

# *The Clarifier*

WISCONSIN WASTEWATER OPERATORS' ASSOCIATION, INC.

Volume 167, September 2006



**Baraboo Wastewater Treatment Plant**

***40th Annual W.W.O.A. Conference  
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# The Clarifier

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Volume 167, September 2006, Page 2



## *President's Message*

Greetings WWOA,

The 40th Annual Conference of the Wisconsin Wastewater Operator's Association is nearly here! By the time you read this, WWOA members in good standing will have received their conference registration packets. Give our talented Executive Secretary, Richard McKee, a chance to stay caught up and get your registration in early. The Kalahari Conference Center promises to be a fine facility. Our partners in this profession, the Manufacturers and Consultants, promise another outstanding display of the latest technological wonders and gizmos. Please don't miss this annual event.

My final "President's Message" (no cheering please) echoes the value of supporting the Water Quality Technology Program at Moraine Park Technical College. In the last issue of the Clarifier, Fred Rice submitted an article on the importance of this type of program to our industry. I could hardly agree more.

Every facility has the ability to support this effort. Plant Managers: setting up an intern program is a

valuable way to find out if a potential hire has the mettle to make this profession a career. As the Superintendent for the City of Oshkosh, I know how difficult it is to hire a plant operator. The standard routine of submitting an application and going through the interview process is uncomfortable for both sides. It's all too brief and can leave many questions unanswered. What a better way to determine a candidate's attributes than be able to see them perform every day as an intern? I hate to coin a phrase, but PRICELESS does come to mind. Mr. Rice had asked us to open our facilities for tours. This is the easiest thing you can do. In my 25 years of working in this industry, I have never toured a treatment facility that was unclean or not well maintained. I have been to plants in all corners of our state. Each and every treatment facility has its own "charm". Ok, so I wear my heart on my sleeve regarding this noblest profession. Show off a little! You folks are very good at what you do and have every reason to be proud.

My term as President of the WWOA has passed so quickly. I was very honored and proud to represent this organization and its nearly 2,000 members. I thank you all for a very high honor and privilege. At this year's conference, Kay Marshall will take the reigns as WWOA President for 2006-2007. She will be a marvelous ambassador. I wish her all the best and will continue to offer any help I can to President Marshall and this organization.

Semper Fidelis,

Tom Kruzick  
WWOA President



**Baraboo WWTF**

The mission statement for the Baraboo Wastewater Treatment Facility states that their “mission is to provide treatment of the wastewater generated by the City of Baraboo and 3 other municipal entities to levels meeting or exceeding the discharge limits set by the Department of Natural Resources.” The Baraboo WWTF began operation at the present site in 1982. At that time the Wastewater Commission selected a Dutch designed “carrousel” Oxidation Ditch system to meet secondary treatment standards for discharge to the Baraboo River. They could not have foreseen the new regulations that would be imposed which would require further upgrades.

In 1994 the Wisconsin DNR began requiring all wastewater treatment facilities to have a minimum of 180 days of biosolids storage capacity, following publication of EPA rules in 40 CFR Part 503 that prohibited runoff into surface water from landspreading operations in winter. After studying their alternatives, the Commission decided to install a proprietary sludge treatment system from N-Viro that was capable of producing Class A biosolids. This process mixes the treatment plant sludge with high-grade lime and lime kiln dust to produce an exceptional quality biosolids product. This product has very little odor, is easy to stockpile and can be spread practically anywhere. Presently, the process is managed to produce a Class B product, though the option to produce a Class A “Exceptional Quality” product remains.

In 1998 it became apparent that the electrical system at the plant was nearing its capacity due to the addition of the biosolids treatment processes, and impending effluent limits for Phosphorus. A new 480-volt system was installed to replace the old 240-volt system. At the same time, a new 255-kilowatt generator was installed, capable of running the entire facility in the event of a power outage, thus eliminating the possibility of an upset of the biological treatment process.

In 1999, the DNR imposed effluent limitations for the amount of Phosphorus that may be discharged to the Baraboo River. After extensive study, the Wastewater Commission decided to go exclusively with biological phosphorus removal. By using this option, the need for a hazardous chemical to precipitate the Phosphorus was eliminated. Chemical precipitation would also have increased sludge production by as much as 25%.

In 2005 wastewater treatment facility operators installed an Ultraviolet (UV) disinfection system to replace the chemical feed systems previously

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employed, further reducing use of hazardous chemicals at the facility. The original 1982 construction had included a gas chlorination system. A liquid chemical system adding sodium bisulfite had been added in 1994 to neutralize any remaining chlorine residual prior to discharge, following orders from DNR. The new UV system at the Baraboo WWTF has two sets of UV bulbs that alternate run-time, except under high influent flow conditions when both sets operate.

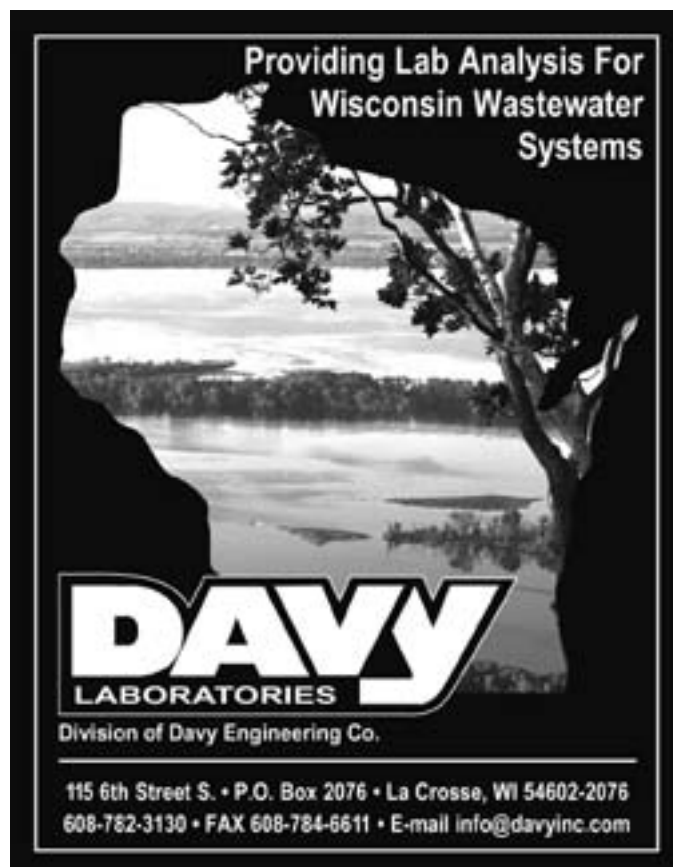
In 2006 a new headworks/septage receiving station was constructed. A new 1/4" opening perforated-plate style fine screen was installed inside a new headworks building. Also included was a washer-compactor to remove most of the organics from the screenings to be returned to the biological treatment process. A new septage receiving pad was also constructed, along with a grit-drying pad for grit removed from the collection system.

Before the annual WWOA Conference begins, the City of Baraboo will have completed a few more upgrades. The four single-speed raw wastewater pumps are being replaced with variable speed pumps equipped with soft start. These changes will increase the firm pumping capacity of the facility to 6,150 gpm. The single-speed 50 hp aerators in the oxidation ditches are going to be replaced with 100 hp variable speed aerators. The dual impeller aerators feature a newly designed low speed vertical shaft rim-blade aerator, which are the first of their kind in the United States. The aerators will provide greater oxygen transfer efficiency than the cone-type impellers that preceded it. The new style aerators will also provide for a greater turn-down, allowing for power savings by more closely matching the oxygen demand of the wastewater.

Both final clarifiers will be rebuilt with high performance energy dissipating feed wells, new drives, new launders, and higher side walls. The biosolids storage building walls will go from 4 feet to 12 feet, to provide an additional 80 days of storage capacity. And finally, a new SCADA system will be incorporated into the plant.

The current facilities are designed to treat an average daily (wet-weather) flow of 2.53 MGD, and a peak daily flow of 5.62 MGD. They are designed to treat a BOD5 loading of 4346 lbs./day, and a TSS loading of 3824 lbs./day. The facility is required to meet monthly average effluent limits of 30 mg/L and weekly average limits of 45 mg/L for BOD5 and TSS. A monthly average limit of 1.3 mg/L for Total Phosphorus, and a monthly geometric mean limit of 400/100 mL for Fecal Coliforms are also specified. Between 2001 and 2004, effluent BOD averaged less than 8 mg/L, effluent TSS averaged 4 mg/L and effluent phosphorus averaged 0.2 mg/L.

The proposed upgrades will extend the life of the WWTF another 20 years. The city will get more than 40 years of use out of the originally constructed facility. As a result, the City of Baraboo has one of the lowest sewer user rates in the State of Wisconsin.



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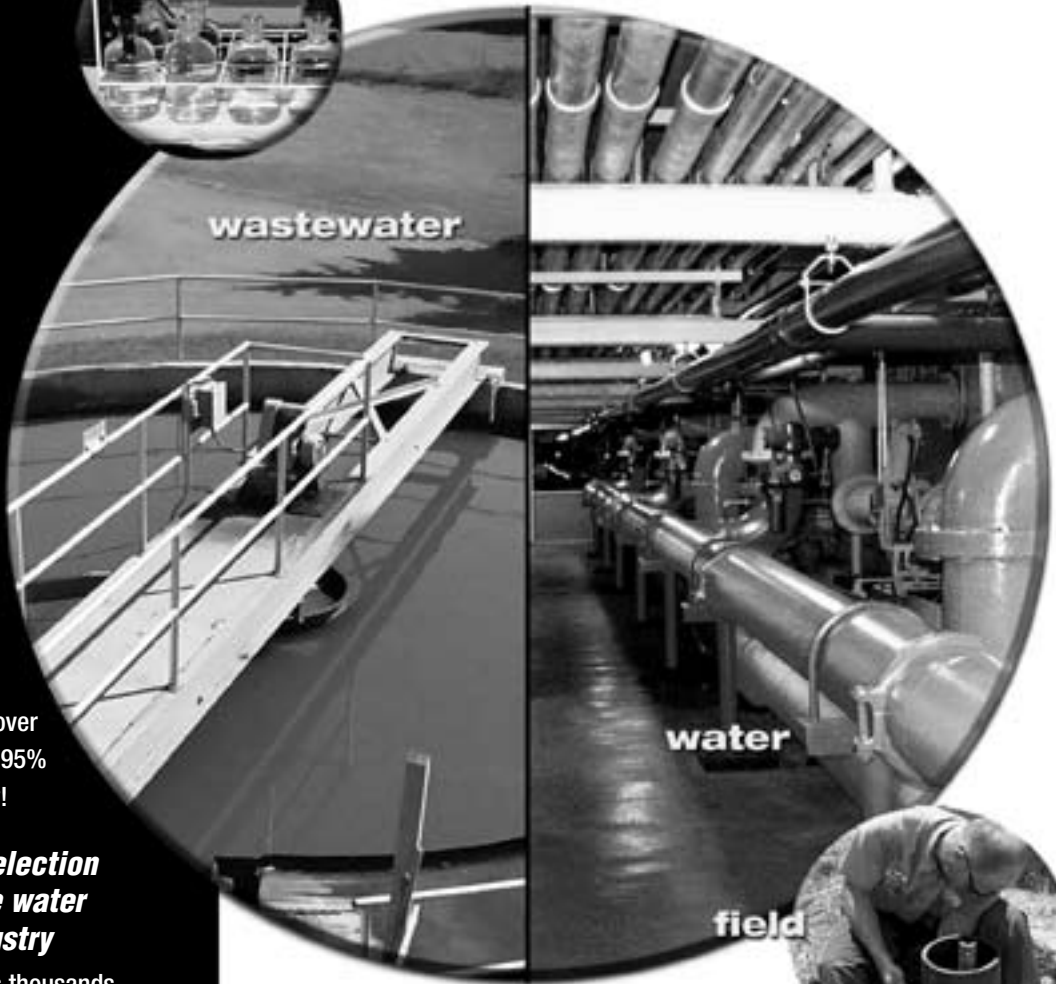
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The City has utilized MSA Professional Services for the engineering involved in the continuing evolution of the Baraboo WWTF. The treatment facilities are operated under the direct supervision of Eugene Doro, with assistance from operators Mark Hanley, Rob Fichter and William Schellenberger. And Terry Kramer is the Utilities Superintendent. They welcome you to tour the Baraboo Wastewater Treatment Facility during the WWOA conference.

*Thanks to Eugene Doro, Baraboo WWTF, and Gil Hantzsch, MSA Professional Services, for their help with this article.*

**Clarifier Deadlines**

<u>Issue</u>	<u>Submittal Due Date</u>
December 2006	November 10
February 2007	January 12
April 2007	March 9
June 2007	May 11
September 2007	August 10
December 2007	November 9

**PHOSPHORUS REMOVAL**  
*Operator Certification Exam Updating*

The Wisconsin Department of Natural Resources is forming a workgroup to review and rewrite the objectives and Q & A to the Phosphorus Removal certification exam, and seeking interested and knowledgeable operators who work with either biological or chemical phosphorus removal systems. Candidates should have a strong knowledge of phosphorus removal operations and system O & M requirements. The workgroup will meet every three-to-four weeks for about ten months. Participation will help ensure a practical, well-written and technically sound certification exam.

