Reedsburg Wastewater Treatment Plant

38th Annual W.W.O.A. Conference
October 26-29, 2004
Wisconsin Dells and Kalahari Resort Headquarters

HOST:
Reedsburg Wastewater Treatment Plant
President’s Message

Typically, the September addition of the Clarifier is the time when the current WWOA President says his goodbyes and thanks the membership "for the memories" as Bob Hope would have said. Not me.

I will thank the membership for allowing me to represent this wonderful organization as its' President, and affording me some very memorable experiences. I sincerely thank all of you for this honor.

But not goodbye. The term in itself sounds so, final, so absolute, almost depressing in a terminal kind of way. When I hand the gavel to Tim Nennig at the annual conference in October, I have no intention of fading away, disappearing, or not staying involved. There are always opportunities to stay involved with this organization. That has been my main goal during my Presidency. Getting members to step forward and become involved by hosting Regional meetings, educating local residents about their wastewater systems, moderating technical sessions, joining an Operator Competition Team, or running for a position on a Regional Board or the State Board. I truly hope that you do consider one of these.

I spent a couple of days in August at the Minnesota Wastewater Operator's Association (MWOA) Annual Conference, in Duluth, Minnesota. I had a great time talking with MWOA members about the similarities and differences between our two conferences. Needless to say, the concerns that we have in Wisconsin (CMOM, Biosolids, Collection system concerns, etc.) are very real in Minnesota also. Take away the boundary of the state line and it would be hard to tell which problem or concern belonged to whom. (Please, no Randy Moss or Viking jokes here!) I hadn't ventured to the City of Duluth since my last Boundary Waters experience about 15 years ago. Doesn't seem like the same downtown area I remembered. These people have staged a war against winter by linking the downtown business area with enclosed walkways and skywalks. You can walk for blocks without ever going outside. Duluth certainly reminds me of the San Francisco of the Midwest with its' steep hills and beautiful views of Lake Superior.

We are going to be a few weeks away from our own Annual Conference when you read this. As I'm writing this message, you can be assured that Tom Kruzick has a good handle on the technical program as well as the various social events. Thank you Tom for your time, effort, and determination. Thank you also, to the many people involved in making our Annual Conference a success and the envy of other wastewater organizations.

I look forward to seeing all of you at the Kalahari Resort in Wisconsin Dells. The enthusiasm, excitement, and camaraderie of the WWOA always seem to peak at the Annual Conference. Please make an effort to do what you can, when you can, to ensure the continuation of excellence for what the WWOA has come to be known for.

Again, my deepest appreciation to all of you for allowing me to serve as your President!

Enjoy the day!

Randy Herwig
WWOA President
Reedsburg WWTP

The City of Reedsburg wastewater treatment plant (WWTP) treats the municipal and industrial wastewater collected by the sewerage system. The original secondary treatment plant was based around a trickling filter and anaerobic digester designed and built in 1939. The plant was subsequently modified in 1969 with the addition of activated sludge basins after the trickling filter, and again in 1983 when an intermediate clarifier, an additional final clarifier, and a new anaerobic digester were added. Additional modifications were made in 1990 when the chlorine disinfection was changed to ultraviolet disinfection. In 1996 sludge dewatering and lime stabilization equipment was installed that replace the liquid sludge hauling previously employed at the facility, and in 2000 the dewatering unit was replaced with a dewatering centrifuge producing higher solids content. In 2002 the anaerobic digesters were converted to sludge holding tanks to provide storage for the feed to the lime stabilization system.

WWTP Reconstruction

**What:** The City of Reedsburg is rebuilding most of the wastewater treatment plant (WWTP). The plant was last rebuilt in 1983 with minor improvements to the sludge handling equipment in 1996 and 2000. Portions of the plant built in 1939 are still in use. The WWTP has a design capacity of 1.8 million gallons per day (MGD). The wastewater collection system serves the city and a few homes in adjacent areas.

**Why:** The design capacity is exceeded during heavy rainstorms when groundwater enters the collection system through leaks and cracks. This causes the wastewater flow to bypass portions of the plant and is only partially treated before reentering the Baraboo River. The "headworks" portion of the plant is regularly overloaded by normal flows and is otherwise inefficient in removing grit, rocks and solid debris before it enters the treatment system. The other bottleneck in the plant is in the final clarifiers where there is insufficient capacity to treat the wastewater before discharging it to the river.

Leaking pipes in the older areas of town that allow groundwater to infiltrate the system plague the collection system. Two lift stations on the west side of the river often fail during peak flow events and send wastewater back into people's basements.

**How:** Most every element of the WWTP is being reconstructed or replaced except the more modern sludge handling equipment. The estimated cost at the WWTP is over $7 million. The cost of replacing portions of the collection system is about $2 million.

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**Applied Technologies provides a Full Spectrum of Wastewater Engineering Services**

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<td>Collection Systems</td>
<td>Operational Assistance</td>
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[Contact Information]
The collection system mains being replaced are deeper than the current mains allowing the city to eliminate the two troublesome lift stations. Several grants are being written to decrease the local share of the cost. The new plant is designed to serve a population of more than 10,000 people with a capacity of 2.6 MGD.

The wastewater treatment and collection system is totally funded by user fees and not by property taxes. The City Council has increased rates for 2004 and 2005 to generate sufficient funds for the project.

