

# *The Clarifier*

WISCONSIN WASTEWATER OPERATORS' ASSOCIATION, INC.

Volume 164, February 2006



**Marion Wastewater Treatment Facility**

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# The Clarifier

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## President's Message

Greetings WWOA Members,

It's the middle of winter in Wisconsin. I sincerely hope that winter weather has not caused your facility to falter in providing top of the line

service to your customers. Equipment failures at this time of year can try the hardest operator's soul. More so our members who have the additional responsibility for water supply and water service line repairs. Living in a typical Wisconsin winter can surely get me looking forward to an early spring and warmer weather.

Should your facility and infrastructure be spared untimely winter break downs, perhaps you're finished with the WDNR annual reports and you've had some time to read some professional journals and publications on what our industry can expect in 2006. I find it interesting what some of the pundits of market reports are indicating. Specifically a recent report, U.S. Wastewater Equipment Markets, revealed an expected increase in equipment expenditures that will expand a "design-build-operate" market to budget strained municipal markets. I wonder how this may affect future employment trends in our profession. This same report touted the continuing popularity of ultraviolet disinfection for plant upgrades. What change will the increasing price of energy have on a community's decision for this type of upgrade? With decisions like these facing us it is important for our membership to network effectively to spread the word on what is working. That's what I always admire about water professionals. They never tire of sharing their experiences regarding successes, and are not ashamed of failures. The free sharing of experiences is what makes this profession great. There is not a Gimbals' vs. Macy's attitude out there.

I read that Congressman John Duncan Jr. (R-TN) introduced a bill on December 15 that would provide \$7.5 billion annually to augment the clean water funding gap. Certainly this would be good news for our profession and those that offer direct support to operators. The wise and effective expenditure for infrastructure upgrades will be entrusted to members of organizations such as ours. Water customers deserve the responsible investment of these funds.

There are so many sources we can tap into to stay current with technology. I continue to marvel at what is available on the Internet. I enjoy surfing the web for water industry stories. If you are interested and have the computer technology savvy, try signing up onto a mail list. There are several I would recommend. Try WaterNews at: <http://www.epa.gov/water/waternews/>. This is a great tool for keeping up with pending federal legislation. Yahoo has a mail list for Industrial Pretreatment and can be joined by signing on at [http://groups.yahoo.com/group/Pretreatment\\_Coordinators/](http://groups.yahoo.com/group/Pretreatment_Coordinators/). For generalized waste and environmental news the magazine Waste News has an electronic newsletter that can be informative and entertaining. You can sign up for their service at <http://www.wastenews.com>. I would certainly be remiss if I did not mention the WWOA mail list. We had a very active group a few years back before a virus forced us to shut it down. New security has been incorporated and we continue to strive to enroll new members. Sign up through our web site at [wwoa.org](http://wwoa.org). Drop Scott Thompson our web master a line for further instructions and details. It is a worthwhile feature that needs membership participation.

Let us hope for an early and pleasant spring. We golfers look forward to the opportunity to once again get outdoors and swing a club without wearing mittens.

Tom Kruzick



### Marion WWTF

In the late 1990's, the City of Marion in northern Waupaca County recognized that their existing wastewater treatment facility would not support long-term growth and economic vitality of the community. Flows to the facility, a rotating biological contactor system, were approaching 120% of design capacity and the City was having difficulty meeting the discharge limits in its WPDES permit. And much of the mechanical equipment had reached its life expectancy.

Graef, Anhalt, Schloemer & Associates, Inc. was retained by the City in 1999 to prepare a wastewater treatment facility plan, and provide subsequent design and construction engineering services for the project. The facility plan recommended a change to an extended aeration activated sludge process along with an increase in the design capacity from 0.24 MGD to 0.40 MGD. These changes greatly improved treatment flexibility of the wastewater stream and provided capacity for flows anticipated over the next 20 years.

To implement the plan, the City of Marion acquired a new treatment site across the North Branch of the Pigeon River (the receiving stream) from the existing plant. This was necessary because the old plant was in close proximity to surrounding development, limiting the amount of land available for expansion. Design plans were developed calling for fine-screen solids removal, grit removal, grease removal, a Carousel® style oxidation ditch, secondary clarifier, ultraviolet light disinfection, effluent post-aeration, aerobic sludge digestion, sludge disposal to reed

beds, a new laboratory, a standby power system and a control system providing remote operating capability.

The new facility went on line in November 2002 and has had excellent performance results since. Discharge levels of BOD5 and TSS are typically in the mid-single digits, well below the permit levels of 20mg/l in summer and 30 mg/l in winter. Effluent ammonia is nearly undetectable and the expanded ultraviolet disinfection system is succeeding in meeting Fecal Coliform limits. The post-aeration system has been working well in ensuring that effluent dissolved oxygen content is well above the permit minimum of 7 mg/l, required because the receiving water is a trout stream.

Some notable project challenges and design features include:

Site Bedrock: Portions of the new site included relatively shallow bedrock. Rock removal was necessary for construction of the influent sewer, the facility wet well and adjoining raw sewage pump dry

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well, and the clarifier. The general contractor, Staab Construction Corporation, also had to deal with groundwater perched on top of the rock. Staab received a 2004 Build Wisconsin Award for its work on this facility.

**Industrial Loadings:** A major source of the influent load to the plant is from a major wood processing facility in Marion. Although it represents a relatively small portion of the design flow, it is a large part of the total BOD load, with BOD concentrations of 2500 mg/l. This industrial flow also contains high amounts of tannins that substantially reduce the transmissivity of the effluent water passing through the plant. As a result, additional ultraviolet lamps were required to achieve proper disinfection of the discharged water.

**Expansion:** The facility was designed to allow a further increase in capacity by adding a second clarifier, a second waste sludge pump and a fourth aerobic digester. All other existing components of the new facility have been sized to treat a design flow of 0.534 MGD.

**Remote Operation:** The plant is operated and monitored by a series of programmable logic controller-based control panels that are interconnected by fiber optic cable. All of the PLC's report to a central computer located in the service building. The central computer can be accessed locally or remotely with a laptop computer allowing the on-call operator to monitor the process, evaluate alarms, and turn components on and off.

**Reed Beds:** The new treatment process incorporates reed beds to assist with sludge management, providing extended storage capacity and further stabilization. The permit application for the facility resulted in additional study of this process by the Wisconsin Department of Natural Resources. WDNR determined that this process is suitable in cold climates as an alternative method of achieving 180-day storage and, with proper design, the process does not pose a risk of propagation of reeds outside of their beds.

In meeting the many challenges and client expectations of this project, Graef, Anhalt,

Schloemer and Associates, Inc. utilized a broad range of technical skills and resources. To provide sub-consultant support for the engineering effort, the firm also utilized PSJ Engineering, Inc., responsible for the HVAC and plumbing systems, and Muermann Engineering, LLC, responsible for electrical design and instrumentation and control.

The project was financed with assistance from USDA in the form of a Rural Development Loan for \$4,412,000 and a Rural Development Grant of \$1,759,000, and from the State of Wisconsin in the form of a Community Development Block Grant of \$750,000. The WWTF is operated under the direct supervision of John Bork, Certified Wastewater Treatment Plant Operator. John hosted a WWOA/LMD meeting on May 19, 2005, offering tours of the new facility to other interested wastewater professionals.

**Editor's Note:** Rick Graser received the 2005 Northwest Operator of the year award. His name was spelled incorrectly in the December 2005 issue. Congratulations Rick!



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## MADISON MSD APPOINTS NEW TRAINING MANAGER



*Roy Swanke takes over as new District Training Manager*



*Glenn Smeaton retires from MMSD*

Madison Metropolitan Sewerage District is pleased to introduce Roy Swanke as its new Training Manager. The position of Training Manager was recently vacated as a result of Glenn Smeaton's retirement from Madison MSD. Roy brings to the position a combination of education and experience. Roy holds a degree in Industrial Education from the University of Wisconsin – Stout. He has twenty-eight years of experience in training and as a supervisor. For the last thirteen years Roy has been supervising the Madison MSD mechanical maintenance department. Roy is also a part-time Instructor at the Madison Area Technical College.

On January 6, 2006 Glenn Smeaton retired from his position as Training Manager with Madison MSD. Glenn has been working in the field of water and wastewater training for over thirty years. He has been working for Madison MSD as Training Manager for the last eleven years. Glenn looks back on work that included communications training and conflict management

training, succession planning, knowledge capture and sharing, and development of personal learning plans. He is especially proud of the work they did at the District in the area of action learning or facilitated implementation training. (Glenn was also the recipient of the prestigious Koby Crabtree Award from WWOA in 2004.) Glenn plans on staying active in the field as consultant in learning and performance support. We wish both Roy and Glenn good luck in their future careers.

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**APPRENTICESHIP: AN OLD APPROACH TO A NEW SITUATION**

*From Glenn Smeaton*

The first E-Day occurred over thirty years ago. That was when a wave of new wastewater treatment plants were constructed and staffed. Now many of those individuals with over thirty years of learning and experience are getting ready to retire. We are facing two major problems -- loss of their collective knowledge and experience, and a lack of new operators in the pipeline. The baby boom is turning 60! That means that in the next 5 to 10 years over half of our present workforce will be retiring. Currently, it doesn't appear that the DNR, or Moraine Park Technical College are being adequately funded to step up to the task of developing the next wave of wastewater operators.

