale Doerr  
**Room:** Ballroom A3 |
|          | Lift Station Maintenance & Control Troubleshooting  
_Dave Braun_ | So you think your plant is well run?  
How do you know it?  
How do you show it?  
_Glenn Smeaton, Paul Nehm_ | Innovative Ammonia Abatement Facility Planning Case Study  
_Bill Marten_ |
| 8:50 – 9:35 | Effective Treatment Plant Troubleshooting  
_Ken Schnaars_ | What to Do With Contaminated Soil Trench Materials  
_Mike Sullivan  
_Nicole LaPlant, Keld Lauridsen_ | Designing for the “All Hell Breaks Loose” Scenario “How the Baraboo Treatment Plant Survived the Floods of 2008  
_Eugene Doro, Gil Hantzsch_ |

**Break: Exhibit Area 9:40 a.m. - 10:00 a.m.**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session J: Plant Construction</th>
<th>Session K: Industrial Waste Issues</th>
<th>Session L: Staff Training &amp; Development</th>
</tr>
</thead>
</table>
| 10:00 – 10:50 | **Moderator:** Tom Kruzick  
**Room:** Ballroom A1 | **Moderator:** Dennis Egge  
**Room:** Ballroom A2 | **Moderator:** Troy Larson  
**Room:** Ballroom A3 |
| 10:55 – 11:45 | Construction Issues at WWTP’s  
_John Szwedko_ | Toxicity in WWTP’s and How to Find the Source  
_Dale Marsh  
_Dennis Pronschinski_ | Quality Standard Operating Procedures Provide Knowledge Capture  
_Sacha Tetzlaff_ |
| 12:00 – 2:00 | Plant Upgrade  
_Jerry Doriott_ | Copper Removal Using Chemical Insulation  
_Tom Fitzwilliams_ | Wiki-Based O & M Documentation System Installed at the Madison MSD  
_Mathias Allen_ |

**Operators Luncheon – 12:00 p.m. / Business Meeting – 12:30 p.m.**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session M: Safety</th>
<th>Session N: Preparing for the New Operator Cert. Lab Exam Workshop</th>
<th>Plant Tours:</th>
</tr>
</thead>
</table>
| 1:30 – 2:15 | **Moderator:** Gary Hanson  
**Room:** Ballroom A1 | **Moderator:** Kevin Freber  
**Room:** Ballroom A2 | Heart of the Valley MSD  
1:15 p.m.  
Feeco International/Encap  
1:30 p.m. |
| 2:20 – 3:05 | Safe Work Planning-A Practical Planning Tool to Keep You and Your Co-Worker Safe  
_Mark Robinson_ | Preparing for the New Operator Certification Lab Exam  
_Rick Mealy, George Bowman_ | 1:15 p.m.  
Bus Departs from Convention Center Lobby Area to Heart of the Valley - Kaukauna Adams St Entrance |
| 3:15 – 4:00 | Understanding MFPA 820 Fire & Explosion Protection in WWTP’s  
_Josef Berktold_ | Preparing for the New Operator Cert. Lab Exam – Cont.  
Preventing Accidental Fires & Explosions in WWTP’s  
_Josef Berktold_ | 1:30 p.m.  
Bus Departs from Convention Center Lobby Area to Feeco Int./Encap – Green Bay Adams St Entrance  
4:00 p.m.  
Tour Buses Return |

**Social Hour – 6:00 p.m. / Awards Banquet /Entertainment – 7:00 p.m.**

WWOA TECHNICAL PROGRAM SCHEDULE
Friday, October 9, 2009

Operators Farewell Breakfast – Session O: 8:30 a.m. – 10:30 a.m. Ballroom A1, A2, A3
Moderator: New WWOA President Bruce Bartel
Speaker: Scott Stein – PCB Clean Up of the Fox River

Conference Concluded

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

DNR Credit Slips Will be Available at the Conference Registration Area Only!

Fee Schedule:

Pre-Registration:
(Prior to September 25, 2009)
Member $55.00
Non-Member $110.00
Non-Member with Membership Offer $95.00
Spouse/Guest Program - Full Package $70.00
Student, Retiree $30.00

On-Site:
(After September 25, 2009)
Member $100.00
Non-Member $150.00
Spouse/Guest Program - Full Package $80.00
Student, Retiree $35.00
Substitution (Re-print charge) $15.00

Officers:
President John Bond
President Elect Bruce Bartel
Vice President Dave Carlson
Past President Jim Thalke
Director (2010) Kevin L. Freber
Director (2010) Randy Thater
Director (2009) Dennis Egge
Director (2009) Wade Peterson
Director (2009) Dale Doerr
Executive Secretary Richard McKee
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.

We understand your needs and the dynamics of your situation. We’ll develop customized solutions and enhanced services that you can’t find anywhere else. With one call, find out why L.W. Allen pumps and Altronex control systems have become the leading provider of pumps, controls, technical assistance and superior customer service. No heavy lifting required.

Altronex Control Systems
A division of L.W. Allen, Inc.

L.W. ALLEN, INC.
(800) 362-7266
43rd Annual Conference
Wisconsin Wastewater Operators’ Association

Tuesday
October 6, 2009
A.M.  Board of Directors Meeting
   Golf Outing: Royal St. Patrick’s Golf Links          10:00 a.m. (Shotgun start)
   Sporting Clays: J & H Game Farm, Navarino WI      9:30 a.m. (Shotgun start)
   Pre-Conference Workshops: Breakout Meeting Room 8 10:30 a.m. – 12:00 p.m.
   1:00 p.m. – 4:00 p.m.

P.M.  Registration Opens: Convention Center Lobby South 1:00 p.m. – 4:30 p.m.
   Regional Officers Meeting: Breakout Meeting Room 7 4:00 p.m. – 6:00 p.m.
   Meet and Greet: Pre-Function Lobby                6:00 p.m. – 7:00 p.m.
   Open Buffet w/Brats, Burgers & Snacks             7:00 p.m. – 9:00 p.m.

Wednesday
October 7, 2009
A.M.  Registration Opens: Convention Center Lobby South 8:00 a.m.
   Welcome Address: Meeting Room B1 & B2           9:00 a.m.  President: John Bond
   Keynote Address: Meeting Room B1 & B2           9:15 a.m.  Key Note Speaker: Eric Alexander
   Vendor Exhibits: Exhibit Hall & Meeting Room B3 10:00 a.m. – 5:00 p.m.
   Technical Sessions: Ballroom A1, A2, A3         10:45 a.m. – 11:55 a.m.  See Program Schedule

P.M.  Walk Around Lunch: In Exhibit Area            12:00 p.m. – 1:30 p.m.
   Operators Competition: Meeting Room B1 & B2     12:30 p.m. – 4:30 p.m.
   Technical Sessions: Ballroom A1, A2, A3         1:30 p.m. – 4:00 p.m.
   Exhibits Social Hour: In Exhibit Area            4:00 p.m. – 5:00 p.m.
   See Program Schedule

Thursday
October 8, 2009
A.M.  Registration Opens: Convention Center Lobby South 8:00 a.m.
   Vendor Exhibits: Exhibit Hall & Meeting Room B3 8:00 a.m. – 12:00 p.m.
   Technical Sessions: Ballroom A1, A2, A3         8:00 a.m. – 11:45 a.m.
   See Program Schedule

P.M.  Operator Luncheon: Meeting Room B1 & B2       12:00 p.m. – 1:20 p.m.
   Business Meeting: Meeting Room B1 & B2          12:30 p.m. – 1:20 p.m.
   Plant Tour Departure: Heart of the Valley        1:15 p.m.
   Plant Tour Departure: Feeco International/Encap  1:30 p.m.
   Technical Sessions                              1:30 p.m. – 4:00 p.m.
   Social Hour: Meeting Room B1 & B2                6:00 p.m.
   Awards Banquet: Ballroom A1, A2, A3              7:00 p.m.
   Entertainment: Meeting Room B1 & B2              8:15 p.m.  Magician: David Seebach

Friday
October 9, 2009
A.M.  Farewell Breakfast: Ballroom A1, A2, A3       8:30 a.m. – 10:30 a.m.
   Scott Stein
2009
WWOA CONFERENCE
GOLF OUTING

Royal St. Patrick’s Golf Links
201 Royal St. Pat’s Drive
Wrightstown, WI 54180

Date: Tuesday, October 6, 2009
Time: 10:00 a.m. Sharp “Shotgun Start”
18 Hole Scramble Format
Prizes: 1st, 2nd, & 3rd place team – Longest drive, longest putt, closest to pin
Cost: WWOA Members, Manufacturers, Engineers, Suppliers and Conference Attendees – $65.00
Cost Includes: ½ motorized cart, 18 holes golf, buffet lunch at the turn, 2 drink tickets, Hors D’oeuvres and cash bar during award/prize drawing at Royal St. Patrick’s Club House.