**Who:** The engineer on the project is Town and Country Engineering of Verona. They have subcontracted with Vierbicher Associates of Reedsburg for some of the preliminary work. The city staff that will manage the project are Public Works Director - Bill Meyer, City Engineer - Steve Zibell, and WWTP Chief Operator - Greg Westerman. The project will be put out for public bids from contractors.

**When:** Preliminary design work is being done in 2004 leading to construction bids in December or January 2005. Construction will take 12-18 months as the plant and collection system must remain operational during the work.

*Editor's Note:* The text above was copied directly from the City of Reedsburg web site, an excellent example of the use of this tool to keep customers informed.

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**Wastewater Treatment Short Course in September**

A short course titled "Sequencing Batch Reactor (SBR) Wastewater Treatment" will be held on September 20-21, 2004 at Marquette University in Milwaukee, Wisconsin. The course will present SBR design considerations, operating strategies, SBR equipment information, and activated sludge theory. Practical experiences of operators and designers will be highlighted with case studies of SBR systems and a description of SBR installations around the world. Attendees will have the opportunity to ask specific questions or suggest particular topics, and hear a discussion of their topic during panel discussions. Attendees will receive 1.5 continuing education units (CEUs) or 15 professional development hours (PDHs) for professional engineering continuing education requirements. For more information, please contact Dr. Dan Zitomer, 414-288-5733 (Daniel.Zitomer@mu.edu) or see http://www.eng.mu.edu/SBR_course.
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North Central District
Spring Meeting
May 25, 2004

The North Central District held its spring meeting at the Athens Fire and Ambulance Building in Athens, WI, on May 25. The Village of Athens Utility Department hosted the meeting. There were approximately 55 people in attendance.

Jeremy Cramer, NCD Vice Chairman, along with Bill Balz, Village of Athens Utilities, welcomed attendees, and thanked William/Reid LTD, LCC, who sponsored the donuts and coffee. Jeremy introduced the first speaker, Rich Gannon, of William/Reid LTD, LCC. Rich presented wastewater industry trends, which touched on areas of infrastructure, water reuse, stricter regulations, energy savings via better process control, and combined sewer overflows.

Mike Furst of Environmental Dynamics gave a presentation on Aeration System and Process Upgrades. Mike reminded us that 65%-90% of operating costs at a wastewater treatment plant are for aeration. He covered topics to help reduce these costs, such as fine bubble vs. coarse bubble aeration, diffuser shapes, diffuser materials, and diffuser perforations. He also discussed Lagoon Process Upgrades, which included process benefits and new regulatory pressures of operating lagoon systems. Mike introduced Advanced Technology Lagoon Aeration Systems (ATLAS), which is a self-regulating activated sludge system combined with internal or external clarifiers added to a lagoon system. These upgrades have greatly improved effluent quality of many lagoon systems facing stricter regulatory pressures to meet their effluent limits.

Jim Martin, Lemna Technologies, followed the break with a presentation on Maximizing Performance of Wastewater Lagoon Systems. Jim explained the

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different types of lagoon systems and discussed the new stricter effluent requirements, particularly BOD, TSS, Phosphorus, and Ammonia limits. Jim explained through technology integration, such as adding baffles, optimizing aeration equipment, covering portions of a lagoon, and tertiary treatment, a cost effective solution can be implemented to achieve better effluent quality in lagoon systems.

The morning session concluded with Duane Schuettpelz, Wisconsin DNR, presenting an update on SSO's and CMOM. Duane explained current proposed revisions to EPA regulations for SSO Activities.

He touched on the issuance of general permits for all collection systems and reporting requirements to the DNR regarding SSO's. Duane also talked about CMOM and tracking maintenance activities, inspections, upgrades and O&M programs for collection systems through the new CMAR annual reports.

A final rule regarding SSO's and CMOM is expected by winter/spring 2005.

Ken Bloom, NCD Chairman, led the business meeting. The minutes of the business meeting follow this write up. The business meeting was adjourned, and the group broke for lunch.

Following lunch, Dan Eastman, of Microgy, gave a presentation on Anaerobic Co-Digestion of Cow Manure and Food Waste with Biogas Production used to Generate Power. Dan explained to the group, that through the technology of anaerobic digestion, cow manure and food waste are converted to electricity and profits. Cow manure and food waste are anaerobically digested to produce biogas and digested manure. The biogas is used to power a generator to produce electricity and generate profits. Approximately 1000 cows can produce enough electricity to power 600 homes. The digested manure, which now has decreased pathogens and decreased odors, is dewatered. The filtrate can then be used as an on-site fertilizer and the solids can be reused as a bedding material.

The day concluded with a choice of touring the Athens Wastewater Treatment Facility or the operations at a local dairy farm.

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Many thanks to Bill Balz and all the employees of the Village of Athens Utility, for all their work that went into hosting and making this meeting successful.