One possible approach to developing new operators is apprenticeship. Apprenticeship is a time-tested way of providing learning and structured experience in developing skilled trades-people. Wisconsin's apprenticeship program has been developing skilled trades-people for the last 100 years – it has definitely stood the test of time! In the late seventies, Wisconsin experimented with a wastewater operator apprenticeship program for returning vets. After the vets completed the program, the program fell from use. It is possible that now is the time to dust off the program and update the curriculum to develop Wisconsin's operators of the future.

For the last ten years Madison Metropolitan Sewerage District has been taking advantage of apprenticeship programs to develop its maintenance mechanics and industrial electricians. The program benefits from three-way cooperation. Madison Area Technical College supports the related instruction, the State Bureau of Apprentice standards regulates the quality of the learning experience, and MMSD supports the program through on-the-job training and continuously investing in the education of its apprentices and journeymen. This is a robust program that should also work for developing qualified water and wastewater operators. In addition to developing skilled trades-people, apprenticeship also helps support the transfer of knowledge and skills from the experienced operators through the use

of structured on-the-job training. As a result, apprenticeship can help approach both problems facing the wastewater industry – developing new skilled operators to fill positions as they open, and sharing the knowledge of our experienced operators as they near retirement.

Glenn Smeaton, recently retired training manager from MMSD, is working with Don Linstroth, MATC Apprentice Coordinator, to see if it is time to reactivate Wisconsin's water and wastewater operator apprentice programs. If there is interest, Don Linstroth will host an informational meeting at Madison Area Technical College. If you would like to learn more about apprenticeship as a means of developing skilled operators, contact Glenn Smeaton at (608) 223-9953 or e-mail [smeatongrs@aol.com](mailto:smeatongrs@aol.com). You can also contact Madison Area Technical College Apprentice Center by calling (608) 246-5201. If there are twelve or more employers interested in apprenticeship, we can start developing the program.

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- A Wisconsin CDL with the appropriate endorsements or be able to obtain the appropriate endorsements with in three months
- Mechanical ability and computer knowledge

Salary range is \$16.47-\$19.87 DOQ with an excellent fringe benefit package. A job description can be found on the Rice Lake Utilities web site located at --www@ricelakeutilities.com. Rice lake Utilities will be accepting resumes until close of business on February 2, 2006. Rice Lake Utilities is located at 320 West Coleman Street, Rice Lake, WI 54868



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## Maximizing Secondary Treatment Wet Weather Capacity Part 5b (of 6): Minimizing Clarifier Loadings

*Bill Marten, Wastewater Process/Operations Engineer, Donohue & Associates, Inc.*

*This is the fifth of a six-part series discussing strategies to maximize secondary treatment peak flow capacity. While the strategies are focused toward activated sludge treatment systems, many of the strategies are applicable to other systems as well. Future editions of The Clarifier will present additional parts of the series. For reference, the series includes:*

*Part 1: The Big Picture: Peak Wet Weather Capacity Considerations*

*Part 2: Optimizing Mixed Liquor Settleability – General and Operational Considerations*

*Part 3: Optimizing Mixed Liquor Settleability – Facility Configuration and Modifications*

*Part 4: Optimizing Secondary Clarifier Performance*

*Part 5: Minimizing Clarifier Loadings*

*Part 6: Putting It All Together: Integrated Strategies for Success*

As noted in Part 1 of this series, “the key factor that controls the peak flow capacity of activated sludge

systems is solids separation”, and the performance of your secondary clarifiers are the key to solids separation. Good secondary clarifier performance is dependent on having a good settling mixed liquor, good hydraulic characteristics, and appropriate loading rates.

Parts 2 and 3 of this series discussed mixed liquor (ML) settleability, the factors that affect it, and strategies to optimize it through operational or facility modifications. Part 4 of this series then focused on the hydraulic characteristics of secondary clarifiers, how they affect secondary clarifier capacity and performance, and what you can do to optimize them.

Part 5a discussed what we mean by secondary clarifier loadings, defining surface overflow rate (SOR) and solids loading rate (SLR) as the two key loading parameters. Part 5a also presented two strategies to help secondary clarifiers perform better under peak flow and loading conditions:

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- Strategy 1: Bring More Clarifiers Online – bringing more clarifiers on line simply distributes the loading across more units, which lowers the loading to any individual clarifier.
- Strategy 2: Increase the RAS Pumping Rate – increasing the RAS pumping rate will increase the rate at which settled mixed liquor is removed from the clarifiers, which will help to overcome the increased SLR that occurs as flows increase. There is a limit to how high you can go with this, however, after which you reach a point of diminishing return.

And that brings us to Part 5b, in which we'll discuss strategies to decrease/minimize clarifier SLRs during peak flow events.

Strategy 3: Decrease the Solids Load to the Secondary Clarifiers

In Part 5a it was noted that SLR is calculated by multiplying the plant plus RAS flow rate times the MLSS concentration, many plants use strategies to decrease their MLSS concentration during peak flow conditions, and thereby minimize the clarifier SLRs.

The simplest way to lower the MLSS concentration is to bring more aeration basins in service during high flow events, taking them back out of service as flows decrease. The result will be a more dilute MLSS, as the same mass, or poundage, of microorganisms in your system will now be stored in a larger volume of tankage.

However, if you don't have extra aeration basins to put in and out of service, there are still strategies to accomplish temporarily lowering your MLSS concentration. All of these strategies involve storing some of the activated sludge population to dilute the mixed liquor concentration flowing to the clarifiers. Thus the MLSS decreases, which in turn results in a lower SLR for any given QF and QR.

The most common way to accomplish this is by changing the locations where influent (or primary effluent) flow enters the aeration basins. This is commonly referred to as implementing "step feed" or "contact stabilization" flow patterns.

Under normal flow conditions, it is usually beneficial to operate in a "plug flow" mode, where all of the

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influent flow enters at the beginning of the aeration basins, and flows as a “plug” through all of the basin volume. Such plug flow operation has been shown to help develop a good settling population of microorganisms, and really led to the development of selectors for controlling filaments.

However, under peak flow conditions, diverting some or all of the influent flow to downstream portions of the aeration basins, while keeping the RAS flow into the beginning of the basins, will have the following results:

- The upstream portions of the aeration basins will have an increased MLSS concentration, due to less dilution of the RAS as some or all of the influent flow is added at downstream locations.
- The downstream portions of the aeration basins will actually have a decreased MLSS concentration, as compared to the plug flow condition, because of adding the dilute influent downstream of where the RAS is added.

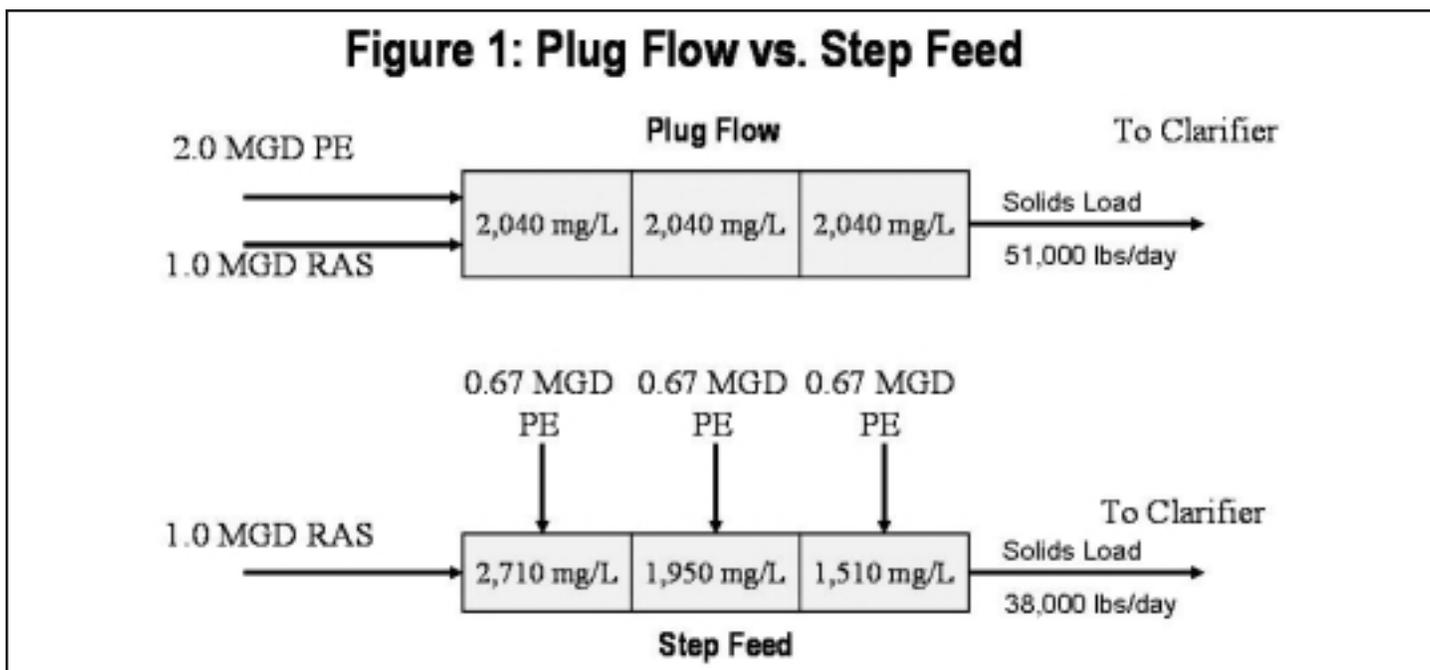
This latter point is critical to this strategy, because as the MLSS concentration decreases, so too does the SLR being applied to the clarifiers (note that the SOR does not change). The reason the MLSS concentration decreases is a little complex, but all related to a mass balance around the aeration basin.