Please contact Jack Saltes, WDNR-Madison by telephone at (608) 264-6045 or by e-mail at [Jack.Saltes@dnr.state.wi.us](mailto:Jack.Saltes@dnr.state.wi.us) by September 30 if you are interested.

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### Art Peterson Hospitalized

On Monday, July 10, 2006, Art Peterson and his wife Eva, were injured in a very serious car accident in Philadelphia, Pennsylvania.

A retired UW Soil Scientist, Art is known to many of us as a long-time supporter of recycling biosolids by land application. He's been instrumental in developing Wisconsin's guidelines and rules for land application, and a regular fixture at the Spring Biosolids Symposium, co-sponsored by WWOA. He and his wife were in Philadelphia attending an agronomy conference. The nature of their injuries and the complications that have arisen, mean that Art and Eva will require a long period of therapy and recovery. They and their family can use all the support they can get. Your thoughts and prayers help. If you want to send a card, please send it to Art at: **Art Peterson, ICU Room 590, Univ. of Pennsylvania Medical Center, 3400 Spruce St, Philadelphia, PA 19104**

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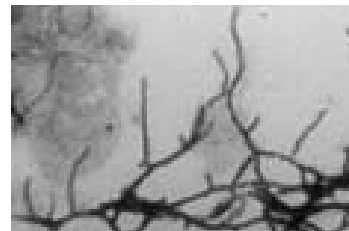
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### IN CONTROL

September 2006

### Successful Operations through Process Control

#### “NO-CARDIA”



By Toni Glymph, Microbiologist  
Jack Saltes, WW Operations Engineer  
Department of Natural Resources

Just say NO to NOcardia, unless of course you like that chocolate mousse all over the surface of your aeration basins and center well of your clarifier. But as you well know, that is much easier said than done. *Nocardia* spp. is the most commonly observed filament in activated sludge plants and the number one cause of foaming. Nocardial foaming occurs as a thick, tan/brown greasy foam and is a more common problem during the warmer months. The foam is easy to identify microscopically. Simply smear a slide with foam, let dry and do a Gram stain. *Nocardia* appears as a branched, gram-positive filament. *Nocardia* tends to grow under longer solids retention times (older sludge ages) and where fats, oils and greases are present. *Nocardia* foam can be difficult to treat and there is no easy solution. Reaching for the chlorine is not the quick fix as it is thought to be. Put that bleach bottle down.

#### Why is *Nocardia* so difficult to treat?

*Nocardia* foam is very stable foam. This filament can continue to live and multiply in the foam. Since it is a soil bacterium, it is not affected by the UV light from the sun, nor is it affected by dry conditions. *Nocardia*, in its early growth stage is harmless in the treatment system and does not cause foaming. In fact in this stage, it is unrecognizable as *Nocardia*. Instead of the “classic” branched filament, it exists as small cylindrical, short, Gram-positive (purple) cells. Once the wastewater temperature rises above 16 C, the branches will begin to elongate at a rapid pace. It is not until *Nocardia*, fully branched, reaches this advanced growth stage that it causes foaming upon

aeration. A unique characteristic of *Nocardia* is that as a part of its natural growth cycle, the branches break up into the cylindrical, short cells and the foam will begin to dissipate. The short cells will begin to grow and branch once again and the growth cycle starts all over again.

The addition of chlorine works well for most filamentous bacteria but may not be advised for *Nocardia*. Applying chlorine sprays to the foam will cause the *Nocardia* branches to prematurely break up into tiny cells that can eventually turn into branched filaments causing more foam.

#### *What should the operator do?*

Floc-forming bacteria grow rapidly in the activated sludge system, peaking in number early in the process. *Nocardia* however, requires a much longer time to grow from its early growth stage to fully branched filaments. In other words, the **sludge age** determines to a great degree whether or not *Nocardia* will remain in the early growth stage and cause no foam or if it will mature to fully branched filaments and consequently, cause foaming in the system. As long as the sludge age remains short enough, *Nocardia* will continue to exist as harmless, small cells. **Controlling and reducing the amount of fat, oil and grease (FOG)** entering your plant will help too.



As long as the foam remains on the surface of the aeration basin, clarifiers and wet wells, *Nocardia* will continue its growth cycle. Eliminating foaming problems caused by *Nocardia* will require time, patience and work. But it can be done. By decreasing the amount and time of *Nocardia* in the aeration basin, you prevent it from maturing into branched filaments. **Manually removing the foam** from the system will prevent it from multiplying. After two or three summers, your system should be foam free!

### NOTICE:

#### **To All Lake Michigan District Members:**

At the August 24th meeting in Sturgeon Bay we will be taking nominations for the Vice-Chair and the Secretary/Treasurer positions for 2007. Please contact me with your nominations before the meeting so each individual may be contacted to confirm their interest in serving the Lake Michigan District as an Officer and to answer any questions on the responsibilities involved. We will also be taking nominations the day of the meeting.

We also need nominations for the Kolby Crabtree, Bernauer and Service Awards. Please contact a regional officer or Kay Marshall at 715-720-6288 with any nominations that you may have for these awards. I can be contacted by phone at 920-779-4086 or by email at:

[rtnvldpw@charterinternet.com](mailto:rtnvldpw@charterinternet.com)

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## Summary of 2005 Wisconsin Act 347

By Greg Kester, P.E., WDNR

Governor Jim Doyle signed Wisconsin Act 347 (WA 347) into law effective April 29, 2006. WA 347 makes broad changes in the laws relating to private sewage systems (septic and holding tanks) in the way they are managed and in the disposition of the waste pumped from them.

WA 347 is the product of a 2004 Joint Legislative Council Committee on septage disposal, chaired by Representative John Ainsworth. It was originally introduced as Assembly Bill 499. The Committee was assigned to: "Examine the current capacity and future need for disposal of septage that is pumped from septic tanks and holding tanks, to review the laws related to this subject, and to develop proposed legislation that will assure protection of public health and the environment, as well as the availability of disposal options for future population and business growth."

The main provisions of the bill include the following:

1. Septage capacity needs must be considered for non-sewered areas in a POTW planning area when facility planning for any capacity increase of at least 20%. While the capacity is not strictly required to be provided even if needed, the expectation is that item two (below) will provide the necessary incentive to do so. Such considerations may be evaluated in any facility plan even if less than a 20% capacity increase is proposed.

2. A zero percent Clean Water Fund loan will be offered for that portion of a public project which will provide planning, receiving facilities, treatment capacity, and disposition of septage. This is available even for those projects that provide less than a 20% capacity increase.

3. The law establishes a uniform protocol for setting costs for septage receiving at a POTW, and requires a 60 day prior notification to haulers of any price increases.

4. The law also establishes a three step process for rate dispute resolution between a hauler and a POTW, with the Public Service Commission (PSC) as the mediating agency.

5. The DNR is explicitly identified as the pre-emptive authority for biosolids and septage. In this manner, the law disallows restrictive local ordinances for land application of these materials.

6. The law allows the department to utilize the Attorney General's office for enforcement of septage violations, as we do with all other environmental programs. The DNR retains citation authority and the ability to enforce through County District Attorney offices.

7. The "farmer exemption" for septage now applies to septic tanks only. The exemption for holding tanks is removed. NOTE: The department is working to streamline this process to allow true farmers flexibility to continue to land apply their own waste if appropriate.

8. And finally, this law now requires all counties to administer the septage maintenance program. Currently 5 counties do not.

The department has developed guidance on facility planning considerations and it is available on the DNR website. Minor rule modifications will be made to Chapters, NR 110, 113, 114, 162, and 204 to incorporate these changes.

Contact Greg Kester with questions at 608-267-7611 or via email at [Greg.Kester@dnr.state.wi.us](mailto:Greg.Kester@dnr.state.wi.us)

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## WASTEWATER SECURITY UPDATES

By Julia Riley, Wastewater Specialist,  
Department of Natural Resources

### Hospital Decontamination Wastewater Recommendations Released

The DNR mailed out the recommendations of the Hospital Decontamination Wastewater Management Technical Work Group in July to wastewater treatment facilities that receive sanitary sewer discharges from local hospitals. The recommendations include guidance on:

- Siting of portable hospital decontamination tents
- Wastewater containment volume design criteria
- Types of decontamination wastewater storage containment
- Conveyance methods of decontamination wastewater
- Decontamination wastewater spill clean-up

The recommendations were developed as a tool to assist hospitals and local wastewater treatment facilities in developing wastewater management plans for hospital decontamination wastewater. Hospitals in Wisconsin were provided portable decontamination tents with federal funding available through the Hospital Bioterrorism Preparedness Program, and are preparing wastewater management plans to address proper containment, evaluation, and treatment of decontamination wastewater.

For more information about the recommendations, contact Julia Riley, 608-264-9244; [julia.riley@dnr.state.wi.us](mailto:julia.riley@dnr.state.wi.us). The recommendations can be downloaded from: <http://dnr.wi.gov/org/water/wm/ww/security>. Click on the “Brochures and Technical Articles” link in the left panel of the web page.

### NEW: Vandalism Prevention Design Checklist Brochure

How can you prevent vandalism? One way is to design new wastewater treatment systems with crime prevention elements. The DNR has released a new

brochure entitled, “Vandalism Prevention Design Checklist.” The checklist summarizes crime prevention design elements to reduce wastewater treatment system vandalism. The brochure includes recommendations from the “Interim Voluntary Security Guidance for Wastewater/Stormwater Utilities”, produced by the Water Environment Federation, American Society of Civil Engineers, and American Water Works.

The brochure and other wastewater security information will be integrated into university environmental engineering design curriculums in Wisconsin. Contact Julia Riley, 608-264-9244; [julia.riley@dnr.state.wi.us](mailto:julia.riley@dnr.state.wi.us), for free copies of the brochures available to consulting engineering firms, designers, wastewater treatment plant operators, and other interested individuals. The vandalism prevention brochure can also be downloaded from: <http://dnr.wi.gov/org/water/wm/ww/security>. Click on the “Brochures and Technical Articles” link in the left panel of the web page.

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## COLLECTION SYSTEM OPERATION AND MAINTENANCE WORKSHOPS

By Julia Riley, Wastewater Specialist, Jack Saltes, Wastewater Operations Engineer, Department of Natural Resources

What are the best ways to detect potential problems in your collection system and fix them? How can you improve the performance of your sewer system? How often do operation and maintenance (O & M) activities need to be done? What about maintenance on private laterals, and controlling grease in your sewer system?

An informative "Collection System Operation and Maintenance" workshop is coming to a location near you over the winter with information on establishing or improving your collection system O & M program. The Department of Natural Resources (DNR) and the Wisconsin Rural Water Association (WRWA) are teaming up to offer workshops on investigative and rehabilitative tools for operating and maintaining your collection system. Specific workshop dates and times will be listed on the DNR Compliance Maintenance Annual Report (CMAR) training web site: <http://www.dnr.state.wi.us/org/water/wm/ww/cmar/training.htm>

If your collection system scored low on the "Sanitary Sewer Collection System" section of the CMAR form, this workshop will help you determine what additional O & M activities to do during 2007. *The following topics will be covered in the workshops:*

- The importance of Sewer Use Ordinances
  - Replacement Fund Requirements and how to set up
  - How to set O & M goals and evaluate success
  - Maintenance issues with private laterals
  - Controlling Fats, Oil & Grease (F.O.G.)
  - Getting the biggest bang for the O & M buck
  - Investigative Tools to detect problems
  - Sewer Line Televising
  - Manhole Inspections
  - Flow Monitoring
  - Smoke Testing
  - Private Sewer Lateral Inspections
  - Lift Station Inspections
- Rehabilitative Tools to fix problems**
- Sewer Cleaning
  - Root Removal
  - Mainline Rehabilitation
  - Manhole Rehabilitation
  - Lift Station O & M
  - Private Lateral I/I removal

For additional information on the workshops, contact Jack Saltes at 608-264-6045; or email at [jack.saltes@dnr.state.wi.us](mailto:jack.saltes@dnr.state.wi.us). For reference materials on Collection System O&M Programs, website: [www.dnr.state.wi.us/org/water/wm/ww/cmar/CSreferences.htm](http://www.dnr.state.wi.us/org/water/wm/ww/cmar/CSreferences.htm)

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**Wisconsin Wastewater Operators' Association**

Dear Members and Friends of WWOA,

On Tuesday, October 3, 2006 the WWOA will hold a golf outing to kick off this year's annual conference. In order to continue the popular appeal of this event for our membership, we are seeking donations of door prizes for the attendees.

As the 2006 Golf Outing Chairperson, I hope you and your firm will consider a donation of a door prize we can award to a lucky attendee. In consideration of a donation, your firm's name will be displayed in the clubhouse. For a cash donation of \$50.00 or more, we can offer your firm sponsorship of an individual hole at the golf course where again your company name will be prominently displayed. The funds collected will all be used to purchase prizes for the registrants.

This year's outing will be held at The Cold Water Canyon Course at Chula Vista Golf Resort, 4052 River Road, Wisconsin Dells, WI 53965. Please feel free to view the website of this beautifully redesigned and expanded course at [www.chulavistaresort.com](http://www.chulavistaresort.com). Course fees will include motorized cart, 18 holes of golf, a complimentary box lunch, two drink tickets, and hors d'oeuvres during the award/prize drawings. There will also be additional beverages available for purchase during and after the event.