Payment must be received no later than September 25, 2009 with names of foursome or individuals. (Committee will assign if not in foursome).

Please RSVP early as we are limited to 128 participants.

No refunds after September 25, 2009 unless course is closed by decision of Club Management.

Directions:
From Highway 41 take the County Road U exit (Exit 154). Head toward Wrightstown 1.5 miles and turn right on Golf Course Drive. Go to Royal St. Pat’s Drive and take a right to the golf course.

Go to www.royalstpatricks.com for more information.
WWOA Sporting Clays
Registration Form

Name: ________________________________
Address: ________________________________
City: ________________________________
State/Zip: ________________________________

Part of Three/Foursome? Yes No

Others in my Group: ________________________________

MAKE CHECK PAYABLE TO WWOA
MAIL REGISTRATION CARD AND FEE TO:

RICHARD D MCKEE
WWOA EXECUTIVE SECRETARY
24184 FAWN MEADOW LANE
RICHLAND CENTER WI 53581

WWOA SPORTING CLAYS
J & H Game Farm
W5810 J & H Road
Shiocton WI 54170

Date: Tuesday, October 6, 2009
Time: 9:30 a.m. Sharp “Shot Gun Start”

Prizes: 1st, 2nd, & 3rd Place Team-Best Individual Score

Cost: WWOA Members, Manufacturers, Engineers, Suppliers, and Conference Attendees $35.00

Cost Includes: 10 station/50 target shoot, (You May Bring Your Own Shells or Purchase at J & H) Scorecards, Lunch/Snacks/Chips/Coffee/Soda Water Served During Awards/Prize Drawing.

Other Services: Cash Bar

Payment Must be Received No Later Than September 25, 2009 with Names of Three/Foursome or Individuals. (Committee Will Assign if Not in Three/Foursome)

Please RSVP Early as We are Limited to 80 Participants.

No Refunds After September 25, 2009 Unless Course is Closed by Decision of Club.

Driving Directions from the South:
From Milwaukee - Take I-94 to I-41/45N. Continue on I-41 North to Appleton Exit 119 (WI Hwy 47). Take Hwy 47 North 21 Miles to Hwy 156. Stay on Hwy 156 W Through Navarino, About One and One-Half Miles to J & H Road. Entrance is On the Left.

Driving Directions from the North/West:
Take Highway 29 East to Hwy 47 South 8 Miles. Turn Right to Hwy 156. Stay on Hwy 156 Through Navarino, About One and One-Half Miles to J & H Road. Entrance On the Left.

Driving Directions from the East:
From Green Bay – Take WI 29-32 West to Hwy 156. Turn Left. Continue on Hwy 156 for 12 Miles to Navarino, About One and One-Half Miles to J & H Road. Entrance is On the Left.
PROCESS EQUIPMENT REPAIR SERVICES –
Our name says it all.

Our team provides equipment repair and rebuild services to the water and wastewater treatment industry.

With over 30 years of experience, our staff has installed, rebuilt and/or repaired the following equipment:

- Mechanical Bar Screens
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- Clarifiers
- Aeration Equipment
- Trickling Filters
- Digesters

……. And More.

We offer professional guaranteed service. We will provide a quotation including equipment requirements and a firm price for the project.

Our customized services allow you the option of having our trained staff work with your personnel or we will provide total turnkey service to complete your equipment installation, repair, or rebuild needs on a timely, competitively priced basis.

Contact Process Equipment Repair Services today, for all your equipment needs!

Phone 262-629-1059 • Cell 414-412-4403
Fax 262-629-1059 • Email PERSLamont@aol.com
5991 Division Rd. • West Bend, WI 53095

Process Equipment Repair Services, Inc.
**WWOA Pre-Conference Workshops**  
**Tuesday, October 6, 2009**  
**10:30 a.m. - 4:00 p.m.**

<table>
<thead>
<tr>
<th>Time</th>
<th>Workshop #1</th>
<th>Workshop #2</th>
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</thead>
</table>
| 10:30 a.m. to 12:00 p.m. | **Communication Success Signals “Colors”**  
Presenter: *Linda Wilke*  
Moraine Park Technical College  
Moderator: *Dave Carlson* | **Establishing and Implementing A Collection System CMOM Program**  
Presenters:  
*Jack Saltes, WDNR*  
*Steve Thon, WDNR*  
*Terry Stamm, Village of Elk Mound*  
*Ron Dickrell, City of Marshfield*  
*Joan Hawley P.E., Consultant O&M for Collection Systems and WWTP’s*  
Moderator: *John Bond* |
| Noon to 1:00       | **Lunch on Your Own**                                                        |                                                                            |
| 1:00 p.m. to 4:00 p.m. | **Cost: $15.00 Pre-Registration**  
$20.00 On-Site**  
Includes Refreshments Between Workshops**  
**DNR Credit Hours Available for each Session.**  
10:30 a.m. to 12:00 p.m.  
and 1:00 p.m. to 4:00 p.m.**  
**MAKE CHECK PAYABLE TO WWOA**  
**MAIL REGISTRATION CARD & FEE TO:**  
**RICHARD D MCKEE**  
WWOA EXECUTIVE SECRETARY  
24184 FAWN MEADOW LANE  
RICHLAND CENTER WI 53581 |
2009 Conference Committees

Local Arrangements & Spouse/Guest Program:
Bruce Bartel – Green Bay Metropolitan Sewerage District
Jean Van Sistine – Green Bay Metropolitan Sewerage District

Technical Program:
Chair: David R. Carlson

Dennis Egge    Wade Peterson    Troy Larson    Dale Doerr    Ken Sedmak
John Bond      Richard McKee    Dale Marsh    Gary Hanson    Kay Curtin
Rick Mealy     Bruce Bartel    Randy Thater    Tom Kruzick    Roy Swanke
Jim Thalke     Mark Robinson    Mike Kersten    John Schoen    Kevin Freber

Exhibit & Manufacturers & Consultants Committee:
Chair: Carol Strackbein & Jim Shaw
Dave Dorner - The Dorner Company
Tom Mulcahy - Mulcahy/Shaw Water, Inc.
Dave Dodge - Adaptor, Inc.

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

Stretch and Walk Sessions

6:30 a.m. Wednesday & Friday

At 6:30 a.m. Wednesday & Friday morning we will hold a Stretch & Walk session in the registration area.

We'll start with a five minute warm-up stretch routine and then proceed out for a group walk for 20 to 30 minutes.

Join us and get your day off to a healthy start.