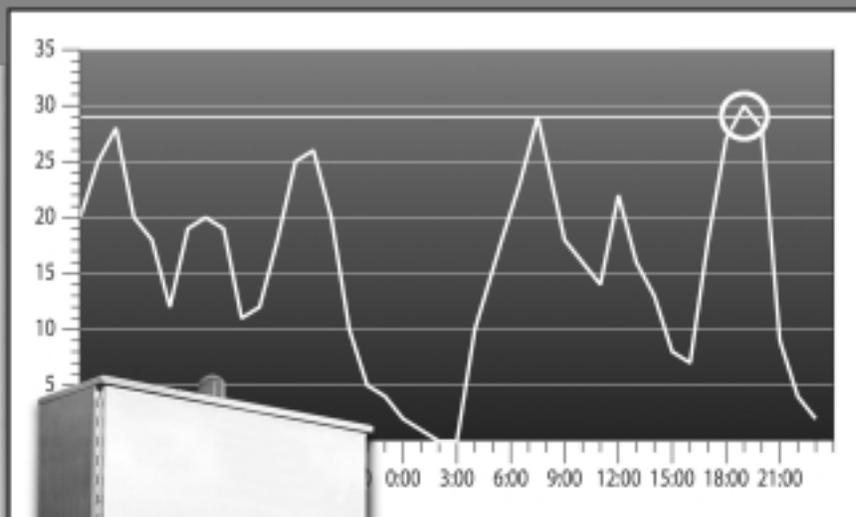
If we think of our activated sludge system, on any

given day we have a certain mass, or poundage, of microorganisms (MLSS) in the system. That mass is related to the BOD loadings to the system, and the sludge age we operate the system at, and the key is that it doesn’t change quickly! Thus, for a given total poundage in our system, if we store a larger percentage of the mass in upstream portions of our aeration basins by increasing the MLSS concentration in those regions (we dilute the RAS less, causing higher MLSS concentrations than with plug flow), we conversely have a lower mass to be diluted with the same influent flow in the downstream portions. As a result, we get more dilution in the downstream portions, resulting in a lower MLSS concentration, and hence lower SLR.

Figure 1 shows a comparison of the MLSS concentration leaving an aeration basin (basin volume of 1 million gallons), to flow to secondary clarifiers, when operated under the same flow rates and overall mass of system microorganisms, for plug flow versus step feed modes of influent addition. As can be seen, with step feed, more solids are stored upstream (higher MLSS concentration) and the MLSS concentration and solids loading going to the clarifiers is reduced by approximately 25%.

This strategy of storing solids “offline” during peak flow events can be implemented in a wide variety of ways, depending on your plant configuration:





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- Many conventional aeration basins were designed with the flexibility to change between plug flow and step feed and/or contact stabilization feed patterns. Normal operation would be in plug flow, with a change to step feed or contact stabilization under peak flow conditions, changing back to plug flow when peak flows subside.
- Some plants have RAS Reaeration Basins that were designed as part of nitrification systems, and have been found not necessary and bypassed. During peak flow events these Reaeration Basins can be put in service to store and aerate RAS solids, thereby temporarily taking some of the microbial mass out of the system until flows decrease.
- With multiple ring oxidation ditches, it might be possible under peak flow conditions to bypass influent around the ring that receives RAS, using that ring to store RAS and thereby microbial solids. After flows subside, the influent would be directed back to the ring that receives RAS.
- It may be possible to concentrate solids in one or several aeration basins. This can actually be done two ways, both of which maintain full secondary treatment, at plants that have multiple aeration basins:
  - o One option is to continue sending RAS to all of the basins, but stopping influent flow to some basins. The basins only receiving RAS will in effect become temporary RAS Reaeration Basins, returning to normal mode when flows decrease.
  - o The other option is continue adding wastewater and RAS to all of the basins, but to turn off the air in some of the aeration basins. With this method, all basins continue to receive wastewater flow, but the basins without air function somewhat like secondary clarifiers without RAS, gradually filling with settled solids. These storage basins are then taken offline (stop both the influent and RAS flows) once they are filled with solids, maintaining normal treatment in the remaining basins.
- You can also store solids in a single aeration basin by simply shutting off some or all of the aeration in the basin, to allow mixed liquor to settle and thicken in the basin. This should be done with caution, with consideration given to the type of

aeration system you have, and should always be done in coordination with your Wisconsin DNR area engineer. However, it may be necessary if the alternative is losing your population of organisms in your effluent. The short term consequences of turning your air off will be much easier to recover from than losing your microbial population.

- A last strategy being implemented at plants is to bypass some of the wastewater flow completely around the activated sludge system, blending it in with the secondary effluent before disinfection. This effectively limits flows and loadings to the secondary clarifiers, but also limits the amount of flow receiving full secondary treatment. This approach relies on blending of fully and partially- or un-treated effluent to meet permit limits. It should be noted that the U.S. EPA has not yet officially approved “blending” as a wet weather treatment option, and that this approach can expose the utility to negative publicity from the media or environmental groups. Similar to the previous approach, this technique should be done in coordination with your DNR area engineer.



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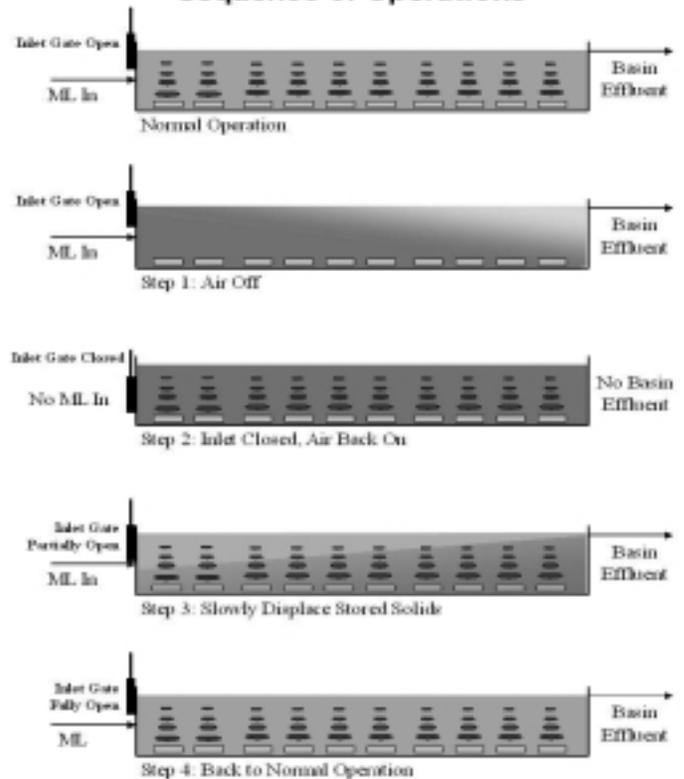
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It should be noted that any approach involving shutting off air to basins, to allow solids to settle and concentrate, must be done with caution to avoid developing other problems. You don't want to try this if you don't have the right type of aeration equipment, and you don't want to hold the stored microorganisms too long without aerating them. In addition, care must be taken in bringing the "offline" basin(s) back in service, to avoid overloading the system (and downstream clarifiers) with stored solids.

Figure 2 shows a sequence of operation implemented at one activated sludge plant equipped with fine bubble membrane diffusers, allowing air to be turned on and off in individual basins. At this plant, under peak flow conditions, about 20% of the operating aeration basins are thus converted to temporary storage basins.

In summary, minimizing clarifier loadings to help deal with peak flows may be easy, and may be tricky. A lot depends on what you've got to work with. If your plant was built with a lot of flexibility and/or

**Figure 2: Solids Storage Aeration Basin - Sequence of Operations**



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excess tankage, you may be in good shape, and be able to easily implement effective operating strategies to handle wet weather flows. If you're limited in tankage and/or flexibility, however, you may be forced to make tough decisions to protect the long-term viability of your system. In such cases, a long-term strategy should be to either eliminate the extreme peak events that are causing such challenges, make facility modifications that improve your ability to implement peak flow operating strategies more easily, or both.

This wraps up discussion on minimizing clarifier loadings, as the final element of your strategy to maximize your activated sludge system's peak flow capacity. The next, and last, installment in this series will tie the concepts and strategies presented in the first five installments together, with the goal of helping you develop a comprehensive, coordinated and (most importantly) effective wet weather operating strategy. Please stay tuned.