**Business Meeting Minutes**

1) Ken Bloom, NCD Chairman, called the meeting to order.
2) Ken read the last treasurer’s report as of March 1, 2004 of $2663.12 in our escrow account.
3) Ken thanked Bill Balz and the Village of Athens Utilities for hosting and setting up the meeting. He also thanked the speakers for preparing and presenting the days presentations.
4) William/Reed LTD was thanked for contributing the donuts and coffee for the meeting.
5) Bloom informed the group of the need for nominations for Operator of the Year and volunteers for the Operators Competition.
6) Ken also reminded the group other awards in need of nominations such as the Bernauer, Crabtree, and Service Awards.
7) The 38th Annual WWOA Conference was discussed and attendees were reminded to register early.
8) Ken reminded the group that two new steering committee officers will be elected at the fall meeting in Rhinelander. Anyone interested in running for a steering committee officer should contact the steering committee, so they can be included on the fall ballot.
9) The NCD is still looking for communities to host upcoming regional meetings. If you are interested contact a steering committee officer. As of now the regional meeting hosts are as follows:
   - Rhinelander - Fall 2004
   - Abbotsford - Winter 2005
   - Almond - Spring 2005
   - Lakeland Sanitary District - Fall 2005
   - Stevens Point - Winter 2006
   - Antigo - Spring 2006
10) The floor was open for any other business or concerns. (Nothing was mentioned)
11) The business meeting was adjourned at approximately 12:00 p.m.
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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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August 12 brought hoards of people to the Sheboygan area, and it wasn't just for the PGA tournament. The WWOA-SE Region also came to Sheboygan's Kiwanis Park for their August meeting and 5th Annual Pig & Corn Roast.

The day started off with a full breakfast and roundtable discussions covering Storm Flow, Maintenance, Activated Sludge, and Laboratory.

Mayor James Schramm welcomed the group of 103 and highlighted amenities that have made Sheboygan one of the best places to raise a family according to Reader's Digest magazine. SE Region Chair Kris Gauger began the meeting with the Pledge of Allegiance, and then recognized the efforts of Dale Doerr and his staff in organizing this meeting.

Larry Henderson of Energenescs discussed options for remote station monitoring and the benefits of using broadband internet for SCADA communications. Ed Nevers of Donohue encouraged operator input during plant design to save money and make life easier for the operators themselves. Following the break, Al Bush of Earth Tech described the issues faced by Racine WWTP with their new UV system.

The business meeting included announcements from Chair Kris Gauger and WWOA Board Member Tim Nennig, and annual elections for the positions of Treasurer and Vice-Chair. Jeff Deitsch of Jackson was re-elected for a second term as Treasurer, and Bruce Rabe of Kenosha was elected to the position of Vice-Chair. The SE Region presented Kris Gauger with a plaque to thank her for her 6 years of service as a regional officer.

Jim Fratrick spoke on DNR issues including online DMRs and non-compliance notices. The final presentation was by Jan Scott of Unison Solutions regarding the use of microturbines for power generation.

Ron Hicks of Sheboygan gave a brief history of the plant before the attendees headed out for a tour of the...
well-maintained facility. The pig roast followed along with vendor displays and a prize raffle.

Special thanks to Dale Doerr of Sheboygan and his staff for their hard work. The SE Region also appreciates the continued generous support of the vendors and the meeting sponsors: Donohue, Earth Tech, Energenecs, William/Reid LTD LLC, and Brose & Associates.

Next Meeting: February 16, 2005 - West Bend

### WWOA Conference Schedule

- **2004** - October 26-29
  - Kalahari Resort, Wisconsin Dells

- **2005** - October 4-7
  - KI Conference Center, Green Bay

- **2006** - October 3-6
  - Kalahari Resort, Wisconsin Dells

### Employment

The Village of Black Creek (population 1200) seeks an experienced public works professional for a full-time position. Minimum of 10 years experience in municipal engineering, public works, or water and wastewater. Working knowledge of plans, review and methods, equipment and materials used in street, water and wastewater construction. Desire individual with strong administration background, analytical abilities, creativity, planning and organizational skills. Supervisory and computer skills a plus. Individual shall have a G.D. water system classification license. Grade 4 wastewater classification and CDL license. If the individual does not have the required classifications for water and wastewater, they shall obtain the license within two years of employment. Residency is required. Salary is $35,000 +/- DOQ.

Send resume to Personnel Committee, Village of Black Creek, 301 N. Maple Street, P.O. Box 277, Black Creek, WI 54106 by September 17, 2004.
In an era when wastewater treatment technological advances were being made in leaps, not steps, and infrastructure improvement and expansion was extensive, public servant George F. Bernauer was at the peak of his career. His efforts served the public through fostering progressive thinking and a genuine interest in the aspects of treatment works. His efforts have not gone unnoticed. George Bernauer's effort and determination are recognized by the WWOA through the annual George F. Bernauer Memorial Award.

The following is an excerpt from an October 9, 1958 publicity statement by Roger P. Scovill of the Conference of Wisconsin Sewage Works Operators.

"George F. Bernauer was first employed by the Wisconsin State Board of Health on Feb. 5, 1940 as District Sanitary Engineer. He was promoted to the Central Office in 1942 as Public Health Engineer and assigned the responsibilities of Sewage Works Engineer, where his specialty was Public Sewage Works Assistance. From that date until his death on October 8, 1958, he served as Consultant to Consulting Engineers on Sewage Works Designs and to Municipalities on sewage works operations and maintenance.

Mr. Bernauer was active in many organizations devoted to public health and welfare. He was Chairman of the Sewage Works Standards Committee of the Great Lakes - Upper Mississippi River Board of Public Health Engineers from 1951 until his death. He served as Secretary for the Central States Sewage and Industrial Wastes Assn. for several years. He was a member of the Wisconsin Society of Professional Engineers and was a registered Professional Engineer in Wisconsin. He was active in the Wisconsin Association for Public Health, The Middle States Association for Public Health, The Conference of Wisconsin Sewage Works Operator, and the Federation of Sewage and Industrial Wastes Associations, where he was a member of the Operators Qualifications Committee."