See you at 6:30 a.m.
Coordinator: Tom Steinbach

Wastewater Treatment
Collection Systems
Sludge Management
Industrial Flow Monitoring

Engineering, Surveying, and Environmental Services

4634 Goldenpond Park Court
Eau Claire, WI 54703

(715) 836-9141 Ph: 715-836-9141
(715) 836-9141 Fax: 715-836-9141

Visit our website: www.relleeinc.com
E-mail us: info@relleeinc.com
SPOUSE/GUEST PROGRAM

Spouse/Guest Program
43rd Annual Conference
Hotel Sierra – KI Convention Center
Green Bay, Wisconsin
October 6 to October 9, 2009

SPOUSE/GUEST PROGRAM
(Please Type or Print Clearly)

Last Name: ____________________________________
First Name: ____________________________________
M.I.: _________________________________________
Nickname (For Name Tag): _______________________

PRE-REGISTRATION
(Prior to September 25, 2009)
Spouse/Guest Program $70.00

ON-SITE REGISTRATION
(After September 25, 2009)
Spouse/Guest Program $80.00

Spouse and Guest Program Details:
The Spouse and Guest Program offers:
- Tuesday Meet and Greet
- Keynote Address
- Admission to Exhibits
- Spouse and Guest Hospitality Room
- Wednesday Walk Around Lunch
- Wednesday Social Hour
- Zumba Class
- Green Bay Botanical Gardens Tour
- EAA AirVenture Museum Tour
- Lunch at Air Academy Lodge
- The Paine Art Center & Gardens Tour
- Farewell Breakfast

WWOA Spouse and Guest Program
October 6 - October 9, 2009
Sierra Hotel & KI Convention Center
Green Bay, WI

Tuesday, October 6, 2009
6:00 p.m. – Meet and Greet

Wednesday, October 7, 2009
8:00 – 9:00 a.m. – Spouse Hospitality Room
9:00 – 10:00 a.m. – Conference Opening and Keynote Speaker
10:30 – 11:30 a.m. – Zumba Class (cardio class thru dance for all ages; taught by YMCA instructor)
11:45 a.m. – 1:00 p.m. – Walk Around Lunch in Exhibit Area
1:00 – 3:30 p.m. – Green Bay Botanical Gardens (Guided tour) – Bus boards at Adams Street Entrance
4:00 p.m. – Return to Hotel Sierra – KI Center
4:00 – 5:00 p.m. – Social Hour in Exhibit Area

Thursday, October 8, 2009
7:30 – 8:30 a.m. – Spouse Hospitality Room
8:30 a.m. – Bus boards at Adam Street Entrance
10:00 – 11:45 a.m. – EAA AirVenture Museum (1 hr. docent tour)
12:00 – 12:45 p.m. – Lunch at Air Academy Lodge
1:00 – 2:45 p.m. – The Paine Art Center & Gardens (1 hr. docent tour)
4:00 p.m. – Return to Hotel Sierra – KI Center

Advance Registration for the Full Spouse and Guest package is $70.00. (Banquet Not Included)

Spouses and Guests are encouraged to register in advance. On-site registration will be available for the Spouse and Guest Program at a cost of $80.00. (Banquet Not Included)

Admittance to all Spouse and Guest Program functions will be by badge only. Please note that the Spouse and Guest Program is designed for adults.

PLEASE REGISTER EARLY AS SPACE FOR ACTIVITIES IS LIMITED TO 55 PEOPLE.
Godwin Dri-Prime® Backup System

The Godwin Dri-Prime® Backup System offers the peace-of-mind you can only find when you have a reliable contingency plan for your lift station. The Godwin Dri-Prime® Backup System provides independently-powered pumping in one dependable package for a variety of emergency situations. With the availability of both backup pumping and backup power, the Dri-Prime® Backup System can be engaged during primary power, switch gear and sewage pump failure or repair, and for primary pumping during routine maintenance. Because it is rated to meet the power and pumping demands of your system, the Godwin Dri-Prime® Backup System is ready, willing and waiting to meet your needs - whenever you need it!

When maintaining system integrity is important, there's no better choice than the Godwin Dri-Prime® Backup System!

Permanently installed Dri-Prime® pump in Fort Story, Virginia.

Permanently installed Dri-Prime® pump at Edenton, North Carolina.

FEATURES:

• Pumping can continue despite power, switch gear or sewage pump failures.
• Acts as primary pumping system during routine maintenance and repair.
• Available in sizes 3” through 16” with flows to 10,000 GPM, heads to 600’ and solids handling to 5” in diameter.
• PrimeGuard digital pump controller enables a seamless interface to existing control systems, thus allowing you to maintain remote monitoring and control.
• Optional sound-attenuated enclosure that provides sound levels as low as 64 dBA at 30’.
• Hinged, locking doors provide access to operating controls and service locations.

For More Information Call
Tom Kimberly
Godwin Specialist
(920) 850-2500
APPLICATION FOR MEMBERSHIP

YES! I want to take advantage of the 2009 registration/membership package.

I hereby apply for active membership in the Wisconsin Wastewater Operators’ Association, Inc. (WWOA).

Name: ____________________________
Address: __________________________
City: ________________________________
State: ___________ Zip: ______________
Work Phone: _________________________
Home Phone: _________________________
E-Mail Address: _____________________

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

Membership Classification:
□ Operator  □ Certified Operator  □ Student
□ Educator  □ Regulatory  □ Retired
□ Consultant  □ Other

This Applicant is Recommended by:

Member: ____________________________
City: ____________________________ State: __________

Send Membership Application Along with Conference Registration.

New Registration Option
Registration/Membership Package

This package is available to non-members only and is available thru pre-registration only. Package provides: conference registration and a two-year membership in WWOA for $95.00. You must fill out the short membership application attached to this registration form. Take advantage of this opportunity to add a WWOA membership, save $15.00 when compared to non-membership registration and save on registration cost next year. Also complete the Registration Form.

Manufacturers & Consultants

SPONSORSHIP FEE
(In Addition to Conference Registration)
Manufacturing, Consultant Engineering Firms, Sales Firms, Exhibitors and Contract Operation Firms
(one fee per firm) $75.00

EXHIBIT FEE
(In addition to Booth Registration & Sponsorship)
*Fee Includes One WWOA Member Registration

*Before August 1, 2009 Included in fee
8’X10’ $330.00 1 Registration

*After August 1, 2009 Included in fee
8’X10’ $510.00 1 Registration

2010 Clarifier Due Dates

<table>
<thead>
<tr>
<th>Issue</th>
<th>Submittal Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 2010</td>
<td>January 8</td>
</tr>
<tr>
<td>April 2010</td>
<td>March 5</td>
</tr>
<tr>
<td>June 2010</td>
<td>May 7</td>
</tr>
<tr>
<td>September 2010</td>
<td>August 6</td>
</tr>
<tr>
<td>December 2010</td>
<td>November 5</td>
</tr>
</tbody>
</table>
Seeing is Believing

The Mahr® Bar Screen: the original multi-rake screen and industry standard for durable, dependable, efficient screening.

REPRESENTED BY

LAI, Ltd.
(847) 392-0990
www.headworksusa.com

WWOA Conference Schedule

2010 - Kalahari Resort, WI Dells
2011 - La Crosse Civic Center, La Crosse
2012 - Kalahari Resort, WI Dells

Instructions:
Complete All the Applicable Entries on the Front and Reverse of This Registration Card.

Pre-Registration Saves You Money and More Importantly Time. Register Before September 25, 2009 and SAVE TIME & MONEY!

Non-Members: Take Advantage of New Registration/Membership Package

Admittance to All Events is by Badge Only; Including Exhibit Hall, Walk Around Lunch, Etc.

Add Total Due for Technical Program, Spouse Program, Additional Activities and Membership Dues.

TOTAL ENCLOSED: $

MAKE CHECK PAYABLE TO WWOA AND MAIL TO:

RICHARD D MCKEE
WWOA EXECUTIVE SECRETARY
24184 FAWN MEADOW LANE
RICHLAND CENTER WI 53581

Cash, Check, VISA, MasterCard, and Discover Will be Accepted as Payment.
**REGISTRATION FORM**  
(Type or Print Clearly)

<table>
<thead>
<tr>
<th>Last Name</th>
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Nickname (For Name Tag)  
Firm Name (If Consultant or Manufacturer)  
Mailing Address  
City | State | Zip Code
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Telephone (Work): ___________________________

Telephone (Home): ___________________________

Position/Title: ___________________________

Regional Affiliation  
Member Affiliation

☐ SE  ☐ Municipal  ☐ DNR/EPA  
☐ NW  ☐ Consultant  ☐ Student  
☐ Southern  ☐ Industrial Operator  
☐ LM  ☐ Manufacturer/Sales  
☐ NC  ☐ Educator  
☐ WC  ☐ Septage Operator  

To Assist the Planning Committee Please Check the Following if You Plan to Attend.