## 2006 Professional Operators Ride

Planning for the 2006 Professional Operators Ride is well along. The Ride, hosted by Geno and Barb McClure of Laona, WI, is scheduled for July 28-29, 2006.

The Operators Cook-Out is planned for Thursday night the 27th. The cookout will be at the home of Geno and Barb, assuming they want us to know where they live.

The Ride will be going to the Four Seasons Resort on Miscauno Island in Pembine, WI. That will also be the location of the Operators Banquet and joke fest.

We are inviting any and all interested motorcyclists to join us on this annual outing. You will certainly have a good time, meet some rather interesting people, and visit parts of the State of Wisconsin that you aren't familiar with.

If you are interested in receiving mailings on the ride and how to participate, contact Reid Snedaker at William/Reid Ltd at 262-255-5420.

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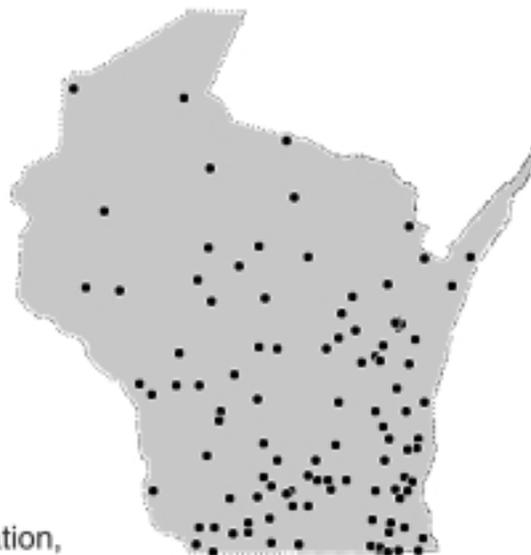
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**ATTENTION ALL GOLFERS**

The annual golf outing is scheduled for Monday, June 19, 2006, at the New London Golf Club, N5525 "Old Hwy 45", New London, WI. Alternate rain date is Monday, June 26. Tee-off is 9:00 a.m. to 10:30 a.m. The cost is \$49 per person. Registration is due by June 9.

Checks should be made payable to Jeff Simpson and mailed to:

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P.O. Box 64  
New London, WI 54961

A complete announcement including the registration form is available on the WWOA website and will be printed in the April issue of the Clarifier.

**OPERATOR TRAINING**

The DNR Lab Certification Program budgeted funds for the State Lab to provide some training this year. Rick Mealy, WDNR, and George Bowman, State Lab of Hygiene, will be the presenters of an Advanced BOD Training session. The session will be offered once in each WWOA Region this spring, March thru May. The WWOA will help to find locations and other local arrangements.

A mailing will go out in February.



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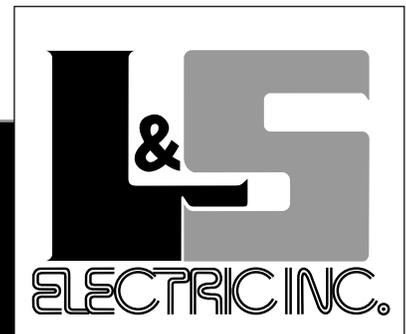
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## WWOA OPERATORS COMPETITION REPORT

October 3, 2005

Regency Suite Hotel, Green Bay WI

Submitted By: John Bond and James Thalke

The 2005 Operators Competition will be offering five Events this year as it did last year. The **Collection System Event** will be setting up (programming) a sampler with a Palmer Bowlus Flume in a 8" PVC Pipe in a flow loop. The **Safety Event** involves the rescue of an unconscious victim in a manhole. The **Mechanical Event** involves the maintenance and operation of a 4" diesel pump. The **Laboratory Event** will be the set up of a BOD test along with questions on ammonia testing. The last event will be **Process Control** which is always a surprise. All competition material and guidelines have been sent out last month to the competing teams. Unfortunately we only have 3 teams this year down from 6 last year and 7 from the previous year.

The three team names are: **Fecal Fanatics**  
**W.C. Sewer Dogs**  
**Insufficiently Wasted**

The judges are: LaMont Albers  
Tom Kimberly  
Tom Steinbach  
Frank Bonney  
Pete Wachs  
Mark Duerr  
Gordy Koch  
Dan Tomaro  
Monty Baker  
Mike Hess

A special thank you to the Equipment Suppliers and Companies that supported the **WWOA 2005 Operators Competition:**

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- 1st Insufficiently Wasted** (Lake Michigan Region)  
Jeff Smudde  
Dan VandenAvord  
Jason Ellis  
Jeff Mayou
- 2nd W.C. Sewer Dogs** (West Central Region)  
Greg Imgrund  
Sam Warp Jr.  
Dan Burns  
Merle Noren
- 3rd Fecal Fanatics** (South East Region)  
Bruce Rabe  
Tom Dixon  
Gary Martinson  
Mike Christel



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OPERATOR COMPETITION

1st Place - Lake Michigan



Insufficiently Wasted  
(L to R) Ron Austreng, Dan VandenAvond,  
Jeff Mayou, Jason Ellis, Jeff Smudde

2nd Place - West Central



W.C. Sewer Dogs  
(L to R) Greg Imgrund, Sam Warp Jr.,  
Dan Burns, Merle Noren

3rd Place - South Eastern



Fecal Fanatics  
(L to R) Tom Dixon, Bruce Rabe,  
Mike Christel, Gary Martinson

Operator Competition Judges



Back (L to R) Lamont Albers, Frank Bonney, Monty  
Baker, Tom Steinbach, Mark Duerr  
Front (L to R) Gordy Koch, Dan Tomaro, Pete Wachs

## SERVICE AWARD



### What I Meant Was...

By Jeff Haack

When I was presented with the Service Award at the WWOA Conference last October, I was speechless – literally. I know that I mumbled “Thank you.” But I also know that I said that I didn’t feel like I deserved such an award. I think I should explain.

Most of the time that I devote to this organization is “work” time, when I’m on the payroll. My job working for the State of Wisconsin essentially boils down to protecting the water resources of this state. I feel that my time attending the regional operators’ meetings and working on The Clarifier is time well-spent accomplishing that job. By undertaking these kinds of activities I have a better understanding of the sometimes complex problems on which we, the state regulatory agency and the regulated community, must work together to solve. Interacting personally improves my ability to communicate by telephone, e-mail or more formally in writing. It also helps motivate me to do a good job. Fortunately, my direct supervisor and others at higher levels in the DNR also recognize this, and have allowed me to budget some time for this. So when I said I didn’t think I deserved the award, it’s because I feel like I’m just doing my job.

On top of that, I enjoy this. Sometimes it’s just a welcome change of pace. But mostly, it seems that people that work in the field of wastewater treatment

are just simply good people. It takes a certain amount of humility, and a sense of humor, to work in this business. Through WWOA I’ve had the good fortune to meet and work together with some outstanding people.

So doing my job, and having a little fun – I don’t deserve an award for that! And that’s what I meant.

### 2006 Clarifier Deadlines

<u>Issue</u>	<u>Submittal Due Date</u>
April 2006	March 10
June 2006	May 12
September 2006	August 4
December 2006	November 10

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**WISCONSIN WASTEWATER OPERATORS' ASSOCIATION, INC**  
**Board of Directors Meeting**  
**Monday, October 3, 2005 and Tuesday,**  
**October 4, 2005**  
**Regency Suites Hotel, Green Bay, WI**

President Tim Nennig called the meeting to order at 1:00 PM Monday, October 3, 2005. Roll call was taken by WWOA Executive Secretary Richard McKee. All Board members were present except John Bond who was excused absent on Monday afternoon, however attended on Tuesday morning. Pete Conine arrived later Monday afternoon.

Also present on Monday afternoon was Dan Busch, CLARIFIER Editor. Exhibit Committee Chairperson Carol Strackbein sat in on the Board meeting Tuesday morning.

The minutes of the August 23, 2005 meeting were reviewed. President Nennig asked for any Board member comments regarding the minutes as presented. Herwig made a motion to approve the minutes as presented. Bartel seconded the motion. Motion carried.

McKee presented the Financial Statement for Board review and approval. McKee reported that as of August 31, 2005, the WWOA had \$162,487.26 in revenues and \$153,225.22 in expenditures with excess revenues over expenditures totaling \$9,262.04. McKee reminded the Board that this was an audited Financial Statement. Herwig made a motion to approve the audited Financial Statement as presented. Marshall seconded the motion. Motion carried.

McKee presented the vouchers for Board review and approval. After a brief discussion and some voucher clarifications, Herwig made a motion to approve the vouchers as presented. Thalke seconded the motion. Motion carried.

### COMMITTEE REPORTS

**NOMINATIONS** - Herwig reported the WWOA will have four positions to be filled this year, three 2-year Directorships and one 1-year Directorship providing Thalke is elected to the Vice President position. Herwig received four nominations for the Director positions: Dan

Tomaro, Randall Thater, John Bond and Bruce Bartel. The candidates for office are President-Elect Kay Marshall and Vice-President Jim Thalke.