Please indicate your willingness to donate by August 15, 2006, contact me through any of the means listed below. Your participation is greatly appreciated. Thanks again in advance!

**Kelly Zimmer**, *WWOA Golf Outing Chairperson*  
MSA Professional Services, Inc.  
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## WWOA Board of Director Positions Available

The WWOA Nominations Committee wishes to announce that there will be several positions on the WWOA Board of Directors open for election this coming fall at the 40<sup>th</sup> Annual Conference in Wisconsin Dells. Board elections will take place on Thursday October 5, 2006 at the WWOA's annual business meeting held during the Annual Conference.

As is the case each year, the Board positions of President-Elect and Vice-President will be up for election by the general membership. In addition, there will be two (2) Director positions to be filled at the time of this year's election. The Director positions are for 2-year terms; whereas the President-Elect and Vice-President positions are elected for a term of one year.

Persons interested in seeking nomination to the WWOA Board of Directors must be an active or life member and currently in good standing within the organization. Interested members must submit a completed WWOA Nomination Form; along with a "head and shoulders" photo, sending the information to the attention of WWOA Executive Secretary Richard D. McKee. Nomination forms are available in the *Clarifier* and online at [wwoa.org](http://wwoa.org).

Persons who are considering serving the organization on the Board of Directors are encouraged to contact Nominations Committee Chairperson Tim Nennig or any of the current Board members for more information relative to the Board positions. Board member contact information can be located online at [wwoa.org](http://wwoa.org) or on the back cover of every *Clarifier* issue.



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### WWOA Board of Directors Nomination Form

Complete the following information and submit it; along with a photo of you, to the attention of the WWOA Executive Secretary at the address listed below. If more room is needed for your responses, please attach additional sheets as necessary.

Board of Directors position you are seeking nomination for: \_\_\_\_\_

Name: \_\_\_\_\_  
Home Address: \_\_\_\_\_  
Occupation: \_\_\_\_\_  
Years Experience: \_\_\_\_\_  
Employer: \_\_\_\_\_  
Education: \_\_\_\_\_

WWOA Organizational Involvement:

Date Joined: \_\_\_\_\_  
Board Positions Served & When: \_\_\_\_\_  
Committees Served On & When: \_\_\_\_\_  
Regional Affiliation: \_\_\_\_\_  
Regional Positions Served: \_\_\_\_\_

1. What do you see as the future of the WWOA? \_\_\_\_\_  
\_\_\_\_\_
2. How do you feel this could best be accomplished? \_\_\_\_\_  
\_\_\_\_\_
3. Other qualifications or experience for WWOA office? \_\_\_\_\_  
\_\_\_\_\_
4. Other comments you wish to share: \_\_\_\_\_  
\_\_\_\_\_

Committees you are interested in becoming involved with:

- |   |  |   |
|---|--|---|
| <input type="checkbox"/> Promotional Items      | <input type="checkbox"/> Scholarship & Tuition Aid | <input type="checkbox"/> Publicity          |
| <input type="checkbox"/> Government Affairs     | <input type="checkbox"/> Permanent Arrangements    | <input type="checkbox"/> Annual Awards      |
| <input type="checkbox"/> Membership / Directory | <input type="checkbox"/> Web Site; wwoa.org        | <input type="checkbox"/> Career Development |
| <input type="checkbox"/> Regional Coordinator   | <input type="checkbox"/> Operator Training         | <input type="checkbox"/> Liaison (CSWEA)    |
| <input type="checkbox"/> Operators Competition  | <input type="checkbox"/> Biosolids Liaison         | <input type="checkbox"/> Historical         |
| <input type="checkbox"/> Clarifier              | <input type="checkbox"/> Resolutions & Bylaws      | <input type="checkbox"/> Permanent Program  |

Mail completed materials to: Richard D. McKee  
WWOA Executive Secretary  
416 Herman Street  
Arena, WI 53503



the  
**Wisconsin Wastewater  
Operators' Association**

**Dear WWOA Member, Associates, and Guests:**

The WWOA Board of Directors cordially invites you to the 40th Annual WWOA Conference to be held October 3-6, 2006. The Conference will be held at the Kalahari Resort & Convention Center in Wisconsin Dells, WI.

WWOA activities kick-off Tuesday afternoon with the ever-popular Pre-Conference Workshops scheduled from 1:00 p.m. to 4:00 p.m. There will be three interesting and timely workshops to choose from this year: Workshop #1 "Simplifying Total Residual Chlorine Compliance Testing"; Workshop #2 "Sampling and Flow Monitoring" and Workshop #3 "Collection System O & M Panel Discussion. Separate registration is required for attendance at all Pre-Conference Workshops.

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, hot dogs, munchies and refreshments in the Convention Center area C-F. 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 Tom Kruzick followed by our Keynote Address from a nationally known motivational speaker Joe Tye. 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 noon.

Concurrent Technical Sessions are scheduled for the mornings and afternoons on Wednesday and Thursday of the Conference. Fridays "Operators Farewell Breakfast" Dan Thompson (Executive Director of Wisconsin League of Municipalities) will have an interesting talk to close the Conference. Training

## How long can you wait to reduce cost?

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- B. When I hear of competition for my job
- C. It's too late, we are being privatized
- D. I am not concerned, I plan to retire soon

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**John Leonhard, WWTF Operations Manager  
Fond du Lac, WI**

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**Kurt Damrow, Wastewater Supervisor  
Park Falls, WI**

*"It's a big money saver. You can take a tour of our system any time from a laptop."*

**Joe Morrissey, Director of Public Works  
Village of Black Creek, WI**

*"They are fantastic; very easy to work with. The system has saved us money. It's a very user friendly system. They're flexible and very responsive. I would certainly recommend them and their system."*

**Wayne Fields, Chief of Water Operations  
Broomfield, Colorado**



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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 the Convention Center.

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 your fellow operators at the Awards Banquet. After the Awards Banquet you will be treated to "David Seebach's Wonders of Magic" in which he will perform his Ultimate Show with eight major illusions.

Plant tours will feature the Baraboo WWTP and the Ho Chunk Nation WWTP on Thursday afternoon beginning at 1:30p.m. Space for both tours will be limited, so be sure to sign-up in advance. This year's

Spouse/Guest Program will offer an Upper Dells Boat trip, a trip to the Circus World Museum and a tour of the HH Bennett Studio. Please review the Spouse's Program schedule for a complete list of activities and offerings.

Conference information and Registration Forms are available. **PRE-REGISTRATION IS STRONGLY ENCOURAGED!** On behalf of the Board of Directors, Technical and Local Arrangements Committee, we hope to see you this fall.

Sincerely,

**Jim Thalke**  
*Technical Program  
 Committee Chair*

**Kelly Zimmer**  
*Spouse/Guest Program*

**Gil Hantzsch**  
*Local Arrangements  
 Committee Chair*

## Keeping Challenges at Bay

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*Dyckesville Sanitary District President Dick Charles (left)  
 with Foth & Van Dyke's Dennis Steigenberger*



**WWOA CONFERENCE  
GOLF OUTING**

**The Cold Water Canyon  
Course of Chula Vista  
4052 River Road  
Wisconsin Dells, WI 53965**



**Date:** Tuesday, October 3, 2006

**Time:** 10:00 A.M. Sharp "Shot Gun Start"  
18 Hole Scramble Format

**Cost:** WWOA Members, Manufacturers,  
Engineers, Suppliers, and Conference  
Attendees - - - \$50.00

**Cost Includes:** Cart, 18 holes golf, scorecards, box  
lunch (Ham, turkey or beef sandwich, chips, cookie,  
soda/water), 2 beverage tickets, and hors d'oeuvres  
during award/prize drawing.

Payment must be received no later than September  
20, 2006 with names of foursome or individuals.  
(Committee will assign if not in foursome).

Please RSVP early as we are limited to 120 participants.  
No refunds after September 20, 2006 unless course is  
closed by decision of Club Management.

**WWOA CONFERENCE GOLF OUTING  
REGISTRATION FORM**

Name \_\_\_\_\_

Address \_\_\_\_\_

Phone \_\_\_\_\_

Part of a Foursome?    \_\_\_ Yes    \_\_\_ No

Others in my foursome:

\_\_\_\_\_

\_\_\_\_\_

**Make check payable to WWOA. Mail  
registration card and fee to:**

**Richard D. McKee  
WWOA Executive Secretary  
416 Herman Street, Arena, WI 53503**

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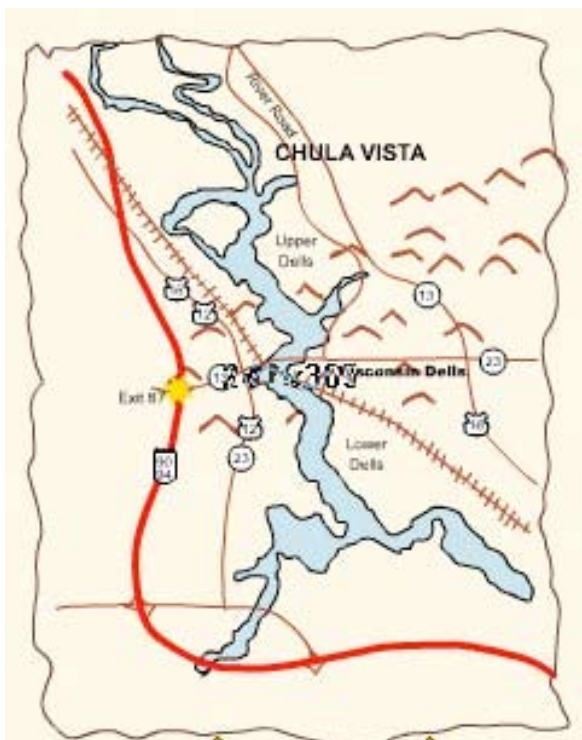
## TO COLD WATER CANYON COURSE AT CHULA VISTA:

• Take I90-94 to exit 87 at Wisconsin Dells. After you cross the Wisconsin River bridge, the first stoplight is River Road. Turn left onto River Road. At the “Y” in the road, stay left. Coldwater Canyon Course at Chula Vista is 3 miles north on River Road.

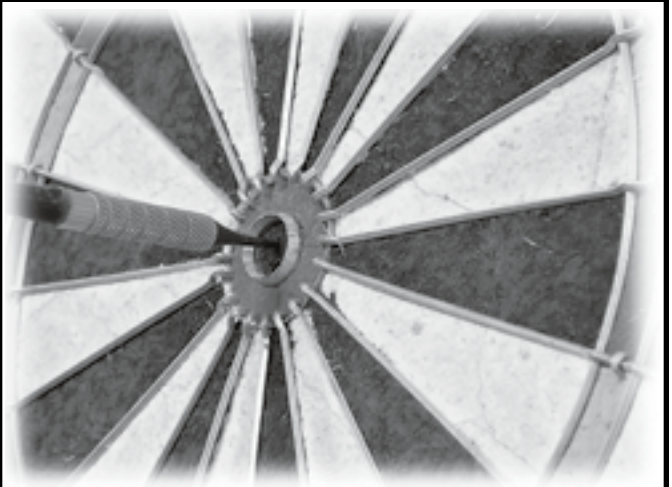
• From the east, go to the intersections of Hwy’s 16, 23, and 13. Go north on 13 for 3 miles. Turn left at the Rest Area on Golden Avenue. Then turn onto River Road. Coldwater Canyon at Chula Vista’s main entrance is on the left.

## FROM KALAHARI TO COLD WATER CANYON COURSE AT CHULA VISTA:

• From Kalahari Drive turn right at stoplight onto Highway 12 West. Follow Highway 12 (WI Dells Parkway) until Highway 13 North, and turn right on Highway 13. After you cross the Wisconsin River bridge, the first stoplight is River Road, turn left. At the “Y” in the road, stay left. Coldwater Canyon Course at Chula Vista is 3 miles north on River Road. The Clubhouse will be on your right.



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**PRE-CONFERENCE WORKSHOPS AGENDA  
Tuesday October 3, 2006**

	<b>Workshop #1 1:00 p.m.-4:00 p.m.</b>	<b>Workshop #2 1:00 p.m.-4:00 p.m.</b>	<b>Workshop #3 1:00 p.m.-4:00 p.m.</b>
<b>1:00-2:00</b>	Simplifying Total Residual Chlorine Compliance Testing <b>Presenters:</b> <i>Rick Mealy &amp; George Bowman</i> <b>Moderator:</b> <i>Kay Marshall</i> <b>Room:</b> Aloeswood	Sampling and Flow Monitoring <b>Presenters:</b> <i>Jeff Haack &amp; Mark Duerr</i> <b>Moderator:</b> <i>Danny Tomaro</i> <b>Room:</b> Marula	Collection System O&M Panel Discussion <b>Presenters:</b> <i>Jack Saltes &amp; Mike Simpson</i> <b>Moderator:</b> <i>John Bond</i> <b>Room:</b> Tamarind
<b>2:00-2:15</b>	Break	Break	Break
	<b>Workshop #1, Continued</b>	<b>Workshop #2, Continued</b>	<b>Workshop #3, Continued</b>
<b>2:15-4:00</b>	<b>Presenters:</b> <i>Gram Anderson &amp; DeWayne Kennedy-Parker</i>		<b>Presenters:</b> <i>Steve Laabs, Ron Dickrel, Rich Vogel, Keith Steinbrecher &amp; Larry Nietzel</i>

**Simplifying Total Residual Chlorine Compliance Testing**

Can you measure total residual chlorine at levels low enough to meet the 0.038 mg/L wastewater discharge limit? This workshop will provide step-by-step instructions for making total residual chlorine measurements using the DPD and Ion Selective Electrode (ISE) methods. Participants will also be given an opportunity to have on-hands experience trying methods at four workstations.