**Tuesday, October 6, 2009**  
Meet & Greet No.________

**Thursday, October 8, 2009**  
Heart of the Valley MSD  
Feeco International/Encap  

Sign-Up for Plant Tours Will be On-Site  
In the Registration Area

---

**Count No.** | **Registration Type** | **Member No.**
---|---|---
Office Use | | |

**Conference Registration**  
Please Check All Choices

**PRE-REGISTRATION**  
(Prior to September 25, 2009)

☐ WWOA Member $55.00  
☐ Non-Member $110.00  
☐ Non-Member Plus WWOA Membership- (Pre-Registration Only) $95.00  
☐ Retiree $30.00  
(Must be at least 60 Years Old and Retired from Wastewater Industry)

☐ Student $30.00  
(Must Send Copy of Valid Student ID)

**ON-SITE REGISTRATION**  
(After September 25, 2009)

☐ WWOA Member $100.00  
☐ Non-Member $150.00  
☐ Retiree $35.00  
(Must be at least 60 Years Old and retired From wastewater industry)

☐ Student $35.00  
(Must provide copy of valid student ID)

☐ Substitution or Re-Print Charge $15.00

MAKE CHECK PAYABLE TO WWOA AND MAIL REGISTRATION FEES TO:

**RICHARD D MCKEE**  
WWOA EXECUTIVE SECRETARY  
24184 FAWN MEADOW LANE  
RICHLAND CENTER WI 53581

---

**Thank You…**

Words cannot express my gratitude to everyone who attended and donated to the benefit golf outing held in my honor, and to all of you that have sent cards, e-mails, and have kept me in your thoughts and prayers. I would like to give special thanks to John and Jane Bond, Dennis Holtz, and the Village of Roberts Public Works staff for all of your work in planning and implementing the outing. The generosity and kindness that everyone has extended to me is overwhelming and very much appreciated.  

*Thank you so much. – Kay Curtin*
Conference Registration
No Refunds of Conference Fees After September 25, 2009

ADDITIONAL FUNCTIONS

OPERATORS' BUSINESS LUNCH:
Smoked Beef Brisket
No. of Tickets ____________ @ $15.00

AWARDS BANQUET:
No. of Tickets ____________ @ $25.00
Check Choice: □ Prime Rib
□ Door County Chicken
□ Shrimp DeJohn

FAREWELL BREAKFAST:
All Registered Spouse/Guest Are Welcome
No. of Tickets ___ @ No Charge if Registered

SOCIAL HOUR:
Courtesy of Manufacturers & Consultants

WWOA DUES: (If Applicable)
Two Years Dues _______________ $40.00

ENCLOSED $ _______________

Print or Type Clearly
VISA  Mastercard  Discover
Name on Card: _____________________
Card No.: _________________________
Expiration Date: ____________________

ON-LINE REGISTRATION WITH CREDIT CARD PAYMENT IS AVAILABLE AT WWW.WWOAO.ORG

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CONFERENCE MEETING ROOM GUIDE

Registration Booth - Convention Center Lobby South
Pre-Conference Work Shops - Breakout Meeting Room 8
Meet and Greet - Pre-Function Lobby
Stretch & Walk Sessions - Meet in the Registration Area
Spouse/Guest Hospitality Room - Ballroom A4
Spouse/Guest Bus Departs - Convention Center Lobby West, Adams St. Entrance

Wednesday Walk Around Lunch - Vendor Exhibit Area
Wednesday Social Hour - Vendor Exhibit Area
Regional Officers Meeting - Breakout Meeting Room 7
WWOA Promotions - Convention Center Lobby South
Welcome Address - Meeting Rooms B1 & B2

Keynote Address - Meeting Rooms B1 & B2
Technical Sessions - Ballrooms A1, A2 & A3
Vendor Exhibits - Exhibit Hall C and Meeting Room B3
Operator Luncheon - Meeting Rooms B1 & B2
Business Meeting - Meeting Rooms B1 & B2
Operator Competition - Meeting Rooms B1 & B2

Plant Tour Buses Depart - Convention Center Lobby West, Adams St. Entrance
Social Hour (Thursday Night) - Meeting Rooms B1 & B2
Awards Banquet - Ballrooms A1, A2 & A3
Entertainment - Meeting Rooms B1 & B2
Farewell Breakfast - Ballrooms A1, A2 & A3
The Newest Team Member Of 818 Lambeau St., Green Bay WI
The newest team member of 818 Lambeau St., Green Bay WI... with Diversenet to allow for easy activation of the modem’s SIM card on the GSM GPRS cellular network.

Fieldbus

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

nanoLine

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

Managed Ethernet Switch

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

SFN Switch

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

Ethernet Modem

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

UT Terminal Blocks

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

WLAN Radio

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

GSM GPRS Modem

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

1220 Washington Ave., Cedarburg, WI 53012 800-558-7033
818 Lambeau St., Green Bay WI 800-242-6303
www.aa-electric.com
Attention Biosolids Land Application Programs!

Training for Nutrient Management Planners
August 31 – Sept 1  Madison, WI
Sept 28 – 29 Wausau, WI

The UW Nutrient and Pest Management Program and Department of Soil Science will be presenting a workshop entitled "Training for Nutrient Management Planners" at two locations later this year. The Wisconsin Department of Agriculture, Trade, and Consumer Protection, the Wisconsin Department of Natural Resources, and the USDA Natural Resource Conservation Service are also contributing to the program. This two day Program is designed to educate individuals on the rules governing nutrient management, basic soil management principles, and how to prepare a nutrient management plan. Such a plan is required for farms throughout the state. Biosolids and other residuals are important sources of nutrients for many Wisconsin farmers and should be incorporated into any nutrient plan.

Identical programs will be held August 31 - September 1 in Madison at the Crowne Plaza Hotel, and September 28 - 29 at the Stoney Creek Inn in Wausau. The cost for the day, which includes lunches, breaks, and materials, is $200. Contact Scott Sturgul at 608.262.7486 or sturgul@wisc.edu for more information.

July 2009
Brain Teasers

Subject: Maintenance

Introductory
Which of the following would not be a reason for induction motor failure?

A. Single phasing
B. Excessive starts
C. Low temperatures
D. Imbalance of voltage

Advanced
What is “Ohm’s Law”?

A. Power, watts = (Electromotive Force, volts)(Current, amps)
B. Pump efficiency = 100 x (Pump Water Power)
   (Brake Power)
C. Horsepower = (gpm x Total Dynamic Head)
   (3960 x Pump Efficiency, percent)
D. Current, amps = Electromotive Force / volts
   Resistance, ohms

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Sky-Rocketing Costs?
We saved our customers an average of $150,000 last year in process improvements and chemical savings.
WISCONSIN WASTEWATER OPERATORS’ ASSOCIATION, INC.
Board of Directors Meeting

Thursday, April 16, 2009 and Friday, April 17, 2009
Hotel Sierra and KI Center Green Bay, WI

1. President J. Bond called the meeting to order at 10:02 a.m. on Thursday, April 16, 2009. All Board members were present. Also present were Regional Officers: John Schoen-LMD, Roy Swanke-SD, Bernie Robertson-SD, James Bergles-SED, Terence Vanden Heuvel-NCD, David Piquett-SED, and Wally Thom-NWD.

2. The minutes for December 11 and 12, 2008 were reviewed. After review, W. Peterson made a motion to approve the minutes as presented. The motion was seconded by K. Freber. Motion Carried.

3. McKee presented the Financial Statement and Vouchers for approval. McKee reported that as of April 1, 2009, WWOA had $18,683.23 in revenue with $23,682.95 in expenditures with excess expenditures over revenue of $4,999.72. The Board reviewed the Vouchers (327-348 and 1-42) for review and approval. After discussion, B. Bartel made a motion to approve the Financial Statement and the Vouchers as presented. D. Carlson seconded the motion. Motion carried.