George Bernauer was killed tragically in a car accident in 1958 while traveling for his job. He was survived by a wife and three children. The Conference of Sewerage Works Operators, the predecessor to today's WWOA, responded by creating the George F. Bernauer Memorial Award. The award is presented each year at the annual conference in his memory.

The Award recognizes treatment plant operators in the State of Wisconsin who demonstrate a high level of plant performance, successful solution of complicated operational problems, and outstanding contributions in the field of wastewater technology. The purpose of the award is to stimulate improvements in the field of wastewater treatment. Mr. Bernauer is one of the founding fathers of today's progressive culture within the WWOA.

We are grateful for his contributions.
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Tom Kimberly (920) 850-2500
Dear WWOA Member, Associates, and Guests:

The WWOA Board of Directors cordially invites you to the 38th Annual WWOA Conference to be held October 26-29, 2004. The Conference will be returning to the recently expanded 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 A & B "Basic Wastewater Chemistry"; Workshop #2 "Monitoring Procedures for the New Mercury Rule"; and Workshop #3 "WWTP Security Update". 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 Kalahari's new expanded convention area. Come rekindle old friendships and make new friends. "The Sludge Floccers" will again be making an appearance offering a down home musical interlude.

Wednesday morning activities will begin at 9:00 a.m. with an Opening Address by WWOA President Randy Herwig, followed by our Keynote Address from Diana Papili. 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. Training opportunities for large and small system operators will be the primary focus throughout the Conference. The Annual Operators Competition will be a featured event of Wednesday's program beginning at 12:00 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. The Awards Banquet will close at 9:00 p.m. with the show band Bobby Way and the Fabulous Wayouts. This high energy group has played at the State Fair, the opening of renovated Lambeau Field, and many of Wisconsin's largest business gatherings. Check out the link to their web site by going to wwoa.org. Remember, the entertainment portion is open to all. The whole family is welcome for the show!

Plant tours will feature the Reedsburg WWTP and a look at the inner workings of the water park portion of the Kalahari on Thursday morning beginning at 9:00 a.m. Space for both tours will be limited, so be sure to sign-up in advance. This year's Spouse/Guest Program will offer a planned excursion and plenty of available free time to enjoy the many opportunities that the Kalahari and the WI Dells area have to offer. Please review the Spouse's Program schedule for a complete list of activities and offerings.

Enclosed is Conference information and Registration Forms. 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,

Tom Kruzick
Technical Program Committee Chair

Gil Hantzsch
Local Arrangements Committee Chair

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2004/2005 Clarifier Deadlines

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PRE-CONFERENCE WORKSHOPS

General Wastewater Chemistry Part I and II

The foundation of all wastewater chemistry (and drinking water treatment as well) rests with general chemistry parameters, including pH, alkalinity, and hardness. These three parameters interact with each other in a continuous web that in turn affects all facets of treatment operations. Other basic wastewater chemistry concepts, including the phosphorus and nitrogen cycles also provide insight that is useful in understanding wastewater treatment and environmental impact. Wastewater treatment plant operators, laboratory technicians and plant managers will find this session helpful in better understanding the overall principles of wastewater treatment.

Mercury Monitoring Procedures for the New Mercury Rule

The new Wisconsin Department of Natural Resources rules regulating wastewater discharges containing mercury took effect in late 2002. The regulations initially require permittees to collect high-quality monitoring data upon which later phases of rule implementation rely. The workshop will concentrate on the data collection phases including: how the data will feed later phases of the rule, sampling procedures and demonstrations through simulation, and the experiences and problems encountered by the staff at the Milwaukee Metropolitan Sewage District.

Security at WWTPs

This presentation will provide a summary of the current laws, funding, training programs and other activities by the government in the area of WWTP security. It includes examples of security enhancements for access control, and intrusion prevention, delay and detection. Security enhancements at septage receiving stations will also be discussed.
## PRE-CONFERENCE WORKSHOP AGENDAS

**Tuesday, October 26, 2004 • 1:00 - 4:00 p.m.**

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<th>Workshop #2</th>
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<td>1:00 - 2:30 p.m.</td>
<td>General Wastewater Chemistry</td>
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<td>Part 1</td>
<td>for the New Mercury Rule</td>
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<td><em>Rick Mealy</em></td>
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<td><em>WI Dept. of Natural Resources</em></td>
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<td><em>George Bowman</em></td>
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<td>Moderator: Kay Marshall</td>
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<td>2:30 - 2:45 p.m.</td>
<td>Break</td>
<td>Break</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Time</th>
<th>Workshop #1 B</th>
<th>Workshop #3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:45 - 4:00 p.m.</td>
<td>General Wastewater Chemistry Part II</td>
<td>Security at Wastewater Treatment Plants</td>
</tr>
<tr>
<td></td>
<td><em>Rick Mealy</em></td>
<td><em>Julia Riley</em></td>
</tr>
<tr>
<td></td>
<td><em>WI Dept. of Natural Resources</em></td>
<td><em>WI Dept. of Natural Resources</em></td>
</tr>
<tr>
<td></td>
<td><em>George Bowman</em></td>
<td><em>Steve Brand</em></td>
</tr>
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<td></td>
<td><em>WI State Lab of Hygiene</em></td>
<td>Room: Aralia</td>
</tr>
<tr>
<td></td>
<td>Moderator: Kris Gauger</td>
<td>Moderator: Steve Brand</td>
</tr>
<tr>
<td></td>
<td>Room: Aloewood</td>
<td>Room: Aralia</td>
</tr>
</tbody>
</table>

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OPS software is the easiest to set up, learn, and use. With **OPS 32** you will be entering data, producing reports and graphs all on the first day. **JOB Cal** maintenance software automatically builds a calendar that shows you what needs to be done, what’s coming up and what’s overdue.