**Sampling and Flow Monitoring**

In this workshop the participant will have a hands on experience with programming flow meters and samplers and also learn sampling methods, holding times, and preservation requirements along with reporting and record keeping requirements.

**Collection System O & M Panel Discussion**

eCMAR now requires information on collection systems. What constitutes a good collection program? How do we control F.O.G.? What can we do about private laterals? What O & M activities give operators the best dollar value and improve the performance of a collection system? If you have questions such as these, please join this panel discussion.

**WWOA Pre-Conference Workshops**

Tuesday, October 3, 2006  
12:30 p.m. - 4:00 p.m.

**Registration Form**

Name: \_\_\_\_\_

Address: \_\_\_\_\_

C/S/Z: \_\_\_\_\_

Phone: \_\_\_\_\_

Employer: \_\_\_\_\_

Cost: \$15.00 Pre-Registration      \$20.00 On-site

***Includes refreshments between Workshops***

3.0 DNR credit hours available for full 1:00 p.m. - 4:00 p.m. workshop attendance (wastewater only)

**Mail with Conference Registration to:**  
Richard D. McKee, WWOA Executive Secretary  
416 Herman St., Arena, WI 53503



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Joel Smith	PAGER	242-775-0104
Rick Kutcher	MOBILE	262-951-6327
Rick Kutcher	PAGER	262-775-0106

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**WWOA TECHNICAL PROGRAM SCHEDULE**

**Wednesday October 4, 2006**

Welcome Address - President Tom Kruzick 9:00 am  
 Keynote Speaker – Joe Tye 9:15 am

Exhibits 10:00 am – 5:00 pm Convention Center I thru VIII

	<b>Session A:</b> Activated Sludge <b>Moderator:</b> Randy Thater <b>Room:</b> Aloeswood	<b>Session B:</b> Lagoons <b>Moderator:</b> Rich Knoelke <b>Room:</b> Marula	<b>Session C:</b> Staff Training <b>Moderator:</b> Tom Kruzick <b>Room:</b> Tamarind
10:45 to 11:20	Integrated Fixed Film-Activated Sludge <i>Douglas Nelson, Tom Renner, Jim Kyler</i>	Ammonia Removal in an Aerated Lagoon <i>Ken Hackett, Paul Gont, Rocco Raymond</i>	Public Speaking for Wastewater Personnel <i>Tom Asmus</i>
11:25 to 11:55	Design of an Efficient, A/S Treatment System <i>Vern Withuhn Jr. Dave Carlson</i>	Dissolved Air Flotation Improves Wastewater Lagoon Effluent <i>James E. Farmerie</i>	SOP Development: A Means to Staff Development <i>Kenneth L. Sedmak</i>
Walk Around Lunch in Exhibit Area 12:00 - 1:30 pm Operators Competition 12:30 - 4:30 pm Convention Center H			
	<b>Session D:</b> Nutrient Removal <b>Moderator:</b> Gil Hantzsch <b>Room:</b> Aloeswood	<b>Session E:</b> Energy Conservation <b>Moderator:</b> Wally Thom <b>Room:</b> Marula	<b>Session F:</b> Plant Upgrades <b>Moderator:</b> Jim Beier <b>Room:</b> Tamarind
1:30 to 2:00	Biological Nutrient Removal Mixing with Low DO <i>Craig Johnston</i>	Energy Savings (Plant/Process Upgrades) <i>Joe Cantwell</i>	Village of Oostburg Fine Screen Addition <i>Gary Weselschmidt Diane Thourne</i>
2:05 to 2:40	A/S Nutrient Removal <i>Jay Kemp Dennis Egge</i>	Saving Energy Through Total Facility Management <i>Matt Lininger</i>	Cost-Effective Blending Facilities <i>James Kleinschmidt John Leonhard</i>
Break in Exhibit Area 2:40 pm – 2:55 pm			
2:55 to 3:25	Phosphorus Removal <i>Remy Newcombe</i>	Energy Reduction 101 City of Sheboygan <i>Dale Doerr Joe Cantwell</i>	Odor Control Ingenuity: Low-Tech Biofiltration <i>Rich Boden Nathan Cassity</i>
3:30 to 4:00	The Greater Bayfield WWTF: Putting Technology To Work <i>Troy Larson</i>	Energy Efficiency Improvements <i>Ron Wroblewsk Jim Schieble Darren Sytsma</i>	Chippewa Falls; Where Did All This Copper Come From?? <i>John Allen Steve Thon</i>
Social Hour in Exhibit Area 4:00 pm - 5:00 pm			

**2006 Conference Committees**

**Local Arrangements:**

Chair: Gil Hantzsch - MSA Professional Services

**Spouse/Guest Program:**

Chair: Kelly Zimmer - MSA Professional Services

**Technical Program:**

Chair: Jim Thalke

- |                |              |
|----------------|--------------|
| Ken Sedmak     | Gil Hantzsch |
| Bruce Bartel   | Tim Nennig   |
| Dave Carlson   | Gary Hanson  |
| Kay Marshall   | Jim Beier    |
| Troy Larson    | John Nelson  |
| Tom Kruzick    | Rich Knoelke |
| John Bond      | Dale Marsh   |
| Richard McKee  | Jack Saltes  |
| Harlan Mueller | Jim Smith    |
| Randy Thater   | Dan Tomaro   |
| Richard Mealy  |              |

**Manufacturers & Consultants:**

Chair: Jim Shaw, Sanitaire

**Exhibit Committee:**

Chair: Carol Strackbein, Sanitaire

Dave Dorner, The Dorner Company  
 Tom Mulcahy, Mulcahy/Shaw Water, Inc.

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

**Fee Schedule:**

**Pre-Registration:**

(Prior to September 18, 2006)

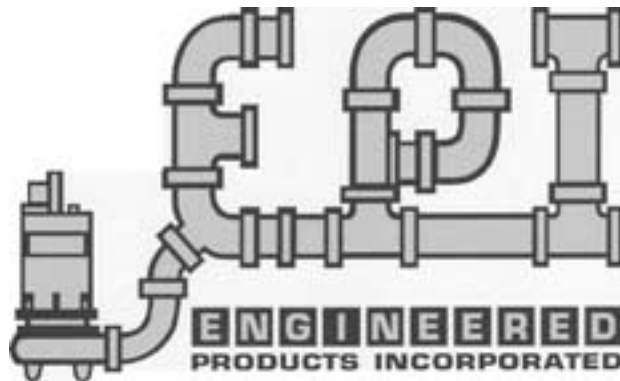
Member	\$ 55.00
Non-Member	\$ 100.00
Spouse/Guest Program	\$ 70.00
Student, Retiree	\$ 30.00

**Fee Schedule:**

**On-Site:**

(After September 18, 2006)

Member	\$ 85.00
Non-Member	\$ 130.00
Spouse/Guest Program	\$ 75.00
Student, Retiree	\$ 35.00
Substitution (Re-print charge)	\$ 15.00



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<b>WWOA TECHNICAL PROGRAM SCHEDULE</b>			
<b>Thursday October 5, 2006</b>			
Exhibits 8:00 am - 12:00 pm Plant Tours 1:30 pm - 4:00 pm			
	<b>Session G:</b> Maintenance <b>Moderator:</b> Troy Larson <b>Room:</b> Aloeswood	<b>Session H:</b> Collection System <b>Moderator:</b> John Nelson <b>Room:</b> Marula	<b>Session I:</b> Lab <b>Moderator:</b> Jeff Meyer <b>Room:</b> Tamarind
8:00 to 8:45	Simple, Everyday Odor Control Methods <i>John Szwedo</i>	F.O.G. Control <i>Keith Steinbrecher</i>	The BOD Files: A Tool to Train Staff <i>Rick Mealy</i> <i>George Bowman</i>
8:50 to 9:35	The Crack Stops Here <i>Troy Opgenorth</i>	Collections System O & M Receiving Water Quality Issues <i>Julie McMullin</i>	Probe Maintenance <i>Mike Raynovic</i>
Break in Exhibit Area 9:40 am - 10:00 am			
	<b>Session J:</b> Regulatory Issues <b>Moderator:</b> Kevin Freber <b>Room:</b> Aloeswood	<b>Session K:</b> Collection System <b>Moderator:</b> Jack Saltes <b>Room:</b> Marula	<b>Session L:</b> Industrial <b>Moderator:</b> Bruce Bartel <b>Room:</b> Tamarind
10:00 to 10:50	Determining Effluent Limits <i>Jeff Haack</i>	Utility Benchmarking <i>Andrew Craven</i>	New Advances Oxidation Process <i>Danny Tomaro</i>
10:55 to 11:45	SPCC Plans <i>John Szwedo</i>	Using Mapping and GIS In the Field <i>Jon Schwichtenberg</i>	Surfactants and WWTP <i>Dale Marsh</i>
Operators Luncheon 12:00 pm Kahunaville Business Meeting 12:30 pm Kahunaville			
	<b>Session M:</b> Safety <b>Moderator:</b> Tim Nennig <b>Room:</b> Aloeswood	<b>Session N:</b> Biosolids <b>Moderator:</b> Don Lintner <b>Room:</b> Marula	<b>Plant Tours</b> <b>Baraboo WWTP</b> <b>Ho Chunk Nation WWTP</b>
1:30 to 2:15	OSHA Standards for Wastewater Operators <i>George Gruetzmacher</i>	Biosolids Handling "Digestion and Beyond" <i>Larry R. Collins II</i>	Plant Tour
2:20 to 3:05	Inspection on New & Existing Buildings <i>Norm Arendt</i>	Operation of Fine screens at MMSD <i>Matt Allen, Barney Fullington, Paul Nehm</i>	Plant Tour
3:15 to 4:00	Arc Flash and Electrical Safety in the Workplace <i>Tim Vick</i>	Design and Start-up of TPAD Process at Dela-Hart WPC <i>Bob Hyde, Phil Korth</i>	Plant Tour
Social Hour 6:00 pm Convention Center III, IV, V, VI Awards Banquet 7:00 pm Convention Center I, II, VII, VIII Entertainment 9:15 pm Convention Center III, IV, V, VI			

<b>WWOA TECHNICAL PROGRAM SCHEDULE</b>
<b>Friday October 6, 2006</b>
Operators Farewell Breakfast <b>Session N:</b> 8:30 am - 10:30 am Convention Center A, B, G, H Moderator: New WWOA President Kay Marshall Speaker: Dan Thompson
Conference Completed

**12 CEUs (including 5 for water) DNR credit slips will be available at the Conference Registration Area only!**

**Plant Tours:** Departures from Convention Center Lobby  
**Tours Depart @ 1:30 pm & 4:00 pm**  
\*\* Baraboo WWTP & Ho Chunk Nation WWTP

<b>Officers:</b>	
President	Tom Kruzick
President Elect	Kay Marshall
Vice President	Jim Thalke
Past President	Tim Nennig
Director (2006)	Randy Thater
Director (2006)	Dave Carlson
Director (2007)	John Bond
Director (2007)	Dan Tomaro
Director (2007)	Bruce Bartel
Executive Secretary	Richard McKee
<b>CURRENT YEAR NAME BADGE REQUIRED FOR ADMISSION TO ALL CONFERENCE FUNCTIONS.</b>	

**WISCONSIN WASTEWATER OPERATORS ASSOCIATION, INC.  
HOSPITALITY ROOM/PRIVATE DISPLAY  
GUIDELINES**

1. All Manufacturers and Consultants in attendance of any scheduled conference event or activity or present in a hospitality room are required to register and pay the established fee.
2. Display of equipment is allowed in the official exhibit area. Display of equipment in or adjacent to the Annual Meeting area or in hospitality rooms may detract from the effectiveness of the Annual Meeting and tend to keep participants from attending formal presentations, and will not be allowed. Descriptive brochures will be allowed in official exhibit area and hospitality rooms only.
3. Advertising for separate inspection tours (not programmed) of facilities outside the convention area is not permitted. Private solicitation by Manufacturers or Consultants will be allowed, but these special trips must be scheduled either prior to or following the completion of the convention.
4. Hospitality rooms are allowed. They will only be open when no formal convention program is in session. Advertising for these rooms will be allowed at one location which will be in the proximity of the registration area on a board as provided by the hotel, which will be available to all. All sponsoring occupants of each hospitality room must be registered with the conference as stipulated above in these guidelines.
5. To add to the decorum of the convention, all hospitality rooms shall be closed by 12:00 midnight.
6. Compliance with the above rules will be directed by the Manufacturers and Consultants Committee. Non-compliance by a Manufacturer or Consultant shall result in the Committee submitting the offender's name to the W.W.O.A. Board of Directors for review and appropriate action.
7. Questions regarding these guidelines should be directed to a member of the Manufacturers and Consultants Committee.
8. Please keep in mind, the W.W.O.A. Board of Directors does not govern our Committee. We Manufacturers and Consultants are present at this conference to greet old friends and make new ones. Everyone's cooperation is requested and required to make this convention a success.