4. Committee Report
   a. Nominations - No nomination.
   b. Promotional Items - No report.
   c. Membership - McKee reported that we have 1,995 members.
   d. Scholarship - W. Peterson reported that he as one application for one of the two $1,000.00 scholarships.
   e. Executive Committee - No report.
   f. Clarifier - J. Butt reported that the Clarifier will experience a change. Jeff Haack has retired from the Committee. The Committee is searching for a DNR replacement. J. Butt reported that there were 41 ads in the April issue, up from 34 in the December 2008 issue. The FTP web-based file sharing is working well. It saves time and money. J. Butt reported that the April issue is the first issue published with the new software, InDesign.
   g. Career Development - D. Doerr reported that they attended the Guidance Counselor Conference. There was a lot of interest in our wastewater display. D. Doerr informed the Board that he got the World Water Monitoring Days test kits and has distributed them to school teachers from around the state.
   h. Awards - B. Bartel reported that he has not received any awards nominations yet. The awards nomination form was updated with the help of R. Thater. The awards nomination form will be published in both April and June issues of the Clarifier.
i. **Operator Training** - No report.

j. **Directory** - R. McKee reported that the New Directories will go to print in May. The cut off date for changes was April 1. He will get four proofs. R. McKee will get one, T. Kruzick will get one, John Bond will get one, and the other will be the markup copy to return to Sun Printing.

k. **Publicity** - D. Doerr reported that his Committee submitted articles for the Clarifier regarding WWOA Past President Willis Stubbe obituary, 2009 School Guidance Counselors Convention, and Water Resource Library.

l. **Regional Coordinator** - R. Thater reported that he emailed a regional newsletter in December. A second short newsletter was sent in March. R. Thater provided the Board with a regional meeting schedule. A discussion ensued regarding regional reports and photos of their meetings. After discussion, it was decided that the Regional Coordinator will receive all regional meeting reports and photos and then provide them to the Historical Committee, Clarifier, and Website. The Regional Coordinator will act as a clearinghouse.

m. **Government Affairs** - The 2009 Government Affairs Seminar was held February 19 at the Marriott Madison West in Middleton, WI. R. Thater performed the Welcome and Opening Remarks. R. Thater submitted an article for the April Clarifier. The Committee reserved Tuesday, February 23, 2010 with Madison Marriott West. Next year CSWEA will chair the Committee.

n. **Biosolids Symposium** - D. Egge reported that the Spring Biosolids Symposium was held at the Stevens Point Holiday Inn and Convention Center on March 10, 2009. There were approximately 295 that attended including both Septage and Wastewater Treatment Plant Professionals. D. Egge committed that this year there was a sit down lunch rather then a buffet and a lunch session. This worked out very well and will likely be the same next year.

o. **Liaison** - D. Egge reviewed the minutes of the Collection System Committee Meeting on January 6, 2009. The 22nd 2009 Collection System Seminar will be held on June 4, 2009 at Turner Hall in Watertown, and in Marshfield on August 6, 2009 at the Clearwater Hotel & Convention Center.

p. **Web-Site** - B. Bartel reported that Webfitter is behind schedule in the switch over due to personnel issues. Notice has been sent to Green Bay Net to inform them of the decision to switch providers per the contract with them. There will be an article in the June Clarifier explaining the new web site and updating members on the options and feature of the new site. A discussion ensued regarding online registration for this year. After discussion, D. Doerr made a motion to proceed with the online registration for this year’s Conference effective July 1, 2009. W. Peterson seconded the motion. Motion carried.

q. **Technical Program** - D. Carlson reported that the Technical Committee met February 24 2009 and the speakers have been selected. Letters have been sent. Those who were accepted to present their papers were also given the option to have their papers posted on the wwoa.org website. There are two pre-conference workshops this year. The
two sessions are set up back to back. The keynote address speaker this year will be Eric Alexander. He is a motivational speaker. David Seebach, a magician, will be the entertainment after the awards banquet this year. Gary Kincaid of the WDNR or someone else who is a member of the responsible party group of the Fox River PCB Cleanup Program will be the farewell speaker. D. Carlson needs 16 moderators for the Conference.

r. **Exhibit Committee & M&C** - C. Strackbein informed the Board that we have room for 110 8X10 booths. The M&C will pay for the cost of the following: one hour of beer, wine, and soft drinks for the Meet & Greet, half of the cost of the lunches on Wednesday, half of the cost of the breaks in the exhibit area, and the cost of the Social Hour before the banquet.

s. **Operators Competition** - D. Doerr reported the operator competition for 2009 is being put together. There will be new Lead Judges for the Collection System event and Safety event. The events will be the same as last year. The Maintenance event, Vogelsang Rotary Lobe pump lobe change out, will include replacing the seal assembly.

t. **Local Arrangement** - B. Bartel reported that everything is set for the tours to the Heart of the Valley and FEECO International/Encap. There will be a sign up sheet at registration for both tours. There will be limited room so attendees will have to sign up. D. Egge made a motion to set the conference fee the same as last year. K. Freber seconded the motion. Motion carried. They are: pre-registration Member $55.00, Non-member $110.00, Non-Member with Membership Offer $95.00, Spouse/Guest Program $75.00, Student/Retiree $30.00, Banquet $25.00, and Business lunch $15.00.

u. **Spouse Program** - B. Bartel reported for J. Van Sistine. The spouses program has been set. It consists of Tuesday: Meet & Greet; Wednesday: Spouse Hospitality Room, Conference Keynote, Zumba Class, Walk Around Lunch, Green Bay Botanical Gardens, and Exhibit Social Hour; Thursday: Spouse Hospitality, EAA Air Venture Museum, Lunch at Air Academy Lodge, The Paine Art Center & Gardens. The Fee is $75.00 pre-registration and $80.00 on site.

v. **Golf Outing** - B. Bartel reported for J. Czypinski. The golf outing will be held on Tuesday, October 6, 2009 at the Royal St. Patrick’s Golf Link. McKee reported that the Golf Committee needs to set the prices high enough to make up some of the $1,500.00 deficit from last year. After discussion, the price was set at $65.00, which includes 18 holes with cart and some prizes.

**Sporting Clays** - J. Thalke reported that this event will take place at J & H Hunt Club located near Navarino, about 20 miles from Green Bay. Starting time will be 10:00 a.m. Tuesday. Lunch
will be provided in the price. The prizes will be much the same as last year, with four person teams. The price is set at $35.00 this year.

w. Permanent Arrangements - John Leonhard, Chair of the Committee, presented the Board with a list of sites out to 2012. They are: 2010 Wisconsin Dells-Kalahari; 2011 La Crosse-Radisson/La Crosse Center; 2012 Wisconsin Dells-Kalahari. Leonhard requested some guidance from the Board on sites for 2013 and 2014. After discussion, the Board directed the Committee to pursue contracts with Holiday Inn in Stevens Point for 2013 and 2014 KI Center and Hotel Sierra in Green Bay for 2014.

x. Resolutions and bylaws - No report.

y. Historical - No report.

z. Others - No report.

A motion by B. Bartel, and seconded by J. Thalke to accept the Committee Report as presented. Motion Carried.

5. OLD BUSINESS

6. NEW BUSINESS
  a. Others - none.
  b. McKee will re-establish the library account. The Spouses income and expenditures be placed in an escrow account.
  c. The Board set the one day Conference meeting for Tuesday, August 14, 2009 at the Hotel Sierra and the KI Convention Center.

7. Adjournment - There being no further business, D. Doerr made a motion to adjourn. B. Bartel seconded the motion. Motion carried. Meeting adjourned at 9:20 a.m. on Friday, April 17, 2009.

Respectfully submitted,
Richard D. McKee
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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.

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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

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WWOA SE REGION MEETING
May 7, 2009 Sussex, Wisconsin

It was a beautiful day to host a meeting. The sun was out and the rain was away, the operators and vendors made great use of the day. The meeting was held at Fairways of Woodside located on the North side of Sussex. This was an ample size meeting hall and the food was just as delicious.