Herwig commented it was his opinion that prior to the election of officers, either President Nennig or whoever he may want to delegate, should make mention the importance of the continuity of service that the individuals running for the Board need to consider. A discussion ensued. The Board concurred and President Nennig stated he would make mention of the continuity of service and its significance in overall Board activities prior to the Board elections.

**PROMOTIONS** - Carlson reported to the Board that the Promotions Committee has \$5,378.21 worth of inventory on hand. Carlson suggested possibly reducing the price on some of the older inventory. A

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discussion ensued. Kruzick made a motion to reduce prices across the board by 50% on the older inventory and directed Carlson and Bond to decide what items should be reduced and make those items available throughout the run of this year's Conference. Marshall seconded the motion. Motion carried.

**MEMBERSHIP** - McKee reported the WWOA currently has a total of 2051 members, which includes a total of 234 Lifetime members and 54 Retirees.

**SCHOLARSHIP** - Conine informed the Board this year's \$1000.00 4-year scholarship recipient is Sara Driver; daughter of WWOA member James Driver. Conine stated he had received no applications for tuition aid.

**EXECUTIVE COMMITTEE** - President Nennig presented the Board with a brief summary of the major items of concern that were addressed by the Executive Committee members and the full Board of Directors.

**CLARIFIER** - Dan Busch provided the Board with **CLARIFIER** quotes for printing the **CLARIFIER** on

a glossier and heavier paper stock. President Nennig asked for some direction from the Board. A brief discussion ensued. Busch will contact Sun Printing with some options and e-mail the Board.

Busch commented he has received numerous requests for color ads throughout the publication.

Busch also provided the Board with costs to organize, format and prepare the **CLARIFIER** for printing for future consideration.

Busch commented it has been some time since advertising rates have been looked at and adjusted. He suggested that the Board may wish to consider evaluating the need for a price adjustment and announce any changes by June of 2006 and make them effective with the start of the new fiscal year in 2006.

**CAREER DEVELOPMENT** - President Nennig commented this past year the Career Development Committee was headed-up by President-Elect Tom Kruzick and himself.

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—Les Grant, Wastewater Treatment Facility Operator, for the Wisconsin Dells-Lake Delton Sewerage Commission

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President Nennig stated there should be more than sufficient funds to cover the costs of attending some career fairs and purchase additional wastewater career related handouts and materials for restocking and updating the WWOA display board.

President Nennig informed the Board that while attending the Minnesota Wastewater Operators Association Annual Conference this past July, he had learned through discussions with individuals that student interest in wastewater career training opportunities in Minnesota remained very high. The Minnesota wastewater programs at Vermillion Community College and at St. Cloud Technical College actually had waiting lists of interested program students this year.

President Nennig questioned why this is happening and what is drawing students to the wastewater industry in Minnesota and why the decline in student interest in the wastewater program offerings in Wisconsin?

President Nennig stated he has assembled some 40-50 individual wastewater career information packets for distribution at the Conference. He stated that the purpose for these packets was to provide an opportunity for attendees to take a packet of materials back home with them and share the materials with their local high school guidance office.

**AWARDS** - Kruzick provided the Board with a list of the annual WWOA award recipients.

President Nennig thanked Herwig on behalf of the WWOA for graciously donating a stand to hold the Past-President plaque for the display board.

**OPERATOR TRAINING** - Carlson informed the Board throughout the past year he has assisted Jack Saltes of the WDNR in coordination of eCMAR training that was conducted at treatment plants having internet access.

Carlson commented the Operator Training Committee provided one training seminar this year, "Sampling and Flow Monitoring for Wastewater Treatment Operators". The seminar was well received and may be provided again in 2006.

**DIRECTORY** - McKee commented that the new 2005/2006 directories will be available at the Conference registration area.

**PUBLICITY** - President Nennig explained to the Board the PR packets that are handed out to the award winners.

**REGIONAL COORDINATOR** - Conine distributed copies of the agenda for the Regional Officer's Meeting and copies of the Regional Newsletter.

**GOVERNMENT AFFAIRS** - Thalke informed the Board this is the 20th anniversary of Government Affairs.

**BIOSOLIDS SYMPOSIUM** - President Nennig provided the Board with a description of the WWOA Biosolids Symposium Committee for review and comment. President Nennig would like this in the policy book by the December Board meeting.

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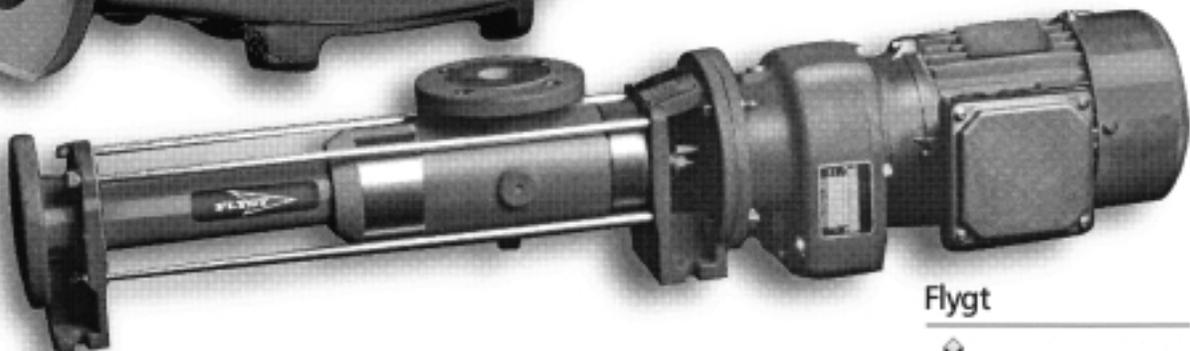
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Kruzick commented he attended the Biosolids Symposium meeting held at the Nine Springs facility in Madison. Kruzick provided the Board with a copy of the itinerary for the symposium. The Biosolids Symposium is scheduled for March 21, 2006 in Stevens Point. The operator forum will be a new concept where the committee will attempt to obtain case histories from 5 or 6 different facilities where particular problems or success has been developed.

**LIAISON** - Thalke stated the first meeting was held May 24, 2005 at Rochester, MN. The second meeting was held August 10, 2005 at Nine Springs WWTF in Madison, WI. Thalke was unable to attend either of those meetings; however, he plans to attend the Annual Business Meeting November 17th at the Country Inn Hotel in Waukesha, WI.

**WEBSITE** - Bartel reported the move to Hostexcellence.com as the web site's new web hosting provider has gone quite well; Hostexcellence.com replaces the former provider Webservpro.

The employment page on the web site is the most frequently visited section of the web site. The section on the annual conference comes in second. The online member email directory is the third most visited page. The mailing list subscriber bases remains at 47 users.

**TECHNICAL PROGRAM** - Marshall stated the moderator letters were sent out last week. The AV and other speaker needs have been confirmed with the conference center. Troy Larson is bringing the signage. Sign-up sheets are ready for the bus tours and Pre-Con sessions.

**EXHIBIT COMMITTEE** - President Nennig reported for Carol Strackbein, Chairperson of the Exhibit Committee. The Committee sold 110 booth spaces for the 2005 Conference. Strackbein provided the Board with a list of exhibitors and the booth space layout.

Strackbein suggested getting e-mail addresses from as many exhibitors as possible for next year. It will help communication.

**OPERATORS COMPETITION** - Thalke reported the 2005 Operators competition will be offering five events again this year. All competition materials and

guidelines have been sent out to the participating teams. Unfortunately, only 3 teams will be competing this year. Thalke commented that at last year's Conference there were 6 teams competing and 7 the previous year.

**LOCAL ARRANGEMENTS** - Bartel stated the training center at Green Bay MSD will be set up and ready for the Pre-Conference's Electrical Workshop.

The Green Bay MSD tours will be divided into two sections. One tour will be the general plant tour and the other tour will be demonstrations of process monitoring, controls and maintenance equipment. Each tour will last approximately 90 minutes.

The De Pere plant tours will be the general plant tour and will include showcasing the new blower system upgrade that was recently installed at the facility.

**SPOUSE PROGRAM** - President Nennig reported for Jean Van Sistine, Chairperson of the Spouse Program. On Wednesday morning, Officer Dennis

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Gladwell from the De Pere Police Department will give a talk on "Identity Theft."

On Wednesday afternoon the program participants will board a bus for a trip to the Von Stiehl Winery Tour in Algoma. On Thursday morning, Kathleen Zeitler will give a talk on "Attention Deficit Disorder in Adults." On Thursday afternoon of the Conference, the program participants will board a bus to go to Frank's Dinner Theatre.

**GOLF OUTING** - Bartel commented the Conference golf outing is all set for The Woods golf course. There are 120 golfers registered for the outing. Bartel reported that five holes will be sponsored by various vendors.

**PERMANENT ARRANGEMENTS** - President Nennig reported for John Leonhard, Chairperson of Permanent Arrangements. The Committee met with the Kalahari staff on April 8, 2005 to go over the contracts for the even numbered years until 2012. The Kalahari staff made the changes that the WWOA required; those contract changes are now ready for Board approval.