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## 40TH ANNUAL CONFERENCE WISCONSIN WASTEWATER OPERATORS' ASSOCIATION

### Tuesday, October 3, 2006

A.M.	Board of Directors Meeting: Empress Golf Outing: Cold Water Canyon	10:00 a.m. (shotgun start)	
P.M.	Registration Opens: Convention Center Lobby Pre-Conference Workshops: Aloeswood, Marula & Tamarind Rooms Regional Officers Meeting: Guava Meet and Greet: C-F Convention Center	1:00 p.m. - 4:00 p.m. 1:00 p.m. - 4:00 p.m. 4:00 p.m. - 6:00 p.m. 6:00 p.m. - 7:00 p.m.	Open Buffet w/Brats, Hot Dogs & Snacks Social, Refreshments, Beer, Wine, Soda
	Hosted Bar: C-F Convention Center	7:00 p.m. - 9:00 p.m.	

### Wednesday, October 4, 2006

A.M.	Registration Opens: Convention Center Lobby Welcome Address: Convention Center D & E	8:00 a.m. 9:00 a.m.	President Tom Kruzick
	Keynote Address: Convention Center D & E Vendor Exhibits: Convention Center I thru VIII Technical Sessions: Aloeswood, Marula & Tamarind	9:15 a.m. 10:00 a.m. - 5:00 p.m. 10:45 a.m. - 11:55 a.m.	Key Note - Joe Tye See Program Schedule
P.M.	Walk Around Lunch: In Exhibits Area Operators Competition: Convention Center H Technical Sessions: Aloeswood, Marula & Tamarind Exhibits Social Hour: In Exhibits Area	12:00 p.m. - 1:30 p.m. 12:30 p.m. - 4:30 p.m. 1:30 p.m. - 4:00 p.m. 4:00 p.m. - 5:00 p.m.	See Program Schedule

### Thursday, October 5, 2006

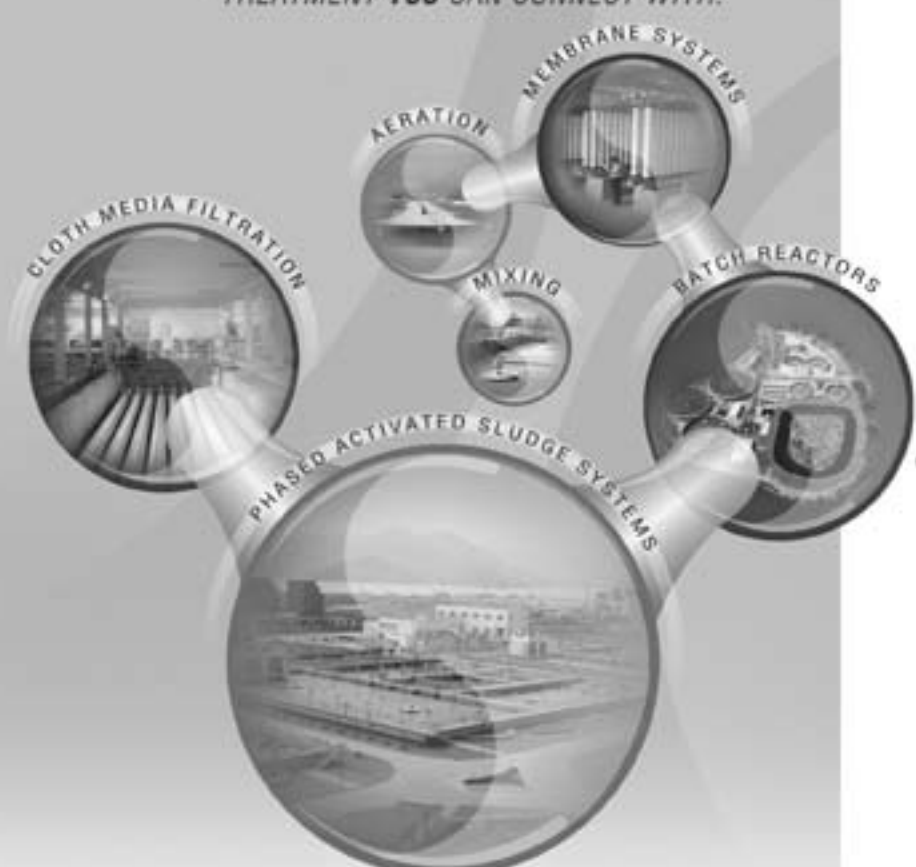
A.M.	Registration Opens: Convention Center Lobby Vendor Exhibits: Convention Center I thru VIII Technical Sessions: Aloeswood, Marula & Tamarind Plant Tour Departures: Convention Center Lobby	8:00 a.m. 8:00 a.m. - 12:00 p.m. 8:00 a.m. - 11:45 a.m. 1:00 p.m. - 4:00 p.m.	See Program Schedule
P.M.	Operator Luncheon: Kahunaville Business Meeting: Kahunaville Technical Sessions: Aloeswood, Marula & Tamarind Social Hour: Convention Center III, IV, V, VI Awards Banquet: Convention Center I, II, VII, VIII Entertainment: Convention Center III, IV, V, VI	12:00 p.m. - 1:20 p.m. 12:30 p.m. - 1:20 p.m. 1:30 p.m. - 4:00 p.m. 6:00 p.m. 7:00 p.m. 9:15 p.m.	See Program Schedule Magician David Seebach

### Friday, October 6, 2006

A.M.	Farewell Breakfast: Dan Thompson Convention Center A, B, G, H	8:30 a.m. - 10:30 a.m.	See Program Schedule
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**AQUA•OLOGY** is evident in all of our products and systems - from aeration and mixing, and biological processes to cloth media filtration and membrane treatment. By connecting with **YOU**, we create quality products and systems that are reliable and cost **YOU** less over the life of the product or system.

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*Partnering For Solutions*

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 Phone: 262.241.1199  
 Fax: 262.241.4997  
 Website: [www.mulcahyshaw.com](http://www.mulcahyshaw.com)  
 Email: [info@mulcahyshaw.com](mailto:info@mulcahyshaw.com)

### CONTROLS

- IntelliPRO™**
- Process monitoring and controls system
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  - Operator input and instrumentation feedback
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- Surface mechanical aerators
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### Diffusers

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- Complete systems available



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- 3-75 HP
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- Ideal for anoxic applications

### Aqua MixAir®

- AquaDDM® mixer in combination with aeration source
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- Complete systems available

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#### AquaPASS™

- Activated sludge system for enhanced nutrient removal and reuse
- Efficient and compact
- Full-range of design flows

#### AquaMB Process™

- Combines biological process with cloth media filtration and membranes
- Lower life-cycle costs
- Ideal for reuse, BNR, crypto, giardia and turbidity removal applications

### FILTRATION

#### Cloth Media Tertiary Filters

- Utilizes cloth media
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- Reuse quality effluent



#### AquaABF®

- Utilizes sand media
- Continuous rapid-rate downflow



**WISCONSIN WASTEWATER  
OPERATORS' ASSOCIATION, INC.  
40th Annual Meeting  
Kalahari Resort, Wisconsin Dells, WI  
October 3-6, 2006**

**MANUFACTURERS & CONSULTANTS**

**Instructions**

1. **Complete all the applicable entries on the front and reverse of this registration card.**
2. **Pre-registration saves you money and more importantly time.** Register before September 18, 2006, and **SAVE TIME & MONEY!**
3. **Non-Members** take advantage of New Registration/Membership Package.
4. **Add Total Due** for Technical Program, Spouse Program, Additional Activities and Membership Dues. **Make Check Payable to WWOA.**
5. **Admittance to all events is by badge only including Exhibit Hall, Walk Around Lunch, etc.**

Total Enclosed \$ \_\_\_\_\_

*Please note: only cash and checks will be accepted as payment.*

**Mail registration form and payment to:**

Richard D. McKee  
WWOA Executive Secretary  
416 Herman St., Arena, WI 53503

**NEW REGISTRATION OPTION  
Registration/Membership Package**

**This package is available to non-members only and is available thru Pre-registration only.** Package provides for 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 \$5.00 when compared to non-membership registration and save on registration cost next year. Also complete the Registration Form.

**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, 2006

Included in Fee

___ 8'X10'	\$330.00	1 Registration
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\*After August 1, 2006

Included in Fee

___ 8'X10'	\$510.00	1 Registration
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*Please note only cash and checks will be accepted as payment. No Credit Cards*

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**CONFERENCE REGISTRATION**

*Please check all choices*

**PRE-REGISTRATION**

**(Prior To September 18, 2006)**

___ WWOA Member	\$55.00
___ Non-Member	\$100.00
___ Non-Member plus <u>WWOA Membership</u> (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 18, 2006)**

___ WWOA Member	\$85.00
___ Non-Member	\$130.00
___ Retiree	\$35.00

**Must be at least 60 years old and retired from wastewater industry**

___ Student	\$35.00
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**Must provide copy of valid student ID**

___ Substitution or Re-Print	\$15.00
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**Please note only cash and checks will be accepted as payment.**

**No Credit Cards**

**No refunds of conference fees after September 18, 2006**

**CONFERENCE REGISTRATION**

**ADDITIONAL FUNCTIONS**

**OPERATORS' BUSINESS LUNCH**

Herb crusted roasted pork loin  
No. Of Tickets \_\_\_\_\_ @ \$15.00

**AWARDS BANQUET**

No. Of Tickets \_\_\_\_\_ @ \$25.00  
Check Choice \_\_\_ New York Strip  
                  \_\_\_ Roasted Chicken  
                  \_\_\_ Teriyaki Salmon

**FAREWELL BREAKFAST**

(All Registered Spouse/Guest are welcome)  
No. Of Tickets \_\_\_\_\_ @ No Charge

**SOCIAL HOUR**

(Courtesy of Manufacturers & Consultants)

**WWOA DUES** (if Applicable)

Two year dues . . . . . \$40.00

**Total Enclosed** . . . . . \$ \_\_\_\_\_

***Only Cash and Checks will be accepted as payment.***



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**TO:** All Potential WWOA Exhibitors

**RE:** WWOA 40th Annual Conference  
October 3 - 6, 2006  
Kalahari Resort & Convention Center  
Wisconsin Dells, WI

We are pleased to announce that there are approximately 140 8' wide x 10' deep exhibit spaces available during the WWOA Conference being held at the Kalahari Resort & Convention Center in Wisconsin Dells.

Total cost for the exhibit space is \$330.00 for Applications received prior to August 1, 2006. The cost for requests received after August 1, 2006, is \$510.00. A sponsor fee of \$75.00 is included in this cost. This fee includes:

- One Conference Registration
- Backdrop and side drapery
- Table with Drapery
- One 110 volt outlet
- Sponsor Fee

**Everyone** staffing the booth must register. **Anyone** who is not registered will not be allowed in the exhibit hall.

Because of the amount of exhibit space available this year, we will allow two exhibit spaces per company and three contiguous exhibit spaces for representative firms and their principles. If all the space is not sold by August 15, 2006, exhibitors may purchase additional space. Please use the line item on the Application Form to request the extra space.

The Board of Directors ruled that "any events sponsored by manufacturers and consultants, such as luncheons, training sessions, etc. that interfere with the conference (including exhibit hours) will not be allowed". The Sponsor Fee of \$75.00 (included in the exhibit cost) is to be paid only once per firm. It is charged to ALL manufacturers and consultants attending the conference.

The sponsor fee is used for:

- Refreshment during Exhibit Hours
- The walking lunch on Wed. in the exhibit area.
- The social hour before the banquet.

Exhibit hours are:

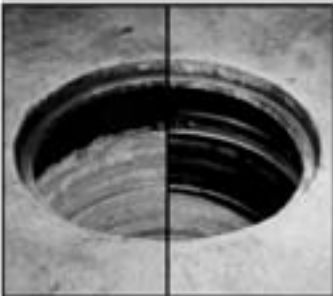
Wednesday, October 4 - 10:00 A.M. to 5:00 P.M.

Thursday, October 5 - 8:00 A.M. to 12:00 Noon

Exhibits may be set up Tuesday afternoon after 4 P.M. or on Wednesday morning. All exhibits must be set up by 9:30 A.M. on Wednesday and cannot be dismantled before 12:10 P. M. on Thursday.

All items must be removed from the exhibit hall by 1:30 P.M. on Thursday.

Exhibits will be assigned per item 2 of the attached rules and regulations. A check in the amount of \$330.00 (\$510.00 after August 1, 2006) must accompany each application for exhibit space. One conference Registration fee is included per booth.



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water out.  
Seal system  
capacity in.

**S**tem the tide of wasted sanitary system capacity with Cretex manhole chimney seals. By reducing inflow at the manhole chimney frame, Cretex seals can significantly increase your effective system capacity. Get the whole story now.

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All applications must be received prior to August 31, 2006, as the space assignment date is September 1, 2006. Exhibitors will be notified of the space assignment by the beginning of September.

If you have any questions or need any more information, please call me at 414 365-2231. Thank you for your continued support of the WWOA.

**Carol Strackbein**

*WWOA Exhibit Committee Chairman*

**P.S. Please note that each and every person manning the booth must register for the conference.**

cc: WWOA Exhibit Committee Members

James G. Shaw – Sanitaire

David Dorner - The Dorner Co.

Tom Mulcahy - The Mulcahy Corp

Dave Dodge – Adaptor, Inc.