Chairman Piquett called the meeting to order at 8:05 with a warm welcome to the attendees. He then introduced the Sussex Village Board President Tony Lapcinski. Mr. Lapcinski greeted the members and then gave a brief history of Sussex and talked about the current economics in Sussex. Once Tony was done Chairman Piquett introduced our first speaker.

Kevin Freber was the first to take the floor. His is the assistant water systems manager for Watertown. Kevin’s topic dealt with WisWARN (Wisconsin’s Water/Wastewater Agency Response Network). WisWARN is a Voluntary Mutual Aid Response Network for Wisconsin Water, and Wastewater Agencies. The purpose of WisWARN is to provide a network where water and wastewater agencies can locate emergency assistance in the form of personnel, equipment, materials, and other associated services. The
objective is to provide rapid, short-term deployment
of emergency services to recover from any emergency
including but not limited to: Natural Disasters — Tornados,
floods, ice storms, earthquakes, lightning, regional electrical
outages, etc. Manmade Disasters — Significant accidents,
vandalism, hazardous materials release, riots, or terrorist
attacks. The bottom line, it means strength in numbers.
Follow the link to find out more about this worthwhile
organization: http://www.wiswarn.org/

The second speaker to be introduced was Doug Nelson from
Ruekert & Mielke. His presentation was on pharmaceuticals
and the wastewater operator. This was a very informative
presentation. Doug covered drug take back programs, water
treatment, urine separation, and waste from animals and
humans that contain endocrine disrupters. The drug take
back programs can become very involved when it comes
to the narcotics. The right people need to be in place to
identify and accept these drugs, plus transporting them to
be disposed of. One of the key reasons these programs are
happening is that the endocrine disrupters are showing up in
our drinking waters world-wide. The majority of treatment
plants at last reading, had not caught up with technology
or employed technologies to remove them yet. This is why

I cringe every time I hear of a deep injection well coming
online to replenish the aquifer. That’s just my opinion.

If you have questions or would like more information on his
presentation, give Doug Nelson of Ruekert & Mielke a call.

Following the second speaker, the meeting took a break
to visit a well packed vendor display area. The WWOA is
always thankful for vendors. Without them, our meetings
would be more expensive and left with a void that we
would have to fill with acrobatic cats or clowns with confetti
buckets. Thank goodness those have never needed to be
deployed.

After the break, the meeting was brought back to order
by Chairman Piquett. Dave introduced the third speaker,
Joseph Piatt PH.D M.S.C.E. from Carroll University.
He continued on the topic of Pharmaceuticals in the
Environment. You are probably thinking, two speakers on
the same topic? I did also when I first seen the meeting
agenda. But it turned out to be a great continuation from
the second speaker’s presentation. Mr. Piatt’s presentation
dived deeper into the subject of drugs in our water. Mr.
Piatt covered the drug take back programs, symposiums

Foth.
If you are looking for a presentation on pharmaceuticals for your meeting, I suggest having these two speakers come in and present the facts. The audience will go away with much greater knowledge of how our environment is being affected by the chemicals in pharmaceuticals.

The business meeting followed next and was called to order by Chairman Piquett. The usual items were discussed and accepted. The DNR update, WWOA upcoming events, and any public comments were discussed. The operators’ competition got some greatly needed attention. We will have a team this year, maybe two. Our last event for this year is the summer picnic meeting that is being hosted by the Burlington Wastewater Treatment Plant. Connie Wilson and staff are planning hard for this meeting. The usual pig that is cooked has been replaced by a grilled pork chop dinner. I am looking forward to this! Plus the tour of another recently updated plant.

Our meetings for next year are as such: February 2010 is at the Village of Slinger, May 2010 spring meeting will be held at the Village of East Troy, and our August meeting will be held in West Bend. Looks like I will be doing some traveling as chairman next year. Maybe all the road construction will be done? Ok time for another dream. Recognitions were then handed out to the plant director, Mr. Thalke and his

---

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Rick Kutchter  MOBILE  262-951-6327
Rick Kutchter  PAGER  262-775-0106

ITT Flygt Corporation  N27 W23291 Roundy Drive, Pewaukee, WI  53072  (262) 544-5875
staff. Lunch soon followed and was delicious and filling. Hats off to the in-house staff at Fairways of Woodside for a great meal.

Following lunch we had a plant introduction and tour overview by Jim Thalke along with Strand and Associates. They informed us of the upgrade that had just been completed and how the plant is now laid out. The last item that went along with the tour was a stream shock. Sue Beyer from the DNR gave a short presentation on what to expect and what we should find. And even though operators were hoping to see a nice big rainbow trout pop up, none were found. Maps to the plant were handed out and off we went for the tour.

Having worked at Sussex for several years, it was nice to see it again. And yes, it has grown. The operators toured the newly updated plant and then headed to the back gate where they could exit to watch the fish shock demonstration. The fish shocking was interesting to see. It was not at all what I expected. Several different species of fish were found; I believe 7 different kinds? but no trout. A special thank you goes out to Sue Beyer and her crew from the DNR. Thank you for demonstrating how a stream shock is done and what to look for.

In closing, the SE WWOA officers wish to thank everyone that attended. It helped make another great meeting for 2009. ☺

Respectfully submitted by,

James T. Bergles, Vice Chairman

---

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Southern Region WWOA Meeting
Hosted by the Janesville WWTP at the Pontiac Convention Center
Thursday – May 14, 2009

Janesville Group Shot
There were 80 people in attendance at the meeting. We were greeted by Joe Zakovec – Southern District Chairperson who introduced City Manager Eric Levitt of the City of Janesville. Eric told the audience he has only been City Manager for a short period of time and has found the wastewater treatment plant to be a very positive experience. He appreciates that the facility is in compliance (not the case where he formerly was employed) and a very competent staff who are a pleasure to work with on a day-to-day basis. Eric recognized Dennis Egge, who recently retired as the City of Janesville Wastewater Treatment Plant Superintendent and Joe Zakovec who was recently promoted to Superintendent. He invited everyone to visit and enjoy the many features the City of Janesville has to offer – one of which is the park system and the many miles of paved trails.

Our first presentation was by Ray Grosch – IntelliSys Information Systems. Ray’s PowerPoint presentation was titled, “IntelliSys Information Systems - Design, Build, Support your path to the Knowledge Staircase.” Ray had information which shows that energy costs, a major O&M expenditure, accounts for 28% of a wastewater treatment plant budget. Wastewater and water operations account for 3% of all this country’s electrical energy usage (56 billion Kw/yr). Energy costs are continually climbing and although many utilities have reduced energy use, energy costs continue to rise. Operation costs can be managed with the right tools reducing both usage and cost. EPA states that a 5% to 20% reduction in energy can be achieved at most wastewater facilities without the need of any major capital expenditures. Measurement and management is all that is required to achieve these savings. You cannot manage what you do not measure… Step 1 is to Audit utility bills; Analyze time of day usage; Analyze peak demand charges; Review seasonal variations; Track and trend daily energy use, peak demand, abnormal use periods; Automate reporting daily, monthly and yearly. Step 2 is to develop a Project List and Prioritize It. Step 3 is to Document Performance. Step 4 is to publicize Achievement and Step 5 is to Re-assess. EnergyView is proprietary Energy Management Software available to assist is energy conservation.