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- John Zatopa, Rhinelander WWTP

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**Operations & Maintenance Software that’s easy to use!**
WWOA CONFERENCE GOLF OUTING
The Reedsburg Country Club

Date: Tuesday, October 26, 2004

Time: 10:00 A.M. Sharp “Shot Gun Start”
18 Hole Scramble Format

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

Cost Includes: 1/2 motorized cart, 18 holes golf, score cards, box lunch (turkey sandwich, potato chips, candy bar, soft drink)

Other Services: Beverage cart and lounge area, CASH.

Payment must be received no later then October 14, 2004 with names of foursome or individual’s. (Committee will assign if not in foursome).

Please RSVP early as we are limited to 100 participants.

No refunds after October 14, 2004 unless course is closed by decision of Club Management.

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TSURUMI
EBARA
WEINMAN
MARLOW PISTON
SMITH & LOVELESS
A-C
PACO
MOYNO

BLOWER S
SUTORBITL
ROOTS
MD PNEUMATIC
KAESER
SPENCER
HOFFMAN/LAMPSON

COMMINUTORS
SMITH & LOVELESS
CHICAGO
WORTHINGTON

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38TH ANNUAL CONFERENCE
WISCONSIN WASTEWATER OPERATORS’ ASSOCIATION

Tuesday,
October 26, 2004
A.M. Board of Directors Meeting: Empress
   Golf Outing: Reedsburg Country Club 10:00 a.m. (shotgun start)

P.M. Registration Opens: Convention Center Lobby 1:00 p.m. - 4:00 p.m.
   Pre-Conference Workshops:
   Aloeswood & Aralia Rooms 1:00 p.m. - 4:00 p.m.
   Regional Officers Meeting: Guava 4:00 p.m. - 6:00 p.m.
   Meet and Greet: Convention Center 6:00 p.m. - 7:00 p.m.
   Ingraffias & Outdoor Deck 7:00 p.m. - 9:00 p.m.

Wednesday,
October 27, 2004
A.M. Registration Opens: Convention Center Lobby 8:00 a.m.
   Welcome Address: Convention Center D & E 9:00 a.m. WWOA President Randy Herwig
   Keynote Address: Convention Center D & E 9:15 a.m. Diana Papili
   Vendor Exhibits: Convention Center I thru VIII 10:00 a.m. - 5:00 p.m.
   Technical Sessions: Aloeswood, Aralia, & Guava

P.M. Walk Around Lunch: In Exhibits Area 12:00 p.m. - 1:30 p.m.
   Operators Competition: Convention Center C 12:00 p.m. - 4:30 p.m.
   Technical Sessions: Aloeswood, Aralia, & Guava 1:30 p.m. - 4:00 p.m.
   Exhibits Social Hour: In Exhibits Area 4:00 p.m. - 5:00 p.m.

Thursday,
October 28, 2004
A.M. Registration Opens: Convention Center Lobby 8:00 a.m.
   Vendor Exhibits: Convention Center I thru VIII 8:00 a.m. - 12:00 p.m.
   Plant Tour Departures: Convention Center Lobby 8:45 a.m. - 11:45 a.m.
   Technical Sessions: Aloeswood, Aralia, & Guava 8:00 a.m. - 11:45 a.m.

P.M. Operator Luncheon: Convention Center C & F 12:00 p.m. - 1:20 p.m.
   Business Meeting: Convention Center C & F 12:30 p.m. - 1:20 p.m.
   Technical Sessions: Aloeswood, Aralia 1:30 p.m. - 4:00 p.m.
   Social Hour: Convention Center I, II, VII, VIII 6:00 p.m.
   Awards Banquet: Convention Center I, II, VII, VIII 7:00 p.m.
   Entertainment: Convention Center I, II, VII, VIII 9:30 p.m. - 12:00 p.m.
   Bobby Way and the Way Outs Band

Friday,
October 29, 2004
A.M. Farewell Breakfast: Scott Hassett, WDNR 8:30 a.m. - 10:30 a.m.
   Convention Center I and VIII
2004 CONFERENCE COMMITTEES

Local Arrangements:
Chair: Gil Hantzsch - MSA Professional Services

Spouse/Guest Program:
Chair: Kelly Zimmer - MSA Professional Services

Technical Program:
Chair: Thomas E. Kruzick

Randy Herwig
Tim Nennig
Dale Neis
Pete Conine
Kay Marshall
Jim Schreiber
Jim Thalke
John Bond
Richard McKee

Gil Hantzsch
Todd Fischer
Jeff Haack
Dave Carlson
Ron Dickrell
Larry Henderson
Mark Eggert
Gary Hanson

Exhibit Committee:
Chair: Carol Strackbein - Sanitaire

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

WWOA Officers:
President
Randy Herwig
President Elect
Timothy Nennig
Vice President
Thomas Kruzick
Past President
Dale Neis
Director (2005)
Jim Schreiber
Director (2005)
Pete Conine
Director (2005)
Kay Marshall
Director (2004)
James Thalke
Director (2004)
John Bond
Executive Secretary
Richard McKee

Manufacturers & Consultants:
Chair: Jim Shaw - Sanitaire

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

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When the Delafield-Hartland Water Pollution Control Commission leaders saw residential and commercial growth on the horizon, they called Foth & Van Dyke. The district needed additional treatment plant capacity to handle more customers, plus a new state-of-the-art process to produce the highest quality sludge for beneficial reuse. Foth & Van Dyke’s plan delivered both, and kept the entire system running smoothly while improvements were made. If you need fresh ideas to help you grow with the flow, contact Foth & Van Dyke.