**2006 WWOA DISPLAY APPLICATION**

Please reserve an exhibit space for us at the WWOA Annual Conference to be held at the Kalahari Resort & Convention Center on October 4 & 5, 2006. The Display fee will be \$330.00 for applications received prior to August 1, 2006, and \$510.00 for applications received after this date. A sponsor fee of \$75.00 is included in this price.

The exhibit fee will include:

- One Conference Registration
- Booth Drapery
- Table with Drapery and Chair
- One 110 Volt Electrical Connection
- Sponsor Fee

Additional electrical connections may be ordered from the Exhibit Set-up Company.

We understand and agree that, upon acceptance of this application, we will be bound by the WWOA Exhibit Rules and Regulations.

Please provide the following information:

COMPANY: \_\_\_\_\_

CONTACT NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY & STATE: \_\_\_\_\_

TELEPHONE: \_\_\_\_\_

Names & Titles of people who will be attending the conference: **Please attach a registration card for these individuals along with the appropriate registration fee.**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Type of Equipment your company supplies:

\_\_\_\_\_  
\_\_\_\_\_

*(Please be specific, i.e. coatings, safety equipment, etc.)*

Any competitors your booth should be separated from? \_\_\_\_\_

We would like to purchase another exhibit space if one is available:      YES      NO

Please make checks payable to WWOA for \$330.00 or \$510.00 plus conference registration fees (Two booth maximum per firm - three contiguous booths for reps and principals)

Please return a copy of this Application and your check to:

**Richard McKee**  
**WWOA 416 Herman Street**  
**Arena, WI 53503**



the  
**Wisconsin Wastewater  
Operators' Association**

Dear Spouse/Guest,

Welcome back to the exciting Kalahari Resort and Convention Center in the Lake Delton-Wisconsin Dells area! As a registered guest of someone attending the 40th Annual Wisconsin Wastewater Operator's Association (WWOA) Conference, on October 3-6, 2006, we are pleased to invite you to take part in the Spouse and Guest Program.

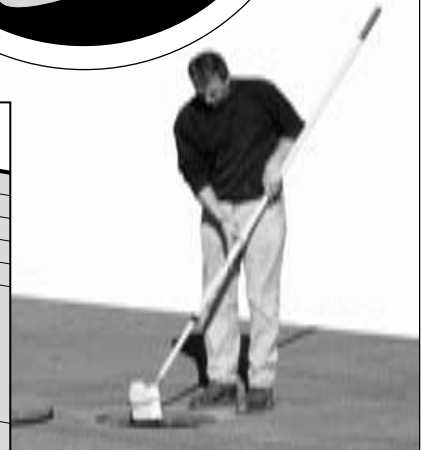
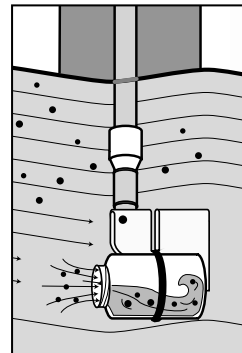
The Lake Delton-Wisconsin Dells area offers the scenic beauty of the famed Dells of the Wisconsin River. In addition to natural beauty, the Dells area has developed into the Midwest's premier family tourist attraction. Among other activities, the Ho-Chunk Casino is very close by; there is a shuttle bus that goes from the Kalahari Resort and Convention Center to the Ho Chunk Casino for your convenience.

The Spouse and Guest Program that has been designed for you this year includes access to all Conference activities, including the Meet and Greet, Spouse Hospitality Room, Keynote Address, Walkaround Lunch, and Farewell Breakfast.

On Wednesday, your program starts with a continental breakfast in the guest Hospitality Room located in the Mangrove Room. You will receive a hospitality gift bag, and then be invited to attend the Keynote Address at 9:00 a.m. After the Keynote, there will be a "mini-scrap book" session held in the Mangrove Room. Following the "mini-scrap book" session, you are invited to the walkaround lunch in the exhibit area. After lunch, a shuttle bus will transport you to and from the famous and unique Circus World Museum for a tour, returning you to the Kalahari by 4:00 p.m.

Thursday begins the day again with the continental breakfast offered in the Mangrove Room. After breakfast, we will transport you to the historic H.H.

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### **Features include:**

- collection from different angles, including 90°
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Bennett Studio for a tour, followed by a short walk for lunch at the RiverWalk Pub where a choice of four delicious sandwich selections will be provided, then it's off on a cruise of the Upper Dells aboard a Double Deck vessel, privately chartered, with two shore lands at Stand Rock and the Witches Gulch. You will return to the Kalahari by 4:00 p.m. The day ends with the annual WWOA Awards Banquet.

On Friday, you are invited to join all WWOA members for the Farewell Breakfast.

The Wisconsin Dells area is an exciting place to visit, and we sincerely hope you will join us for a fun and exciting program!

Sincerely,

**Kelly Zimmer**  
*Spouse/Guest Program  
Chairperson*

**Gil Hantzsch**  
*Local Arrangements  
Chairperson*

**SPOUSE/GUEST PROGRAM  
REGISTRATION FORM**  
(Please Type or Print Clearly)

Last Name: \_\_\_\_\_

First: \_\_\_\_\_ M.I. \_\_\_\_\_

Nick Name (For Name Tag)  
\_\_\_\_\_

**PRE-REGISTRATION**  
**(Prior to September 20, 2006)**

\_\_\_\_ Spouse/Guest Program \$70.00

**ON-SITE REGISTRATION**  
**(After September 20, 2006)**

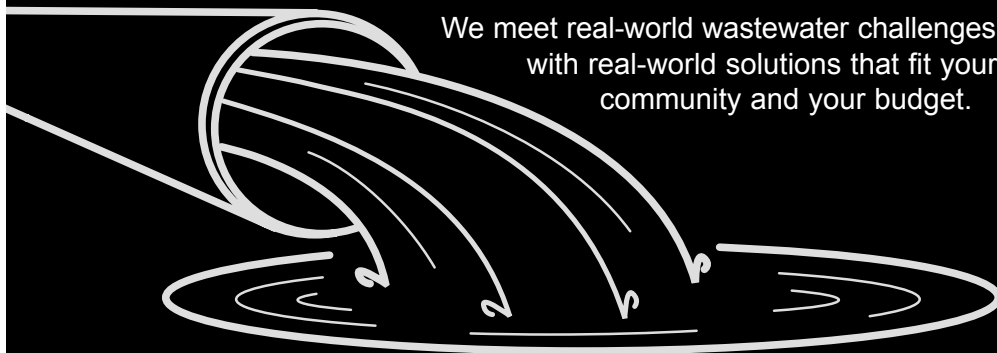
\_\_\_\_ Spouse/Guest Program \$80.00

**Admittance to all events is by badge only  
including Exhibit Hall, Walk Around Lunch, etc.**

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**WWOA Spouse and Guest Program  
October 3-6, 2006  
Kalahari Resort and Convention Center, Wisconsin Dells, WI**

**Tuesday, October 3, 2006**

6:00 p.m.  
Meet and Greet – Kalahari Food Court Area

**Wednesday, October 4, 2006**

8:00 a.m. - 9:00 a.m.  
Spouse Hospitality Room – Mangrove Room

9:00 a.m. - 10:00 a.m.  
Conference Opening and Keynote Speaker

10:15 a.m. - 11:30 a.m.  
Scrap Book Session with Cheri from Stamper’s Corner – Mangrove Room

12:00 p.m. - 12:45 p.m.  
Walk Around Lunch in Exhibit Area

1:00 p.m. – 4:00 p.m.  
Circus World Museum Tour

4:00 p.m. - 5:00 p.m.  
Social Hour in Exhibit Area

**Thursday, October 5, 2006**

8:00 a.m. - 9:00 a.m.  
Spouse Hospitality Room – Mangrove Room

9:30 a.m. - 11:15 a.m.  
H.H. Bennett Studio and History Center Tour

11:30 a.m. – 12:45 p.m.  
Lunch at RiverWalk Pub

1:00 p.m. – 3:15 p.m.  
Upper Dells Boat Tour

**Spouse and Guest Program Details**

- Tuesday Meet and Greet
- Keynote Address
- Admission to Exhibits
- Spouse and Guest Hospitality Room
- Spouse and Guest Gift Bag

- Wednesday Walk Around Lunch
- Wednesday Social Hour
- Circus World Museum Tour
- Scrap Book Session
- H.H. Bennett Studio and History Center Tour
- Lunch at RiverWalk Pub
- Upper Dells Boat Tour
- Farewell Breakfast

Advance Registration for the Full Spouse and Guest package is \$70. Spouses and Guests are encouraged to register in advance. On site registration will be available for the package for \$80, subject to availability. Participation is limited to the first 55 people who register.

Admittance to all Spouse and Guest Program functions will be by badge only. Please note that the Spouse and Guest Packages are designed for adults. All activities are “rain or shine”, please plan accordingly.



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FAX: (414) 355-3556  
SALES@DORNERDOES.COM  
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**WATER & WASTEWATER CLASSES – MORAINE PARK TECHNICAL COLLEGE**

All courses, regardless of campus location, are offered by Moraine Park Technical College.

*Fred Rice will be the instructor for all of the courses listed below.*

Please contact MPTC in Fond du Lac for more information and to register for all courses.

Course Number	Date	Course Title	Campus Location	Room Number	Credits Available
527-130-004	Sept. 26, 27, 28 Oct. 10, 11, 12, 26, 2006	Water Supply (Groundwater & Distribution)	CVTC Chippewa Falls	Chippewa Falls Campus 108	36 CECs; Water Only & 3 Ass. Degree Credits
527-132-001	Oct. 2, 3, 4, 2006	Surface Water Certification	MPTC West Bend	S-111	18 CECs; Water Only & 1 Ass. Degree Credit
527-137-002	Oct. 18 & 19, 2006	Distribution Certification	MPTC West Bend	S-111	12 CECs; Water Only & 1 Ass. Degree Credit
527-451-001	Oct. 24, 2006	Confined Space Safety	CVTC Chippewa Falls	Chippewa Falls Campus Room 108	6 CECs; Water or Wastewater
527-473-001	Oct. 25, 2006	Preventive Maintenance of a Water Distribution System	CVTC Chippewa Falls	Chippewa Falls Campus Room 108	6 CECs; Water Only
527-451-002	Oct. 30 & 31, 2006	Iron, Zeolite, and VOC Certification	MPTC West Bend	S-111	12 CECs; Water Only & 1 Ass. Degree Credit
527-118-001	Nov. 7 & 8, 2006	Utility Management 1	NWTC Green Bay	CB-213-C	12 CECs; Water or Wastewater & 1 Ass. Degree Credit
527-451-002	Nov. 9, 2006	Confined Space Safety	MATC Madison	Commercial Ave Campus	6 CECs; Water or Wastewater
527-442-001	Nov. 13, 2006 (AM)	Cross Connection Control	NWTC Green Bay	CB-213-C	3 CECs; Water or Wastewater
527-427-001	Nov. 13, 2006 (PM)	Leak Detection	NWTC Green Bay	CB-213-C	3 CECs; Water or Wastewater
527-447-001	Dec. 5, 2006	Waterworks Math	MPTC Fond du Lac	E-162	6 CECs; Water or Wastewater
527-473-002	Dec. 6, 2006	Preventive Maintenance of a Water Distribution System	MATC Madison	Commercial Ave Campus	6 CECs; Water Only
527-441-001	Dec. 7, 2006	The Well: Inside and Out	FVTC Appleton	A-160-A	6 CECs; Water Only

**TO REGISTER FOR COURSES:**

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## The Tools Selection Dilemma

A recent article authored by Dave Mason of Infrastructure Management Group Inc. published in the June 2006 edition of WE&T Operators Forum provides an excellent discussion of the issues associated with the design of facility information management applications.

Dave uses the analogy of purchasing the right tools to do the job. I really like the analogy as we all know it takes a lot longer to complete a job, and sometimes it cannot be completed without the right tools.

The article discusses the debate about the “best” products, i.e. best tools with the most features. Dave states the focusing on the “best” debate is often putting the cart before the horse. He states: “What value is an attribute if it is not needed, used or required”. If you had an unlimited budget you could purchase a set of tools that included many which will never be used. The same is true about asset management, data collection and information management solutions.

The BMP (Best Management Practice) is to analyze the current and future information management needs and design a holistic approach to meeting those needs.

Many facilities have information management solutions installed as part of a SCADA application. While Instrument and Control vendors are adept at installing configuring and supporting the SCADA applications, they do not have the experience and knowledge required to plan and provide a reporting and knowledge management infrastructure.

In his book, “How Organizations Work: Taking a Holistic Approach to Enterprise Health”, Alan Brache lists some typical reasons for information management and knowledge management system failures. These same reasons are evident in many wastewater facility management systems today.

They include:

\*Assuming that the computers as the solution

\*Putting the computer “cart” before the required business process “horse”

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\*Tolerating a culture that discourages knowledge sharing

\*Assuming that information technology has to be managed internally

\*Understanding cost and time for both labor and management

\*Installing systems that do not provide automated management of strategic information

\*Delegating information and knowledge management to the information system department

Identifying current and future functional requirements for information management enables us to examine and define the work required in building an information system. With this information the tools required and enabling technologies (the right tools for the job) can be defined.

The process of defining the functional requirements also may lead to the questioning of the current work practices. Is equipment being maintained adequately, or is it being over maintained? Can labor and management tasks be automated?