Committee members also met with the Regency Suites/KI Center staffs in Green Bay to finalize prices and review the contract for this year's Conference.

During the rest of the year the Committee will meet with the Radisson in La Crosse to review the 2007 contract with them. The Committee will also need to start talking to Green Bay Regency Suites/KI Center about returning there in 2009.

**PERMANENT PROGRAM** - No report.

**RESOLUTIONS AND BYLAWS** - No report.

**HISTORICAL** - No report.

**MANUFACTURERS AND CONSULTANTS** - No report.

Marshall made a motion to approve the Committee Reports as presented. Carlson seconded the motion. Motion carried.

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**OLD BUSINESS**

**WWOA MAIL LIST POLICY** - Kruzick presented to the Board a draft copy of the Mail List Policy for the Board to review. The basis of this policy is to clarify the conditions upon which the WWOA would make available the WWOA membership electronic mailing list. A discussion ensued. It is the consensus of the Board that a change in wording needs to be inserted in the Mail List Policy. President Nennig suggested including the wording "you are encouraged to request the Mail list annually in order to obtain any updates." In addition, the master agreement needs to be removed from the policy. Kruzick stated he will make the needed changes and email the Board the revised policy to review. He instructed McKee to include this on the agenda for the December Board meeting.

**COMMITTEE BUDGET OVERAGES** - President Nennig asked McKee to supply a spreadsheet detailing all WWOA standing committees that exceeded their 2004/05 budget expenditure figures. President Nennig feels it is the responsibility of the various committee chairs to provide an annual budgetary number and report back to the Board if they foresee their particular committee going over budget.

President Nennig read a letter drafted by John Leonhard, Chairperson of Permanent Arrangements regarding the budget.

**SCHOLARSHIP AWARD PROGRAM PREAMBLE** - Conine stated he is waiting for feedback from the Board before finalizing the preamble.

**NEW BUSINESS**

**REVIEW AND APPROVAL OF THE ANNUAL BUSINESS MEETING AGENDA** - McKee provided the Board with copies of the agenda for the Annual Business Meeting for their review. After some corrections were made to the agenda, Herwig made a motion to approve the Annual Business Meeting Agenda as presented with the corrections. Marshall seconded the motion. Motion carried.

**HONORARY MEMBERSHIP** - President Nennig and Carol Strackbein provided the Board with some justifications and reasoning for Pete Albers to receive the Honorary Membership Award. President Nennig asked for a unanimous vote of approval from the Board for the nomination of Pete Albers to receive the Honorary Membership Award. Thalke made a motion to approve the nomination of Pete Albers to receive the Honorary Membership Award and to send the nomination of Pete Albers to the membership for a vote at the Annual Business Meeting. Conine seconded the motion. Motion carried.

**REVIEW AND APPROVAL OF THE 2004-2005 AUDIT** - McKee provided the Board with copies of the 2004-2005 audit. A discussion ensued. Marshall made a motion to approve the 2004-2005 audit as presented. Carlson seconded the motion. Motion carried.

Herwig commented he has enjoyed his time on the Board. President Nennig stated on behalf of the Board; and the WWOA general membership, the entire organization sincerely appreciated Herwig's years of service and the Board hopes he will stay involved in WWOA activities.

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President Nennig commented it had been a pleasure and privilege working with all of the current Board members and Committee Chairs this past year. President Nennig thanked the Board for all their time and effort this past year.

There being no further business of the Board, Herwig made a motion to adjourn the meeting. Kruzick seconded the motion. Motion carried.

The Board meeting adjourned at 9:32 AM on Tuesday, October 4, 2005.

Respectfully submitted,

*Richard D. McKee*

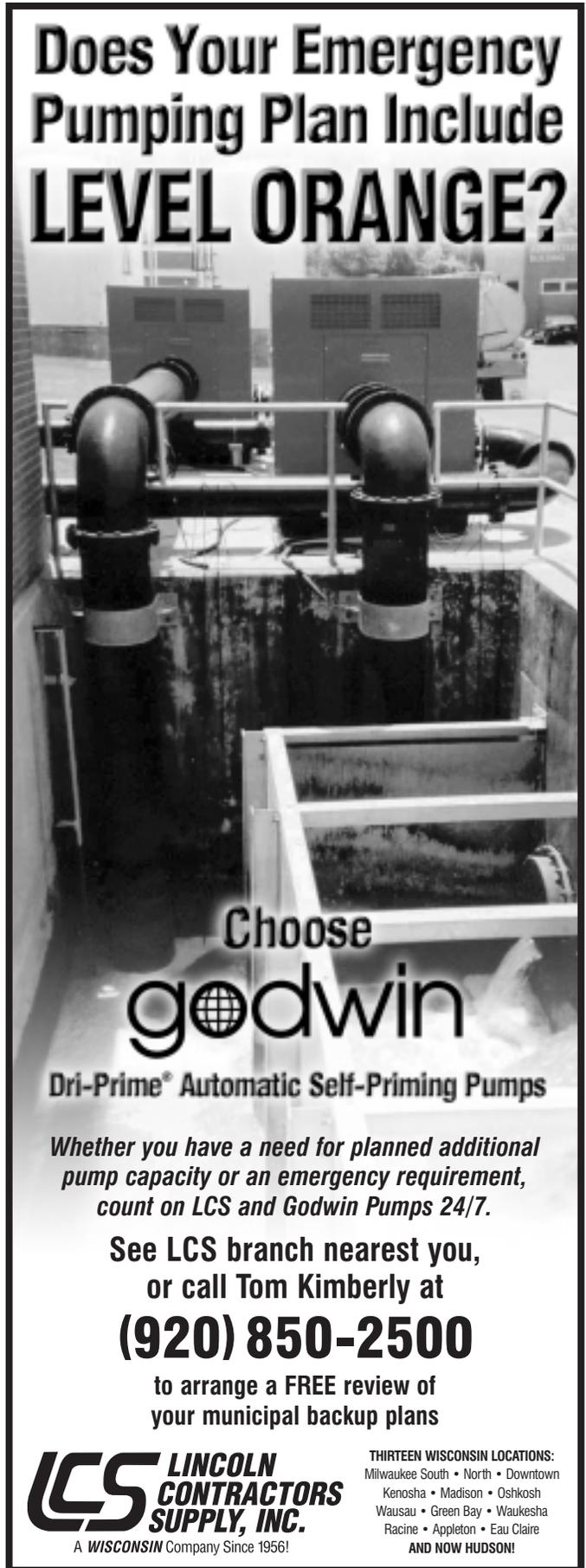
Richard D. McKee, WWOA Executive Secretary

**WASTEWATER UTILITY  
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The Village of Warrens, Wisconsin is seeking a qualified individual to oversee the operation and maintenance of the municipal wastewater system, including a 0.24 MGD oxidation ditch treatment facility and collection system. The wastewater treatment facility is currently under construction with startup scheduled for May 2006. This is a full-time position that would include responsibilities as the Village's back-up water system operator. Salary and benefits to be determined DOQ.

The successful candidate will need to possess a minimum of a WDNR Grade 2 wastewater certification with additional certification in the following subclasses: Activated Sludge, Phosphorus, and Disinfection. The operator shall be required to be on-call 24 hours per day to respond to treatment facility or lift station alarm situations. Candidate shall possess good written and oral communication skills and basic PC-based computer system operation skills for data record keeping and for preparing and electronically submitting monthly monitoring reports.

Send cover letter, resume, salary history and references to: Donna Stebbins, Clerk/Treasurer, Village of Warrens, P.O. Box 97, Warrens, WI 54666. Any questions regarding the position should be directed to Carl Scharfe of MSA Professional Services at 608-355-8930.



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## BENEFITS OF AUTOMATING FACILITY MANAGEMENT

By Raymond Grosch

In a recent survey of Utility Managers using Automated Facility Management Systems we asked what benefits they had realized after several year of use. The top benefit mentioned in the survey was **Operational Cost Savings**. Ease of use and technical support came in second and third.

1st Place Benefit– Reduced labor and operating cost

2nd Place Benefit – Easy record keeping

3rd Place – Single source software support

The following are a few of the survey participant's edited comments:

"I've had a very good experience with them. Service has been prompt and reliable. **This system cut the paper work the staff does here by 75%** and everybody has access to the data without any duplication entries and less errors. [The system integrator] was very helpful in creating DNR reports and in setting up electronic data submissions. A user friendly system too..."

*John Leonard, Operations Manager  
Fond du Lac, WI*

"The system has been real good for us and has **saved us a lot of money**. [Our integrator] knows what they're doing, they're creative in meeting our needs, and they really take care of us. We'd certainly recommend the system to anyone."

*Greg Paul, Superintendent  
La Crosse, WI*

"This system has a lot of benefits... We can utilize our employees' time much better and **save substantial money on maintenance**.... I get excited every time I talk about the system. The [integration company] was really good to work with, too, they were good and patient teachers. We certainly will use them again for some upgrading."

*Kurt Damrow, Utilities Supervisor  
Park Falls, WI*

"It's a **big money saver** in personnel with more capability. You can take a tour of our system any time from a laptop and control it remotely."