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Delafield-Hartland commissioner Dick Landwehr (right) with Foth & Van Dyke’s Steve Marman
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 October 12, 2004, 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 $90.00. 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.

MANUFACTURERS & CONSULTANTS

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

EXHIBIT FEE
(In addition to Registration & Sponsorship)
*Includes one WWOA member Registration.

*Before August 20, 2004
8’X10’ $235.00 1 Registration
8’X20’ $470.00 2 Registrations
8’X30’ $705.00 3 Registrations
16’X20’ $940.00 4 Registrations

*After August 20, 2004
8’X10’ $275.00 1 Registration
8’X20’ $550.00 2 Registrations
8’X30’ $825.00 3 Registrations
16’X20’ $1100.00 4 Registrations

Please note only cash and checks will be accepted as payment. No Credit Cards

WASTEWATER CONSULTING

In Partnership With You
CONFERENCE REGISTRATION

Please check all choices

PRE-REGISTRATION
(Prior To October 12, 2004)

___ WWOA Member $50.00
___ Non-Member $95.00
___ Non-Member plus WWOA Membership Pre-Registration Only $90.00
___ Student/Retiree $25.00

ON-SITE REGISTRATION
(After October 12, 2004)

___ WWOA Member $80.00
___ Non-Member $125.00
___ Student/Retiree $30.00
___ Substitution (Re-Print Charge) $15.00

No refunds of conference fees after October 12, 2004

ADDITIONAL FUNCTIONS

OPERATORS’ BUSINESS LUNCH
No. Of Tickets ________ @ $15.00

AWARDS BANQUET
No. Of Tickets ________ @ $25.00
Check Choice
___ Filet Mignon
___ Chicken Oscar
___ Crab Stuffed Shrimp

FAREWELL BREAKFAST
(All Registered Spouse/Guest are welcome)
No. Of Tickets ________ @ No Charge

SOCIAL HOUR
(Courtesy of Manufacturers & Consultant Sponsors)

WWOA DUES (if Applicable)
Two year dues . . . . . . . . . . . $40.00
Total Enclosd . . . . . . . . . . . . . . . . . $_____

Only Cash and Checks will be accepted as payment.

CONFERENCE REGISTRATION FORM
(Type or Print Clearly)

Last Name

First

M.I.

Nick Name (For Name Tag)

Firm Name (If Consultant or Manufacturer)

Mailing Address

City

State

Zip Code

Telephone (Work)

Telephone (Home)

Position/Title

Regional Affiliation

Member Affiliation

___ SE

____ Municipal

___ NC

____ Other

___ NW

____ Sales

___ LMD

____ Consultant

___ Southern

____ Student

___ WC

____ Consultant

___ Southern

____ Manufacturer

___ NC

____ Educator

___ LMD

____ DNR/EPA

To assist the Planning Committee, please check the following if you plan to attend.

Tuesday, October 26, 2004

___ Meet & Greet

Thursday, October 28, 2004

___ Reedsburg Wastewater Treatment Facility

___ Inner-Workings of the Kalahari Water Park

Sign up for tours will be on site in the registration area.
APPLICATION FOR MEMBERSHIP

YES! I want to take advantage of the 2004 registration/membership package.

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

Name:_____________________________________
Mailing Address:____________________________
City:______________________________________
State:_________________________Zip:_________
Work Phone: (      )_________________________
Home Phone: (      )________________________
E-Mail Address:________________________________

Affiliation:

____Sanitary Operator ____Town Govt. 
____Treatment Plant ____Business
____Industrial

Membership Classification:

____Operator ____Certified Operator ____Student
____Educator ____Regulatory ____Retired
____Consultant ____Other

This applicant is recommended by:

Member:_____________________________________
City:______________________________________ State:_________

Send Membership Application Along with Conference Registration
Eventually, even the best pumps go bad. Wastewater pumps live in harsh and unforgiving environments. They are often ignored and abused. It is the kind of lifestyle that leads to breakdowns.

When it happens, call L.W. Allen. We will ride to your rescue. Our team of experienced factory-trained technicians will quickly arrest your pump problems. We will carefully inspect, service and troubleshoot virtually any wastewater pump. We can rehabilitate the worst cases. In extreme situations, we can replace them.

Do not try reforming bad pumps yourself. When good pumps go bad, call L.W. Allen.

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(800) 362-7266
Welcoming Back...+

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 38th Annual Wisconsin Wastewater Operator's Association (WWOA) Conference, on October 26-29, 2004, 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. The Dells is home to activities ranging from museums to bungee-jumping, indoor waterslides to outdoor go-cart tracks, and golf courses for kids of all sizes. 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. Also close by, located slightly south on Highway 12, is a very large Antique and Craft mall. You could take the opportunity to explore historic downtown Baraboo and visit many of the quaint shops located around the courthouse square. Those interested in planning a shopping excursion can visit www.baraboodowntown.com on the Internet.