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• Guaranteed NH₃-N removal even in cold climates through use of the LemTec™ Modular Cover
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After our break, Jan Scott – Unison Solutions spoke to the group about Technologies for Biogas Conditioning. Equipment damage and performance issues are the driving force for conditioning biogas. The key system components of conditioning include: hydrogen sulfide removal, moisture removal, a compressor or blower, siloxane removal, controls/automation and carbon dioxide removal. Hydrogen sulfide needs to be removed to prevent equipment damage from corrosion (hydrosulfuric acid), health and safety issues (1000 ppm will cause an individual to become unconscious), odor control and prevent fouling of siloxane removal media. Moisture removal to prevent condensation downstream, improves energy content of gas, condenses in compressors, prevent the formation of weak acids from interaction with H2S and CO2 and prevent fouling of siloxane removal systems. Gas compression is accomplished by using either blowers: Centrifugal – high cost, high compression and resistant to H2S, Rotary Lobe (low cost but noisy), or Regenerative (low cost and low compression); or compressors: Flooded Screw – H2S resistant, Sliding Vane – simple oil system but high temperatures. Siloxane is an organosilicon produced by Dow Chemical. It is used in the manufacture of many commercial products including makeup, tooth paste, shampoo, lubricants, and multiple other products. Siloxane is present in almost all digester gas from 500 ppbv to 140,000 ppbv. Siloxanes do not break down during processing at wastewater treatment plants or landfills. Pressure and temperature transform the siloxanes into various abrasive silica forms from sand to glass. Siloxanes cause damage to boilers, internal combustion engines and microturbines, with usage increasing 5-10% annually. Siloxanes are removed using: fixed bed carbon filters, fixed bed silica gel bead filters, regenerated desiccants, regenerated carbon, regenerated...
Take control of your energy costs
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Energy is one of the largest expenses for Wisconsin’s water and wastewater facilities. Fortunately, it’s also one of the most manageable.

Let Focus on Energy help you find practical ways to reduce your energy use and operating costs—from installing energy-efficient pumps, motors, and variable-speed drives, to adopting energy-saving best practices, modifying process operations and utilizing renewable energy.

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Packed with ideas to help you implement energy-efficient practices and equipment in your facility, this invaluable resource is the perfect starting point for creating your own energy management program. Visit focusonenergy.com/guidebooks to download your free copy today!
The Clarifier  SEPTEMBER 2009, VOL. 182  52

graphite and regeneration with microwave. Controls/automation are imperative to monitor and control inlet conditions, process conditions, outlet conditions, and site conditions. End use of biogas includes direct use-boiler fuel, electrical generators, fuel cells, turbines, distribution pipeline injection and compresses gas for vehicle fuel. There are currently 75 systems in operation in the United States.

Steve Arant, Earth Tech/AECOM, gave the morning’s final presentation – The Latest Blower Technologies – Are They Worth It or Are They Just a Lot of Hot Air. The general types of blowers include: Centrifugal (constant pressure, variable capacity) and Positive Displacement (constant capacity and variable pressure). A centrifugal blower converts kinetic energy into pressure energy. The centrifugal action increases the pressure at the outer wall of the volute. Increasing the volute area converts additional kinetic energy into pressure energy. A multi-stage centrifugal blower experiences headloss across multiple impellers, diffusers and return channels. High-speed single stage blowers provide required discharge pressure in single stage and eliminates headloss across multiple impellers, diffusers, and return channels. There are generally two types of discharge diffusers: Volute dischargers which have a spiral shape with increasing cross-section area and Vane diffusers, which have a number of short expanding passages. The methods to control blower capacity include: inlet valve control, adjustable inlet guide vanes, adjustable discharge diffuser, combination inlet guide vanes, and adjustable discharge diffuser and variable speed driver. The inlet control valve reduces the inlet pressure, which in turn reduces the capacity in terms of mass flow (with total head remaining constant) and the reduction in inlet pressure reduces horsepower. The adjustable discharge diffuser allows the head to remain constant and the capacity is adjusted by changing flow direction. Dual point control has the following: combination inlet guide vanes and adjustable discharge diffuser; combination variable speed and adjustable discharge diffuser; and PLC control – optimize efficiency at required flow and pressure. Variable speed blowers have the following: the blower flow rate is proportional to speed; blower head is proportional to speed squared; and blower power is proportional to speed cubed. The efficiency remains constant at variable speed. An ABS Blower is single stage, high speed VFD driven motor, magnetic bearing (oil free), air cooled VFD, controls and motor; and has a vaneless diffuser. A Turblex Blower is

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Breakthrough Water and Wastewater Disinfection

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Bioionix
single stage; 3600 rpm to 20,000 rpm; oil lubricated and cooled; and has adjustable differs and inlet guide vanes. Other high speed single stage blowers, which are oil free and air cooled include: Atklas Copco, KTurbo, Neuros and HAS. Steve mentioned Boyle’s Law and Charles’ Law before closing his presentation.

After lunch, Joe Zakovec conducted the business meeting for the Southern Region. After approval of the agenda, minutes, and the Treasurers Report, Joe introduced Randy Thater, who told the group about various upcoming events of interest. June 4 is the Collection System Seminar in Watertown with another seminar being held in Marshfield on August 6. There are two golf outings forthcoming (one in Lomira and another in Marshfield). There also is an operator’s ride this summer. The WWOA annual conference will be held in Green Bay from October 6 to October 9, 2009 (pre-conference workshop will be two consecutive sessions). Randy also reminded the group about various scholarships and tuition reimbursements that the WWOA has to offer. The UW Water library is our reference library location. Please refer to the WWOA.org website for details about the library and upcoming events. Randy solicited nominations for various awards to be given out at the 43rd annual conference in Green Bay and to start thinking about nominations for next year’s conference.

Joe presented Dan Lynch a plaque acknowledging the appreciation of the Southern Region for hosting the meeting in Janesville. Presently we are looking for host communities...
for 2010 and also seeking nominations for the Secretary to be elected at the next regional meeting, August 13 in Baraboo. 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 Madison Metropolitan Sewerage District for the use of their laptop computer!

Larry also reminded permittees to have the CMAR resolution passed by the appropriate local government body before submitting it to the Department. Permit backlog will continue to grow as the permit drafter for the Southern Region is working on a part-time basis. Your current WPDES permit is in effect until a new permit is issued.

Our next speaker was Larry Wavrunek from Rosemount Instruments and his topic was Wireless Instrumentation. The first step is to answer the fundamental question, Where is my data? What types of applications are targeted for monitoring and where do their data points exist? Many facilities lack the necessary hard wiring to allow the installation of typical data management transmission systems so a wireless device, or devices, may be the most practical and cost-effective method of data acquisition. These wireless units are lithium battery powered (five to eight year battery life - battery technology is ever evolving so even longer lasting batteries are in development) and have an integral antenna. The wireless units are capable of transmitting a signal between unobstructed devices of up to 750 feet. Moderate infrastructure between devices will allow transmission up to 250 feet and up to 100 feet with

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TSS, pH and flow (to name a few). Easy integration into existing SCADA – nothing proprietary (5 levels of security). The devices are not intended to do continual monitoring but instead systematic monitoring. They are secure and reliable and will “talk” to the proper gateway (similar to walkie talkies). Wireless devices are frequently used in wastewater treatment plants – frequently for effluent monitoring, highest installation cost (trenching, wiring and conduit). Wireless devices are also used for tank level measurements. Another example given was to measure vibration (example: sludge pumps) to track trends on a pump or several pumps.

Jay Kemp, AECOM, then gave a brief overview of the Janesville wastewater treatment plant and directions on how to get to the site.

Finally, the members were given a tour at the plant by the entire Janesville staff (with refreshments provided by AECOM).
Wastewater Operator Trainees Available for Hire

Eight trainees who passed the DNR General Wastewater Introductory exam in May after completing Veolia Water Milwaukee’s 33 hour wastewater operator training class are looking for jobs in the wastewater industry.

The training was held in conjunction with Milwaukee Area Technical College and the Wisconsin Regional Training Partnership (WRTP). In addition to the wastewater exam, these trainees have passed a 10-hour OSHA safety course, drug screen, preliminary background check, and academic testing showing math and reading scores sufficient for college level technical courses. All have a valid WI driver’s license, and a high school diploma or GED; some have college coursework or degrees. All have a solid work history in a variety of fields and are looking for an opportunity to move into an industry with a stable employment environment. All interviewed well for the three operator trainee positions that Veolia Water Milwaukee had immediately available.