The best tool for initial planning of a system is a pencil and paper. Define the current functional requirement and the future needs of the system. Then start a search for the “best” tools to do the job.

Purchasing the “best” tools before defining the functional requirements may lead to a more expensive and often dysfunctional knowledge management solution.

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Please return your completed application and your resume to: **Mary Nimm, Management Assistant/HR Coordinator, P.O. Box 178, Whitewater, WI 53190** or e-mail your completed application and resume to the above e-mail address. Applications accepted until position filled. EOE.

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## Brown County Rx Drug Collection Drive Wisconsin's Second Drug Collection Drive

By: Lisa Evenson

Communication and Education Coordinator  
Green Bay Metropolitan Sewerage District

As scientists find prescription drugs like antibiotics and pain relievers in waterways and are not certain of the affects on humans and aquatic species, it becomes apparent that being proactive and preventing medications from entering the wastewater stream becomes essential pollution prevention. Typically, conventional wastewater treatment plants are not equipped to remove all medications from wastewater, so flushing medications down the drain is not recommended. Additionally, leachate (liquid waste) collected from landfills is most often treated at wastewater treatment facilities, so just throwing prescription drugs away is also not the answer. So, if it's not recommended to throw away or flush medications down the drain, what are you suppose to do with unwanted medications?

Helping to prevent medications from entering waterways, the Brown County Household Hazardous Waste Facility (HHWF) together with the Villages of

Allouez and Ashwaubenon, Walgreens, Brown County Sheriffs Department, Lamp Recyclers Inc., and the Green Bay Metropolitan Sewerage District (GBMSD) held the second prescription drug collection drive in the State of Wisconsin on June 27 and 28, 2006. The two day event was held with a meld of contributions provided by the list of sponsors above. The Villages of Allouez and Ashwaubenon donated the use of their Village Halls; Walgreens provided pharmacists at the collection sites to survey and collect the medications; a Brown County Sheriff was on site to collect controlled pharmaceuticals such as narcotics; Lamp Recyclers, a licensed hazardous hauler, transported the medications to the HHWF; and GBMSD created and printed drug collection announcement flyers and distributed them to hospitals, clinics, and pharmacies throughout Brown County. The entire event was coordinated by Wess Damro, Brown County Recycling Manager, who put together the list of sponsors as well as arranged television and radio advertising for the event.

Wess Damro provided a summary of the collection drive in which he said they received 272 pounds of medications from 175 people. Approximately 109,000 pills were collected in 3,350 containers. An estimate of



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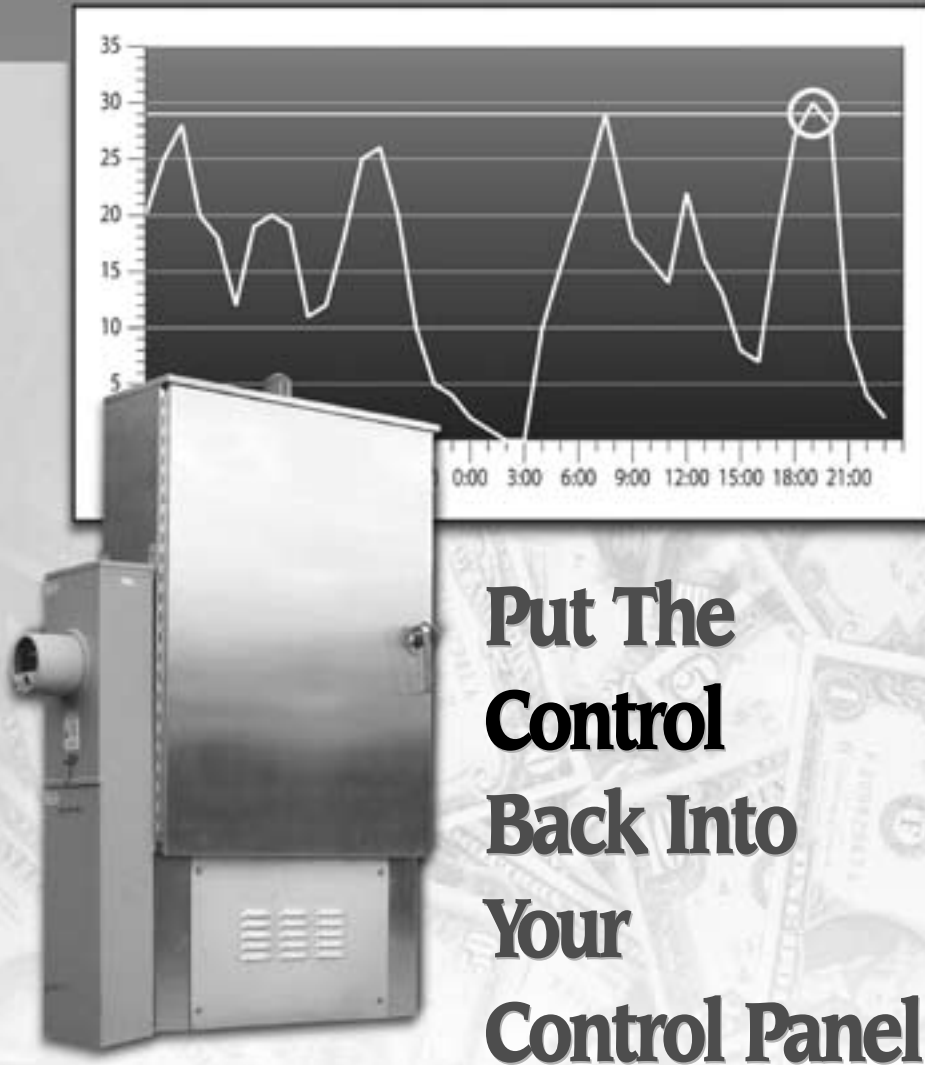




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\$230,000 was reported as to the value of the medications collected. Approximately 10% of the medications collected were classified as a regulated controlled substance. Moreover, medications were received from all over the world like Canada, Mexico, Belgium, Germany, and Mongolia. The oldest date found on a medication container was from February 1970.

In addition to the collection drive, Wess also conducted a survey in which he was surprised to find that 49% of the people were saving their medications for an event such as this because they knew flushing or trashing unwanted medications was not good for the environment. The overall expense of the collection drive was \$4,000, which was used to pay for volunteer lunches, reusable signs, supplies, hazardous waste disposal, and advertising. The turnout was what was expected for the first prescription drug collection drive in Brown County. Wess believes that if it was held on Saturday versus mid-week they might have reached more people. It is anticipated that more events like this are to occur in Brown County, perhaps becoming an annual or semi-annual event.

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**Send contract & payment to:** Richard D. McKee, WWOA Executive Secretary, 416 Herman Street, Arena, WI 53503

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**For complete contract regulations:**

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Clarifier Editor, Dan Busch (920) 438-1101

Email: dbusch@gbmsd.org

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## PHARMACEUTICAL TAKE-BACK A COMMUNITY'S SUCCESS STORY

By Ron Dickrell

*City of Marshfield Wastewater Utility Superintendent*

“Emerging Contaminants in Wastewater” is becoming a more prominent issue in the wastewater treatment profession. The practice of disposing of unused or outdated pharmaceuticals and prescription drugs into toilets or drains seems quite common and is even recommended by the pharmaceutical and medical profession. A group of Groundwater Guardians in the City of Marshfield became concerned about this practice and decided to proactively do something about it. Led by Dr. Mark Borchardt, a scientist at the Marshfield Medical Research Foundation, and other Groundwater Guardians, the group began to discuss ways to educate the public regarding the potential effect this practice could have in Wisconsin's waters and groundwater. Studies have shown conventional wastewater treatment operations do not totally remove these contaminants. Minute traces of pharmaceuticals are being found in some of the nation's waterways.

Therefore, this team, consisting of Dr. Borchardt, water and wastewater utility staff, medical and pharmaceutical personnel, and concerned citizens set out to determine the most proper method of disposal. The method of solid waste disposal was not the best option either, since, in a landfill, they could become incorporated in the leachate and ultimately end up in a wastewater treatment plant. We began by contacting the USEPA and Wisconsin Department of Natural Resources officials, and local experts. All agreed that flushing and landfill disposal were not viable options, yet that is current practice and there are no regulations against using these options. How could we educate the public to use the proper disposal method when we were offered inconclusive options? Next, we met with local clinic and pharmacy officials. Perhaps they could receive the unused pharmaceuticals back from the user. Still no help. They informed us controlled pharmaceuticals could only be possessed by the patient for whom they were prescribed.

With no solid answers forthcoming, we wondered if we couldn't present the public with the opportunity to dispose of their unused pharmaceuticals in

an environmentally friendly manner by offering them a “take-back” program. Initially, we learned about the requirements for receiving and handling controlled and non-controlled substances. Only law enforcement or certified DEA handlers could receive these substances and they must be transported by a certified solid waste handler. This would also require a proper “chain of custody” plan.

Included in our group was the coordinator for the county's Clean Sweep Program. She offered to assist by coordinating a Pharmaceutical Take-Back Program to be held in conjunction with the upcoming Clean Sweep Day at the Central Wisconsin State Fairgrounds in Marshfield. Household and farm hazardous waste are brought to this location on this day and are disposed of by ONYX, a certified solid waste disposal firm. A best guesstimate was that we may receive about 500 pounds of uncontrolled pharmaceuticals, and about 30 barrel gallons of controlled pharmaceuticals. The solid waste transporter estimated the disposal cost to be approximately \$10,000 including transport to an approved out-of-state solid waste incinerator facility. Our team then canvassed the community for donations to cover the cost and received the required commitment amount from the water and wastewater utilities, the medical facilities, and local banks and businesses among others.

Now we're ready! Oh...not so fast! As we sought DEA approval, they would not approve the transport of the substances we received across state lines and they could only be transported by law enforcement officers. Also, law enforcement officers had to be present during all hours of the collection. Back to the drawing board! Finally, with the cooperation of our local Police Department, they found an approved hazardous waste incinerator, at an undisclosed site, that would receive the pharmaceuticals and the Police Department volunteered their staff to transport the items there and to be present during the collection.

On May 13, 2006, the City of Marshfield held the first ever in the State of Wisconsin Pharmaceutical Take-Back Program. The day proceeded smoothly with Groundwater Guardians, medical and pharmacy employees, and police officers donating their time for participant registration, pharmaceutical sorting, and law enforcement observation of the day's activities. Usually, there were about 10 cars waiting in line to dispose of their unused pharmaceuticals, and household and farm hazardous wastes. At day's end, a total of 418 pounds of uncontrolled pharmaceuticals, and (3) three-gallon containers of controlled pharmaceuticals were collected. They were transported to the incinerator by the law enforcement officers. Without having to transport the items out-of-state, the total cost of the program was less than half of the \$10,000 original estimate.

Even though the group's initial goal was to just educate the public, this program succeeded in creating an even higher level of public awareness and environmental protection. The whole team was pleased with the volunteer efforts of the medical and

pharmacy personnel involved, the financial support received, and the cooperation of law enforcement personnel who made the event successful. Its success was measured by keeping nearly 500 pounds of pharmaceuticals out of the city's wastewater stream, and, in turn, protecting and preserving the water resource quality around the City of Marshfield. Through this increased public awareness about our program, we look forward to even greater successes in the future.

For further details regarding the success of this program in the City of Marshfield, please contact: Ron Dickrell, City of Marshfield Wastewater Utility Superintendent, 3411 S. Galvin Ave, Marshfield, WI 54449. Phone 517.591.2022. E-mail: [ron.dickrell@ci.marshfield.wi.us](mailto:ron.dickrell@ci.marshfield.wi.us)

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**NWVOA Summer Meeting  
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July 14, 2006

Chairman Mike LaRose opened the meeting and introduced Bayfield Mayor Larry McDonald. Mayor McDonald welcomed everyone to Bayfield.

Chairman LaRose introduced the first speaker Chad Hawk, Apostle Islands Park Ranger. Chad gave us a brief history of the Apostle Islands and lighthouses. He described the unique flora and fauna and the pristine Lake Superior water. He encouraged everyone to visit the islands.

Chairman LaRose introduced Jane Edwards, Research Assistant for the City of Superior Wastewater Division of Public Works. Jane discussed how her pollution prevention team is involved with the 1991 Lake Superior Binational Agreement to reduce certain designated toxic substances from the Lake Superior Basin. Supported with fourteen grants, the research team's goal is to achieve zero emission. Why Lake Superior? Because Lake Superior has the greatest opportunity to achieve zero discharge because of all the Great Lakes, Superior has the least population, least pollution, and is a symbol of hope.

Jane and her team are focusing on the "nasty nine" which are Mercury, PCBs, Dioxin, Hevachloro-Benzene, Octachlorostyrenl, DDT, Chlordane, Toxaphene and Dieldrin.

Their work includes stormwater programs emphasizing education on rain gardens, mitigation programs, beach sweeps, and school storm sewers stenciling projects. They have distributed nearly 600 rain barrels to interested parties.

Dioxin, the second most toxic man made material, is being reduced by banning burn barrels in Douglas County and advocating electronic waste recycling.

Mercury reduction has fostered thermometer and thermostat exchange programs, bulb recycling, and dental waste recycling with 100 percent participation from the City of Superior area dentists.

Jane pointed out that success involves education, education, and education.