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. Also included in the spouse program is a tour of the International Crane Foundation. The International Crane Foundation (ICF) works worldwide to conserve cranes and the wetland and grasslands communities on which they depend. ICF is dedicated to providing experience, knowledge, and inspiration to involve people in resolving threats to these ecosystems. ICF houses each of the world's 15 species of these majestic birds.

On Wednesday, your program starts with a continental breakfast in the guest Hospitality Room located in the Marula Room. You will receive a hospitality gift bag, and then be invited to attend the Keynote Address. After the Keynote, you have the morning free to explore the Kalahari Resort, home to America's largest indoor waterpark. Immediately following the Walkaround Lunch a shuttle bus will transport you to and from the International Crane Foundation, returning to the Kalahari by 4:00 p.m.

Thursday begins the day again with the continental breakfast offered in the Marula room. Today is all for yourself and your family to enjoy all the amenities the Kalahari has to offer. If you're looking for the ultimate in relaxation, make an appointment at the Oasis Experience Day Spa for a massage, facial, or body treatment. The day ends with the annual WWOA Awards Banquet.

Finally, 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 great time!

Sincerely,

Kelly Zimmer
SPOUSE/GUEST PROGRAM

Tuesday, October 26, 2004
6:00 p.m.  Meet and Greet - Convention Center

Wednesday, October 27, 2004
8:00 - 9:00 a.m.  Spouse Hospitality Room - Marula Room
9:00 - 10:00 a.m.  Conference Opening and Keynote Speaker
12:00 - 1:30 p.m.  Walk Around Lunch in Exhibit Area
1:30 - 4:00 p.m.  International Crane Foundation Tour
4:00 - 5:00 p.m.  Social Hour in Exhibit Area

Thursday, October 28, 2004
8:00 - 9:00 a.m.  Spouse Hospitality Room - Marula Room

Spouse and Guest Program Details
The Spouse and Guest Program offers the following activities and amenities:
- Tuesday Meet & Greet
- Keynote Address
- Admission to Exhibits
- Spouse and Guest Hospitality Room
- Spouse and Guest Gift Bag
- Wednesday Walk Around Lunch
- International Crane Foundation Tour
- Wednesday Social Hour
- Farewell Breakfast

Advance Registration for the Conference Only Package is $35.  Spouse and Guests are encouraged to register in advance.  On-site registration will be available for the package for $45, subject to availability.

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.  The tour at the International Crane Foundation is “rain or shine”, please plan accordingly.
EDMR Update

The Department of Natural Resources (DNR) has begun to accept Discharge Monitoring Reports (DMR's) submitted electronically as described below. The pilot phase has been completed, with approximately 25 facilities assisting DNR by submitting their data electronically and testing all the steps in the electronic submittal process.

There are two electronic submittal processes to choose from, both of which are performed on a secure web site. The first option allows sample results and comments to be entered on a DMR template that replicates a monthly paper DMR. The second option allows a DMR XML (Extended Markup Language) file for a given month to be downloaded, sample data already stored electronically mapped to XML tags in the file, and the file to be uploaded.

Once the data is entered using either of the processes, a validation process is run, summary data is calculated, the file is submitted, and a permittee certification statement is created, which is mailed to the DNR. Upon receipt of the certification statement, the original file integrity is verified using security software and the file is loaded into the DNR database.

DNR hopes to make the electronic submittal process available to all interested facilities within the next year. If you are interested in information regarding this process, Gail Mills can be reached at (608) 266-1387 or gail.mills@dnr.state.wi.us. Additional state funding has been requested to implement the electronic processes. At this time facilities will be included based on the order in which Gail is contacted, required security ID's and passwords are assigned, and Trading Partner Agreements (a document clearly stating responsibilities of DNR and the facility in the electronic submittal process) submitted.

Announcing...

The 2004 Wisconsin Sewer User Charge Survey Report

THIS anticipated report is now available. In this ground-breaking document, MSA provides your community with the following information:

- Analysis of user charges among similar communities
- Water rate comparisons
- Information on connection and impact fees
- 8-year trends and more...

Copies are available at $50 each from MSA Professional Services, Attn: Marketing Dept., 1230 South Blvd, Baraboo, WI 53913.

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- CONTROL REHABILITATION
- LIFT STATION REHABILITATION
- CHECK VALVE REPLACEMENT
- DEWATERING EQUIPMENT RENTALS and INSTALLATION
- CONTROL TROUBLE SHOOTING
- CONSULTING
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Many Wisconsin municipalities are facing enforcement actions in response to bypass events in their system as a result of the unusually heavy spring and summer precipitation this year. Municipalities around the state have been receiving notices of violation ("NOVs") from the Department of Natural Resources ("DNR" or "Department") for sanitary sewer overflow events that occurred in the spring and early summer this year. The Department is stepping up its enforcement against municipalities statewide in part as a response to public and other pressures arising from the substantial bypass events in the Milwaukee Metropolitan Sewerage District system. The increase in enforcement is also a result of the Department's implementation of an internal guidance policy issued to regional staff in April 2002 setting forth criteria for what bypass events should trigger NOVs.

The April 2002 guidance is quite restrictive and provides that "[t]he basic premise . . . should be to issue a NOC/NOV for all overflows and bypasses from sanitary sewer systems." The guidance goes on to provide for a limited set of conditions under which an NOV "may or may not" be necessary. The Department estimates that approximately 150 bypass events were reported this spring and early summer. Of that amount, approximately 50% of those communities experiencing bypass events have or will receive notices of violations of their WPDS permit.