So these eight highly motivated candidates remain available for employment. If you are interested in interviewing any of these candidates or finding out more about the training program, contact: Dawn Schaefer, Employment and Training Coordinator, WRTP, at 414-937-3624 or dschaefer@wrtp.org.

Free Items

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

Please contact Mike Kersten at (920) 339-4094.

What’s Your Back-up Plan?

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- Visu-Sewer is the oldest and largest full service sewer inspection, maintenance and rehabilitation contractor in the Midwest, having inspected, cleaned or repaired over 15,000,000 feet of sanitary sewers and storm drains since 1975!

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### 2009 - 2010 Wastewater Classes for Wastewater Training Solutions

**Instructor: Dan Tomaro  Phone: (608) 770-5144**

[www.wastewatertrainingsolutions.com](http://www.wastewatertrainingsolutions.com)

<table>
<thead>
<tr>
<th>Class</th>
<th>Dates</th>
<th>Location</th>
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<tr>
<td>Primary Treatment - intro &amp; adv</td>
<td>September 1 &amp; 2, 2009</td>
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<td>Lab - Intro</td>
<td>September 8, 9 &amp; 10, 2009</td>
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<td>September 14, 15, 16, 17, 18 &amp; November 2, 2009</td>
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<td>Phosphorus Removal - intro &amp; adv</td>
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<td>September 28, 29, 30, Oct 1 &amp; 2 &amp; November 3, 2009</td>
<td>Stevens Point (Ramada)</td>
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<td>Activated Sludge - Intro</td>
<td>October 12 &amp; 13, 2009</td>
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<td>Lab - Advanced</td>
<td>October 19 &amp; 20, 2009</td>
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<tr>
<td>Mechanical Sludge Handling - intro &amp; adv</td>
<td>October 21 &amp; 22, 2009</td>
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<tr>
<td>Ponds - intro &amp; adv</td>
<td>October 26 &amp; 27, 2009</td>
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<tr>
<td>Disinfection - intro &amp; adv</td>
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<td>Septage Haulers Update</td>
<td>January 19, 2010</td>
<td>Janesville (Holiday Inn)</td>
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<td>Land Application of Sludge</td>
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<td>Wastewater Math</td>
<td>February 2, 2010</td>
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<td>April 7 &amp; 8, 2010</td>
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<td>April 27, 28 &amp; 29, 2010</td>
<td>Stevens Point (Ramada)</td>
</tr>
</tbody>
</table>

All classes go from 8:30 am until 3:30 pm. Most classes cost $80/day, the exception is the General Wastewater class, which costs $360 for 6 days.

The hotels where the classes are held reserve rooms at a special rate for students, mention that you are taking the class if you are staying overnight at the hotels.

All classes are approved for 6 hours of DNR continuing education credits per day, credit slips will be distributed at the end of class.

**Call to schedule custom training at your facility.**
The following courses are offered at various locations across the State of Wisconsin. All courses, regardless of campus location, are offered by Moraine Park Technical College.

**GENERAL INFORMATION:** Contact Eileen Rottsoll at erottsoll@morainepark.edu or 262-306-5321 or Katy Yindra at kyindra@morainepark.edu, or by telephone at 262-306-5325.

**TO REGISTER FOR COURSES PHONE** 800-472-4554 or online at http://www.morainepark.edu/pages/221.asp

A mail-in registration form may be downloaded at http://www.morainepark.edu/PDFFiles/academics/std-records/RegForm1.pdf

*The location is as listed below or as indicated in the informational letter you will receive from the instructor prior to the course.*

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<thead>
<tr>
<th>Course Number/CRN</th>
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<th>Course Title</th>
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<td>Sept. 1, 2009</td>
<td>Basic Waterworks Math</td>
<td>MATC Madison</td>
<td>Rm 246 (upstairs) 2125 Commercial Ave Campus</td>
<td>6 CECs Water OR Wastewater</td>
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<td>527-137-20597</td>
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<td>Distribution Certification</td>
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<td>Sept. 8, 9, 10, 15, 16, 17, &amp; Nov. 3, 2009</td>
<td>Water Supply (Groundwater &amp; Distribution)</td>
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<td>527-416-20627</td>
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<td>527-441-20628</td>
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<td>The Well: Inside and out</td>
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<td>Rm 246 (upstairs) 2125 Commercial Ave Campus</td>
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### WISCONSIN WATER AND WASTEWATER OPERATOR TRAINING COURSES
#### AUGUST 2009 – MAY 2010

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<td>Mar. 30, 31, Apr. 1, 6, 7, 8, &amp; 29, 2010</td>
<td>Water Supply (Groundwater &amp; Distribution)</td>
<td>MPTC Fond du Lac Rm 246 (upstairs) 2125 Commercial Ave Campus</td>
<td>MPTC Fond du Lac Rm 246 (upstairs) 2125 Commercial Ave Campus</td>
<td>36 CECs; Water Only and 3 Associate Degree Credits</td>
</tr>
<tr>
<td>527-117-TBA</td>
<td>Apr. 13 &amp; 14, 2010</td>
<td>Iron, Zeolite, and VOC Certification</td>
<td>NWTC Green Bay Contracting with Business &amp; Industry CB213-B</td>
<td>NWTC Green Bay Contracting with Business &amp; Industry CB213-B</td>
<td>12 CECs; Water Only and 1 Associate Degree Credit</td>
</tr>
<tr>
<td>527-132-TBA</td>
<td>Apr. 20, 21, 22, 2010</td>
<td>Surface Water Certification</td>
<td>FVTC Appleton TBA</td>
<td>FVTC Appleton TBA</td>
<td>18 CECs; Water Only and 1 Ass. Degree Credit</td>
</tr>
<tr>
<td>527-117-TBA</td>
<td>May 3 &amp; 4, 2010</td>
<td>Iron, Zeolite, and VOC Certification</td>
<td>MPTC Fond du Lac Rm 246 (upstairs) 2125 Commercial Ave Campus</td>
<td>MPTC Fond du Lac Rm 246 (upstairs) 2125 Commercial Ave Campus</td>
<td>12 CECs; Water Only and 1 Associate Degree Credit</td>
</tr>
<tr>
<td>527-119-TBA</td>
<td>May 11 &amp; 12, 2010</td>
<td>Utility Management 2</td>
<td>MATC Madison Rm 246 (upstairs) 2125 Commercial Ave Campus</td>
<td>MATC Madison Rm 246 (upstairs) 2125 Commercial Ave Campus</td>
<td>12 CECs Water Or Wastewater and 1 Associate Degree Credit</td>
</tr>
<tr>
<td>527-451-TBA</td>
<td>May 18, 2010</td>
<td>The Well: Inside and Out</td>
<td>NWTC Green Bay Contracting with Business &amp; Industry CB213-B</td>
<td>NWTC Green Bay Contracting with Business &amp; Industry CB213-B</td>
<td>6 CECs Water Only</td>
</tr>
<tr>
<td>527-451-TBA</td>
<td>May 19, 2010</td>
<td>Confined Space Safety</td>
<td>MATC Madison Rm 246 (upstairs) 2125 Commercial Ave Campus</td>
<td>MATC Madison Rm 246 (upstairs) 2125 Commercial Ave Campus</td>
<td>6 CECs Water OR Wastewater</td>
</tr>
</tbody>
</table>

### GENERAL INFORMATION
Contact Eileen Rottscholl at erottscholl@morainepark.edu or 262-306-5321 or Katy Yindra at kyindra@morainepark.edu, or by telephone at 262-306-5325.

### CERTIFICATION EXAM INFORMATION: Wisconsin Department of Natural Resources
The WDNR water and wastewater exams are given twice each year. The upcoming dates are November 4, 2009 (must mail an application form to the WDNR by October 7, 2009 and May 5, 2010 (must mail in an application form by April 7, 2010). Information and certification exam applications can be obtained by contacting your district WDNR office or online at [http://dnr.wi.gov/org/es/science/opcert/forms.htm](http://dnr.wi.gov/org/es/science/opcert/forms.htm)
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Dave Carlson 920-322-3664
Guest Program
Jean Van Sistine 920-438-1057

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