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Chairman LaRose opened a brief business meeting with the treasurer's report and acceptance of the spring meeting minutes. Kay Marshall, WWOA present elect, reminded us that August is the deadline for WWOA award nominations. Kay also informed us that two \$1,000 scholarships are available to students pursuing careers in the wastewater field.

Chairman LaRose introduced Steve Mlejnek and Doug Jennings, Northern Lake Service, Inc. who gave a presentation on sampling and analysis of low level mercury using EPA method 1631E. Steve discussed that about 70 percent of Mercury emissions are man made, of which 40 percent is from coal fired power plants. The Great Lakes initiative shared by the United States and Canada is to achieve a water quality of 1.3 parts per trillion Mercury or less in the Great Lakes.

Steve described the extreme laboratory conditions requiring dedicated instruments, clean environment, clean supplies, and clean analyst.

Doug described the extreme importance and care in sampling. The ease of contaminating water samples with interfering substances cannot be over emphasized. Doug and Steve demonstrated the "two man sampling technique".

Doug described the analytical process and sensitivity required for Mercury analysis. The care required is very impressive.

Northern Lake Service, Inc. is now capable of determining low level analysis of many more metals.

Chairman LaRose introduced Thomas Silhz, Aqua Aerobic Systems, Inc. Thomas described the AquaAerobic cloth media filtration system selected for the Greater Bayfield wastewater treatment plant. He pointed out the advantages of simple operation and low energy requirements of this system. The treated effluent "feed water" passes through a pile cloth membrane that surrounds each of six hollow submerged discs. The membrane removes residual suspended solids and lowers the BOD. As the cloth membrane begins to clog, level sensors begin a backwash operation that vacuums across each disc membrane. The backwash is recycled for retreatment. Effluent water quality has been in the low tens.

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Chairman LaRose introduced the last speaker, Troy Larson of Strand & Associates. Troy presented a PowerPoint presentation of the new Greater Bayfield wastewater treatment plant. The treatment plant serves the City of Bayfield, the Town of Bayfield, and Pikes Bay Sanitary District. Winter population serves about 625 and summer population is about 3,000. The treatment process is extended aeration with BNR. Treatment is followed with cloth disc filtration and UV disinfection before discharge to Lake Superior. Biosolids management is aerobic digestion with reed bed disposal. The approximate \$6 million dollar project received \$5.5 million dollars in grant funding.

The meeting was concluded with a tour of the Greater Bayfield wastewater treatment plant.

Respectfully submitted, Craig Walkey

**CAMBRIDGE-OAKLAND  
WASTEWATER COMMISSION  
WASTEWATER OPERATOR/LAB-TECH POSITION**

The Cambridge-Oakland Wastewater Commission (COWC) is accepting applications for a Wastewater operator/laboratory technician. This newly formed commission serves the Village of Cambridge and Town of Oakland Sanitary District No. 1. The new WWTF will be a Class 2 facility, utilizing SBR technology. The operator/laboratory technician position includes laboratory and process control functions, equipment maintenance, and repair. An associate degree in a related field or a WI DNR operator license with experience is desirable. Applicant must possess the ability to obtain DNR operation certification in wastewater subclasses C, E, G, I and J, and a Wisconsin CDL within six months of hire. Wage will be commensurate with experience and a full benefits package is included (including Wisconsin Retirement System). This position will require residency within 30 minutes of Cambridge.

*Interested applicants should send a resume to:*

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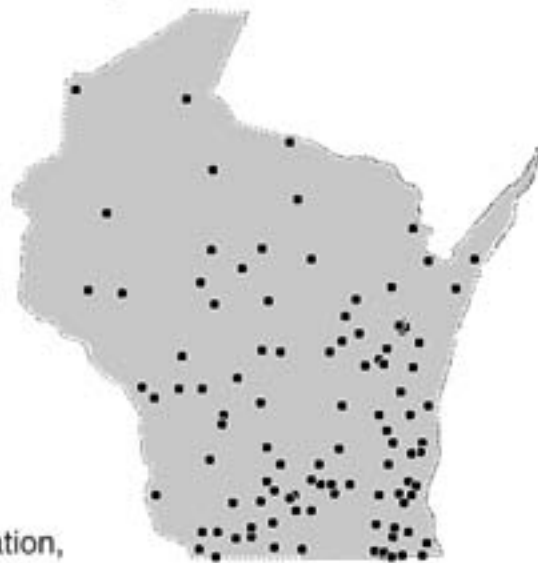
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## WQT Degree and the Wastewater Industry: A Symbiotic Partnership

Fred S. Rice ([frice@morainepark.edu](mailto:frice@morainepark.edu))  
Moraine Park Technical College

Wastewater operators in Wisconsin are an exceptional group of professionals. They serve the public and protect the environment, often in conditions that would deter all but the hardest of souls. Most of the operators have been raised with a solid work ethic and if they do not possess the know how to execute a task, seek out the information from colleagues or training sessions. Operators acknowledge that the plants they operate today are considerably more high-tech as compared to those of 20 or 30 years ago. In fact, many have been part of their facilities evolution; gaining new knowledge and skills in order to keep pace with the growth and perform at the required higher level.

Many operators in Wisconsin have increased their industry knowledge, skills, and abilities through formal education in the Water Quality Technology (WQT) Associate Degree program at Moraine Park Technical College. In biology, one form of symbiosis is known as mutualism. This is an association or special connection that is advantageous to both parties. This analogy also can be used to describe the WQT degree program and the wastewater industry. WQT is the only Water and Wastewater specific degree in Wisconsin and it is poised to play a key role in maintaining a supply of quality future plant personnel. The value of this degree program to the wastewater industry in the State of Wisconsin is considerable. The next generation of operators should be of significant concern and interest to all of us. The WQT degree seeks to answer the call of tomorrow by educating future operators today.

As with any symbiotic relationship though, the association must be reciprocal. Just as the WQT degree program at Moraine Park Technical College needs your help, the wastewater industry needs to support the WQT degree program. Have you looked to hire program graduates in your utility? Have you taken program interns under your wing and provided

them with on-the-job guidance? Have you been considering enhancing your own career through degree study or do you think a degree in Water Technology would be a great first step to launching the employment future of your high school age or graduated children?

It is getting increasingly more difficult for our students to find facilities that are willing to open their gates for a field trip or that will take on an intern (which is a degree requirement in the WQT program). We are in dire need of water and wastewater systems to 1) be available for degree program students to tour while completing course assignments, 2) serve as internship locations for our students to learn some of the hands-on skills required of operators, and 3) actively seek out and hire program graduates. Can you serve in one or more of these capacities? With your collaboration, not only can you help our students but you will be doing a great service to the future of our industry. This is an easy opportunity for industry professionals to give back to the career field that has provided so well for us. I am hoping to build a statewide list of *professional friends of the program*, who students may contact and know that they will be able to schedule a site visit, plan an internship, or simply ask questions about the wastewater industry. Please contact me stating your willingness and to what degree you wish to be a part of this partner network. Together, we can improve the future of our industry by ensuring we have a program that develops a supply of educated and motivated new operators.



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## Southern District, Stoughton, WI May 25, 2006

Our second meeting of the year was held at The Broux House in Stoughton, Wisconsin. There were a total of 59 people in attendance as the meeting started at 9 A.M. Chairperson, Joe Solawetz thanked the City of Stoughton for hosting the meeting before introducing the Stoughton Mayor, Helen Johnson. Helen discussed the importance of specific wastewater projects dealing with slip lining and UV disinfection. She also spoke about the cities recent experience with the tornadoes. Though tragic, the local Stoughton government has grown and learned from the experience. "Tabletop" exercises have become large part in this learning experience for Stoughton.

The first speaker was Jim Schieble from Wisconsin Public Power Inc. Jim discussed a case study at the City of Columbus (pop.~4500). Aeration blower operations were the primary focus of the cost saving effort. Positive displacement digester aerators were also modified and switched from a coarse air system to fine bubble. Off peak vs. On peak, payback period and user fees were also touched on. In the end Columbus was able save 12,000-13,000 Kwh of energy/month on average. Much of the work was accomplished with existing facility staff!

The second speaker of the day was Don Voight, P.E., of Energenec. Don dove right into the topic of European Technologies in Wastewater. Through references to periodicals, books, and personal experiences Don provided a background for the reasoning behind the "value added" approach in Europe. Don continually stressed the importance of increased communication between all stakeholders in the wastewater industry. The value of looking at the long term (i.e. operational) cost vs. initial capital costs were talked about as well. Don ended by stressing pride in the quality of operations and pride in your profession.

Rich Knoelke of Mulcahy/Shaw brought us back to the "headworks" area of the plant. Rich touched on the variety of fine screens and the positives and negatives of each. The importance of a quality washer/compactor system as part of the "whole" process was also discussed. Rich spoke to the group about other operational issues such as odors, differential level control, and seasonal temperature concerns.

Joe Solawetz, regional chairperson held the business meeting just before lunch. Some topics touched on were the upcoming state conference, annual operator award, operator competition changes, scholarships, and tuition aid. \*( Please see the attached meeting minutes!) Nominations and voting for new regional board positions will take place at the Aug.24, 2006 meeting in Janesville. Also adopted was a change to only charge retired WWOA members 50% of the meeting costs in the future. Joe thanked the City of Stoughton for help in hosting the great meeting!

After lunch Mark Kane, L.W. Allen spoke about pump station monitoring. Specifically, devices that monitor pump stations utilizing cell phone bandwidth for the communication. These units are somewhat of a hybrid between a full blown radio telemetry system and dialer units that many of us are already familiar with. Information gathered is then stored on a web server and is accessible to the client with login information upon contract agreements. The signal strength of W(web)RTU devices strongly correlates to that of cell phones. Pump station control, reporting, and alarms can all be accessed

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through the website. Alarm acknowledgement can be done via phone as well as on the website! Different callout situations can be separated out to be dealt with by different dialer group programmed into the unit as well. (i.e. maintenance issues to maintenance personnel, and process issues to operations personnel)

Larry Benson, DNR Basin Engineer briefed the group on the progress with the NR149 rewrite, exam rewrites, eCMAR, and eDMR. Larry also congratulated the City of Janesville who received the large lab of the year award for our area. Good job guys! A new addition to the eCMAR is in the influent loading section. This is where additions were made for graphical trends on each facility.

Jane Carlson, P.E., with Strand and Associates provided the group with some background history and information on the Stoughton WWTF prior to the facility tour. Stoughton WWTF is very progressive for its size and it continues to provide a top notch service to the community.  
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Home: 920-725-0897  
[tkruzick@ci.oshkosh.wi.us](mailto:tkruzick@ci.oshkosh.wi.us)

**Kay Marshall**, President Elect  
SEH Inc.  
421 Frenette Drive  
Chippewa Falls, WI 54729-3374  
Work: 715-720-6288  
Fax: 715-720-4069  
Home: 715-790-1418  
[kmarshall@sehinc.com](mailto:kmarshall@sehinc.com)

**Jim Thalke**, Vice President  
Sussex Regional WPCF  
N64W23760 Main Street  
Sussex, WI 53089  
Work: 262-246-5184  
Fax: 262-246-0921  
Home: 262-246-4915  
[jthalke@sbcglobal.net](mailto:jthalke@sbcglobal.net)

**Tim Nennig**, Past President  
Grafton Water & Wastewater  
P.O. Box 144  
Grafton, WI 53024  
Work: 262-375-5330  
Fax: 262-375-6938  
Home: 262-377-4756  
[tnennig@village.grafton.wi.us](mailto:tnennig@village.grafton.wi.us)

**Bruce Bartel**, Director (07)  
Green Bay MSD  
P.O. Box 19015  
Green Bay, WI 54307-9015  
Work: 920-438-1327  
Fax: 920-438-3134  
Home: 920-465-9876  
[bbartel@gbmsd.org](mailto:bbartel@gbmsd.org)

**John Bond**, Director (07)  
Roberts WWTP  
107 East Maple Street  
Roberts, WI 54023  
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Home: 715-796-5263  
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**Dave Carlson**, Director (06)  
Fond du Lac WPCF  
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Home: 920 993-0616  
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**Dan Tomaro**, Director (07)  
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[dtomaro@yahoo.com](mailto:dtomaro@yahoo.com)

**Randy Thater**, Director (06)  
Waukesha WWTP  
600 Sentry Drive  
Waukesha, WI 53186  
Work: 262-524-3631  
Fax: 262-524-3632  
Home: 262-549-4059  
[rthater@ci.waukesha.wi.us](mailto:rthater@ci.waukesha.wi.us)

**Richard McKee**, Exec. Secretary  
WWOA  
416 Herman Street  
Arena, WI 53503  
Phone: 608-513-9362  
Fax: 608-795-0051  
[rdmckee@wwoa.org](mailto:rdmckee@wwoa.org)

#### 2006 Convention Contacts

**Local Arrangements**  
Gill Hantzsch 608-355-8879  
**Technical Program**  
Jim Thalke 262-246-5184  
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**Clarifier Staff**  
Jean Van Sistine 920-438-1057  
[jvansistine@gbmsd.org](mailto:jvansistine@gbmsd.org)  
Dan Busch 920-438-1101  
[dbusch@gbmsd.org](mailto:dbusch@gbmsd.org)  
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[jeffrey.haack@dnr.state.wi.us](mailto:jeffrey.haack@dnr.state.wi.us)

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