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

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"I'm very happy with the system. I'm thrilled with the support provided, most of it is over the phone. The software has so much flexibility I can do just about anything I want with it. I'd recommend this integrated system to anyone."

*Rich Boden, Superintendent  
Plover, Wisconsin*

"The system works fine for us and they are good with service. It helped us eliminate a third shift."

*Sandy Tallon, Wastewater Facility  
Gloverville-Johnstown, New York*

"Our system has performed very good. **It has saved us lots of time**; we used to have to enter everything on a spread sheet and now it's all done automatically."

*Barb Woods, Supervisor  
Mason City, Iowa*

"We've had a system for seven years now and . . . **it has saved us a lot of money**. So many things we can do from the shop now, like catch a problem before it really becomes a problem. We aren't computer people and they

listen to our needs and take the time to walk us through everything."

*Mike Branigan, River Falls Municipal Utility  
River Falls, Wisconsin*

"[The support team] is very easy to work with. Their training and support are very good, too. **The system has saved us money**. We used to have three or four people per shift before but now it's down to one man. 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 Plant Operations  
Broomfield, Colorado*

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## 23rd Annual Wastewater Operators Conference Set for June 4-7, 2006

Wastewater treatment professionals from the United States and Canada will meet June 4 through June 7, 2006, at the Swissotel in Chicago for the 23rd Annual National Operators Training Conference. The conference focuses on improving wastewater treatment plant operation overall, and offers a broad menu of sessions detailing more intensive looks at special areas of operation.

The program kicks off on Sunday, June 4, with sessions on wastewater sector security training, and workshops on wastewater microbiology and process control, and on using Clarifier software for process control.

Keynote speaker on Monday, June 5, will be Glen T. Daigger, Ph.D., discussing "Future Challenges to the Wastewater Profession and the Role of Operations in Addressing Them." A senior vice president and chief technology officer for CH2M HILL where he has been employed for 23 years, Dr. Daigger is a former professor and chair of the Environmental Systems Engineering Department at Clemson University, and is a widely published author.

Suzanne Malec, deputy commission, will discuss the Greening of the City of Chicago following Dr. Daigger's keynote address.

A broad program of breakout technical sessions are planned for Monday afternoon and all of Tuesday. During those meetings, specialists will focus on lagoon management and the use of barley straw to improve lagoon performance; nutrient management and handling and processing BNR sludges.

Wednesday's agenda includes more breakout sections addressing operational control, activated sludge issues, and a variety of technology issues.

General sessions resume Tuesday afternoon and continue through Wednesday morning, climaxing with a closing ceremony about noon.

The lighter side of the conference will include poster sessions and a tee shirt auction during the conference, and an optional dinner cruise aboard the recently refurbished Lake Michigan cruise ship Odyssey. After sessions end,

there will be a choice of two Chicago post conference tours—a Chicago Water Tower walking tour, and a "Process Control In-Control" treatment plant tour.

Another optional tour scheduled for June 8 will take delegates to Aqua Aerobics in Rockford, Ill., for a manufacturer's plant tour.

Information and conference registration forms are available at [www.NOTC2006.info](http://www.NOTC2006.info).

### WWOA Conference Schedule

2006 Conference - October 3 - 6  
Kalahari Resort  
Wisconsin Dells, WI

2007 Conference - October 22 - 25  
La Crosse Civic Center &  
Radisson Hotel  
La Crosse, WI

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## LAKE MICHIGAN DISTRICT MEETING

November 10, 2005  
Manitowoc, Wisconsin

By: Dawn Jandrey – LMD Secretary/Treasurer



*Group Photo*

The November 10, 2005 Lake Michigan District meeting was held at the Inn on Maritime Bay in Manitowoc. A total of 72 operators and wastewater professionals attended. Chairman Kevin Skogman called the meeting to order at 8:45 a.m. He began by thanking EarthTech for sponsoring the complimentary breakfast and beverages. Kevin also thanked the speakers for being a part of the program and also thanked those who provided door prizes: Dale Marsh of Ayres Associates, Lamont Albers of Process Equipment, and Rick Bartelt of L.W. Allen. The next meeting will be held on February 16, 2006 in Hilbert. Kevin noted that we are looking for hosts for meetings in 2007.

The next order of business was the review of the Treasurer's Report and Minutes of the August 18th meeting. Jeff Haack noted a minor correction to the minutes describing the election of Jeff Mayou as vice-chairman for next year. There was a motion and second to approve both documents, with the minutes corrected as noted.

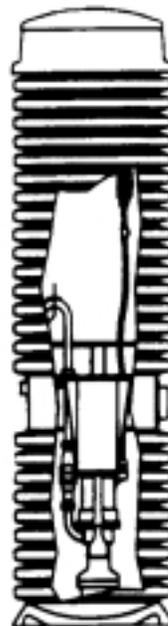
Kevin then introduced Board of Director Bruce Bartel, though Bruce reserved his comments for later. There was no old business or new business, so Kevin proceeded to the following announcements. First he announced that Frank Dart from Maribel had received the District Operator of the Year Award for LMD. Next he announced that one of the LMD teams won the Operator's Competition at the annual conference in October. He mentioned that members of the winning team may be selected for a team sponsored by Central States for next year's WEFTEC in Dallas. Last year Jeff Smudde and

Mike Gelhar represented Wisconsin in the Operator's Competition at WEFTEC. Operators are encouraged to sign on for this educational and enjoyable experience. Anybody interested should contact either Jeff Mayou who will be "coaching" next year's team, or Ron Austreng. At this point Bruce Bartel interjected, noting that fewer teams competed this year. If less than three teams compete next year, the Operators Competition may be suspended. This would be a real loss for the conference. As a final note, Bruce advised the group that the WWOA Board of Directors is interested in seeing more operators making presentations for the technical sessions at future conferences, instead of relying on consultants and vendors.

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*Jeff Haack, Wisconsin DNR*

Next Jeff Haack of the Wisconsin DNR provided DNR announcements. This was limited to an update on the development of thermal water quality standards. Earlier proposals called for an exemption for municipal wastewater treatment facilities, but problems with that approach have developed. Instead, some sort of variance process for municipalities is now being considered to provide a streamlined process for dealing with this. The group was advised to watch for details. The Department is expecting to take draft rules to public hearings early in 2006.

The first technical session was provided by Rusty Schroedel of EarthTech; Designing with a Shoehorn - Racine's Plant Expansion. Rusty provided insight on dealing with space constraints at Racine's WWTP. Rusty reviewed the stages of treatment, project schedule, preliminary treatment processes, and project cost. He also spoke about how they dealt with a cramped site in regards to solids handling, sludge handling facilities, circular final settling tanks, laboratory, and maintenance garage.

After a short break, Dale Marsh of Ayres Associates gave a presentation on Surfactants and WWTP's & Sanitary Sewer Designs. Dale defined surfactant as a material that greatly reduces the surface tension of water. The culprit is normally a soap or cleaning agent. Dale then described the detrimental effects that surfactants play in the wastewater treatment plant process. Three signs that you have a surfactant problem are sliding BOD, oxygen requirements, and ammonia in the effluent. Dale also talked briefly about sanitary sewer manhole design and construction. In particular, he emphasized the importance of constructing the "bench" up to the full depth of the sewer to get the full capacity. Finally, Dale reminded the

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



group that deer hunting season starts in Michigan in “five more days”. Good Luck Dale!!



*Arlen Bauman (L), L & S Electric  
Ron Reschel (R), Eaton Electrical*

Arlen Baumann of L & S Electric, along with Ron Reschel of Eaton Electrical gave a presentation on the Benefits of Using Soft Starters in Wastewater Treatment. Soft Starters can be an effective alternative to Variable Frequency Drives in certain pumping systems. Devices on the market today allow operators to set and adjust the ramp-up to suit the installation.

After lunch, Don Voigt of Energenics gave the final technical presentation on European Technology Solutions for U.S. Wastewater Needs. He described his experience from a visit to IFAT 2005, the worldwide wastewater conference held every third year in Germany. He described some of the cultural differences between Europeans and Americans, and how that impacts water and wastewater treatment. He went on to observe that the internet is also changing the way technology changes on a global scale. For more on this subject, Don invited everyone to check out their company website: [www.energenics.com](http://www.energenics.com).

Brian Helminger of the Manitowoc WWTP gave a background of the plant, talked about the many upgrades and modifications, and described the treatment processes. Brian thanked everyone for attending and welcomed the audience to tour the plant facilities.

Kevin concluded the meeting by thanking Brian for hosting the meeting and helping with the local arrangements. The meeting adjourned and DNR credit slips were distributed.

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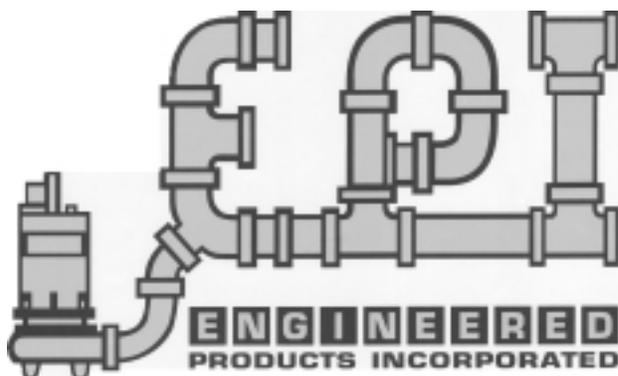
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7:15 am	Registration Opens	12:35 pm	Morning Panel Question & Answer - <i>Art Peterson, Moderator</i>
8:25 am	Welcome - <i>Greg Kester</i>	1:15 pm	Operators Forum: Select Biosolids Issues - <i>Tom Kruzick, Steve Brand, Bob Caray, Greg Paul, Connie Wilson, Benjamin Benninghoff</i>
8:30 am	EPA Update - <i>Rick Stevens</i>		
9:15 am	Wis. DNR Update - <i>Greg Kester</i>		
9:45 am	Emerging Pollutants - <i>Joel Pedersen</i>	2:00 pm	<i>Break</i>
10:15 am	<i>Break</i>	2:15 pm	Septage Management - <i>Bart Sexton</i>
10:35 am	Phosphorus Management - <i>Dick Wolkowski &amp; Dave Taylor</i>	2:45 pm	Biosolids Management - Future Directions - <i>Rufus Chaney</i>
11:15 am	NBP/EMS Presentation - <i>Pete Machno</i>	3:30 pm	Closing Remarks - <i>Greg Kester</i>
11:45 am	<i>Lunch</i>	3:35 pm	Adjourn



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- D. I am not concerned, I plan to retire soon

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**Greg Paul, WWTF Superintendent  
La Crosse, WI**

*"This system cut the work the staff does here by 75% and everybody has access to the data without any duplication entries and less errors. A user friendly system, too, with very little instruction needed."*

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*"We can utilize our employees' time much better and save substantial money on maintenance with the alarms and doing things when we should instead of waiting for something to go bad."*

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*"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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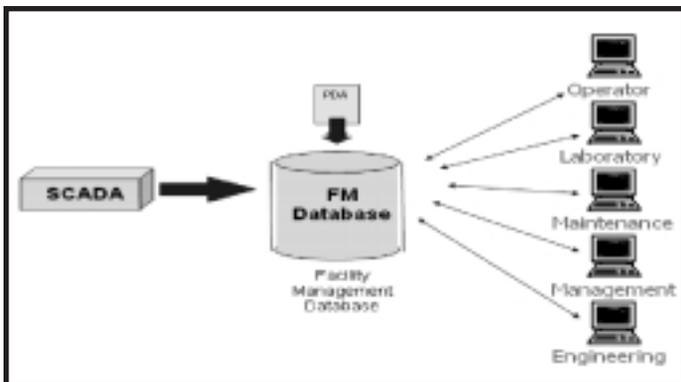
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## What Database Should I use as a Plant Historian?

By Ray Grosch

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Today Microsoft databases are the most commonly used in facility management applications. Microsoft offers two solutions.

Microsoft Access™ is a smaller, simple database that works well as long as the database does not grow too large. Microsoft suggests a limited database file size of 2.0 Gigabytes for Access. However, I recommend that any Access database be limited to less than 1.0 Gigabytes in a facility management database. FM databases that contain only manually entered data for lab and maintenance will work well with the Access database structure.

Microsoft SQL Server is a more robust and stable database platform. The database can easily handle files to 40 Gigabytes and beyond. SQL is an excellent choice for FM systems that include links to real-time data. Most FM systems collecting real-time data will collect hourly (or more frequent) data. Hourly data is the minimum requirement for future use in engineering analysis. A disadvantage associated with using SQL Server has been that it required a server operating system, which many small FM systems do not include because of the higher cost associated with using a dedicated server computer.

I have traditionally recommended the use of Microsoft SQL Server on any system gathering data on 250 or more data points on an hourly schedule. Such a system will build a historical data file at about 175 Megabytes per year. Some small utilities with both water and wastewater systems monitored by a common system fall into this size category. With the database limitation using Microsoft Access, the database would be limited to 4 to 5 years. I recommend that a minimum of 10 years be easily accessible on a system for engineering analysis.

A new version of Microsoft SQL has recently been released: *Microsoft SQL Server 2005 Express*. SQL Express is now recommended for all systems that collect data from SCADA applications. The cost of using SQL Server database has been drastically reduced because the Express application no longer needs to be run on a dedicated server (less computer hardware). All of the benefits of a robust SQL Server application are available except that the new version does have a specific limit for the database size of 4.0 Gigabytes.

SQL Server is technically a superior and more stable platform to manage facility data. I am recommending to all of our clients that they consider moving their



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database to the new SQL Server 2005 platform in the future when upgrading computer workstations and software.

Contact IntelliSys for additional information the Microsoft SQL Server 2005. (800-347-9977).

**IN MEMORY OF  
STEPHEN M. MILLER  
1949 – 2006**

Stephen M. Miller, 56, of Twin Lakes, WI, passed away Friday evening, January 6, 2006, at the Memorial Hospital of Burlington.

Stephen Michael Miller was born on September 7, 1949 in Kenosha, WI, the son of Egone and Mary C. "Connie" Hall Miller. On November 11, 1995, in Hawaii, he was united in marriage to Carol L. Kramer. He lived in Kenosha and Delavan, WI, before moving to Twin Lakes 26 years ago.

He received a Bachelors degree in Biology from UW-Parkside. He served as a Specialist 4 in the U.S. Army serving in Vietnam. He worked as Superintendent of Operations for the Walworth County Metropolitan Sewerage District in Delavan, WI, for 23 years retiring in 2004. He was a member of the Twin Lakes American Legion Post #544, the Wisconsin Wastewater Conference and the National Rifle Association. He enjoyed fishing, woodworking, traveling, and gardening.

Stephen is survived by: his wife, Carol; one son, Erick (Monica) of Marina Del Ray, CA; two step children, Tracy (John) Forst of Sebring, FL, and Gary (Karen) Smith of Colorado; one granddaughter, Samantha Joell Smith of Genoa City, WI; his parents, Egone and Mary C. "Connie" Miller of Kenosha, WI; four sisters, Cindy (George) Safransky of Sturtevant, WI, Sue (Richard) Hart of Custer, SD, Karen Miller of Lakewood, CO, and Laurie Chapman of Waunakee, WI.

He was preceded in death by one brother, Craig Miller.

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**Wisconsin Wastewater Association 2006 Annual Convention Housing Form  
October 3-6, 2006**

**INSTRUCTIONS**

Reservations can be made by  
PHONE 608-254-5466  
FAX: 608-254-8609  
Or  
MAIL TO:  
Kalahari Resort  
Attn: Barb  
PO Box 590  
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**DEADLINE : September 4, 2006**

Reservations must be made by this date to guarantee convention rates.

**CONFIRMATIONS**

You will receive your confirmation from the hotel within 7 days of receipt of your reservation.

**Tax Rates and Special Requests**

All rates are subject to 11% tax (subject to change).

Special requests cannot be guaranteed, however the hotels will do their best to accommodate all requests.

**CANCELLATION POLICIES**

- Cancellations made within 72 hours of the arrival date will not be refunded the first night deposit amount.
- Hotel will charge **\$25.00 cancellation** For all reservations canceled before 72 Hours of the date of arrival.
- All cancellations and changes must be made directly with the hotel.

**GUEST INFORMATION**

**Arrival Date:** \_\_\_\_\_ **Departure Date:** \_\_\_\_\_

First Name: \_\_\_\_\_ MI \_\_\_\_\_ Last Name: \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City/State/Zip Code \_\_\_\_\_

Daytime Phone: \_\_\_\_\_ Evening Phone: \_\_\_\_\_

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

**HOTEL SELECTION - One form per room.**

**Please fill out completely by ranking your preferences, 1 being your first choice.**

The Kalahari has a limited amount of rooms available at conference rate and reservation requests will be honored on a 1<sup>st</sup> come 1<sup>st</sup> serve basis.

**Kalahari (Headquarters)**

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(Two Queen sized beds, full bath and deck or patio, includes up to 4 Water park passes.)

**Kalahari (Headquarters)**

\_\_\_\_\_ \$109 per night per  
(King bedroom, living room with fireplace and full sized pullout couch, full kitchen and deck or patio includes up to 2 water park passes.)

If your preferred hotel is unavailable, a reservation will be made at the next available hotel based on your ranking above.

**List all room occupants (Indicate if child):**

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

Check here if you require special services       Non- Smoking Request  
Special Requests \_\_\_\_\_

**DEPOSIT INFORMATION**

**All reservations requests must be accompanied by a credit card guarantee for one night's deposit .**

Housing forms received without a valid guarantee will not be processed.     Visa     MasterCard     Discover     American Express

Card Number \_\_\_\_\_ Name on Credit Card \_\_\_\_\_

Cardholders Signature \_\_\_\_\_ Expiration Date \_\_\_\_\_

I hereby authorize any of the participating hotels to process a charge the cost of one night to my credit card for my room deposit. I also agree to abide by the cancellation policy as stated above and authorize the hotel to charge any cancellation fee based on these policies.



## The Clarifier

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#### **Guest Program**

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