A Notice of Violation ("NOV") is a single step in an enforcement process the state may use to address permit or other regulatory violations. Typically the first step in that enforcement process is the issuance of a Notice of Noncompliance ("NON") or an NOV. The NOV is one step further into the enforcement process than a NON. One objective the Department has in issuing either an NON or an NOV is to provide the municipality with notice of a claim against the municipality. Notice of claim requirements arise from Wis. Stat. § 893.80, which requires a party seeking to sue a municipality to provide notice of the events upon which a claim against the municipality is based within 120 days of those events. Frequently the DNR chooses to issue a NOV or NON in order to provide the notice required under that statute.

In Your Corner ....

DNR STEPS UP ENFORCEMENT FOR BYPASS EVENTS
Once a municipality receives a NON or NOV, the next step in the process varies depending upon the circumstances of the alleged violation. In some cases no further action is taken and the NOV is kept on file, much like a traffic warning would be. The NOV may then be referred back to in the event of future violations. Another option, the one that appears to be most commonly used for the recent SSO events, is for the Department to schedule an enforcement conference with the municipality. An enforcement conference is essentially a meeting between appropriate municipal representatives and a DNR enforcement specialist, the basin engineer and any other Department staff involved in the issues that are the subject of the NOV. The purpose of the meeting is to discuss the circumstances of the alleged violation and steps to correct any problems. From the municipality's perspective, it is important to use this opportunity to clarify any misunderstandings and raise other defenses to the violations. If there is not a resolution through the enforcement conference the Department has the option to refer the alleged violation to the State Department of Justice for enforcement through a possible lawsuit against the municipality.

The Municipal Environmental Group ("MEG") is very concerned about the Department's use of enforcement as the tool to address the statewide design limitations of many municipalities' wastewater treatment and collection systems. MEG is working to address these ongoing SSO issues for its members through a more constructive process than enforcement. MEG believes that the primary means to address these types of issues should be the committee process through a full discussion of the technical issues and consideration of all interests involved. MEG is a member of the SSO/CMOM Committee the Department convened to address these issues. That Committee has not met for over a year. An important step to constructively addressing collection system design and management issues statewide will be to restart that committee process and ensure that all those with a stake in this issue are heard.

The Municipal Environmental Group is comprised of almost 90 POTWs throughout the state that have banded together to advocate for POTW interests before the DNR and the Legislature. For more information about MEG membership or the Department's SSO enforcement policy, please contact MEG Wastewater legal counsel, Paul G. Kent or Amy Tutwiler at (608) 280-8235 or pgk@dkattorneys.com or abt@dkattorneys.com.
Bill Marten Joins Triad Engineering

WWOA member Bill Marten recently joined Triad Engineering Incorporated, a multi-disciplinary consulting engineering firm headquartered in Milwaukee, Wisconsin. Bill, who is a senior wastewater process engineer and project manager with Triad, is a former member of the WWOA Technical Program Committee and is a member of the Southeast Region. Bill is currently the Secretary-Treasurer of the Wisconsin Section of Central States WEA, and in that role he interfaces closely with Rich McKee and the planning committees for a number of seminars that WWOA and the Wisconsin Section co-sponsor, such as the Government Affairs Seminar, the Spring Biosolids Symposium, the Collection System Seminar and the Management Seminar. Bill has given a number of presentations at the Annual Conference and at regional meetings over the years, and looks forward to doing more of that in the future. His new contact information is:
Bill Marten, P.E.
Triad Engineering Inc.
325 East Chicago St.
Milwaukee, WI 53202
Phone: (414) 291-8840
Fax: (414) 291-8841
Email: bill.marten@triadengineering.com

Please join us in wishing Bill luck in good luck in his new position.

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Reporting of Lab Numbers

In the near future, the Department of Natural Resources will place more emphasis on recording of the nine-digit number of the laboratory that conducts tests, which are reported on the Discharge Monitoring Reports (DMR's). A similar effort regarding collection of the limits of detection (LOD's) and limits of quantification (LOQ's) was initiated in 2003.

There will be clear notification regarding which parameters need the certified or registered laboratory number reported on the DMR's. When the laboratory number is required and not recorded, follow-up with the facility by compliance staff will be necessary.

Field tests such as Dissolved Oxygen, pH, and Total Residual Chlorine will not require a laboratory number. Also, laboratories are not currently required to be certified or registered for Fecal Coliform testing, though that may change with proposed revisions to the Lab Certification rules.

If your facility has been consistently reporting lab certification numbers, the DNR appreciates it. If not, please incorporate this important step in the recording and reporting of self-monitoring data.

(STILL) LOOKING FOR A FEW GOOD MEN (OR WOMEN)

There is still time to put your hat into the ring if you would like to run for a position on the Board of Directors! There will be three director positions opening up this year because of one of the present directors decision to run for Vice-President. The President-Elect position is also opening up. So take a chance! Get a hold of Dale Neis at (608) 568-3151 or at neisguy@pci.net.
## MUNICIPAL ENVIRONMENTAL GROUP - WASTEWATER DIVISION
### LEGISLATION AND REGULATION TRACKING TABLE

**July-August 2004**

### PENDING LEGISLATION

<table>
<thead>
<tr>
<th>TOPIC</th>
<th>NUMBER</th>
<th>IMPACT ON IMPACT OF BILL ON WASTEWATER FACILITIES</th>
<th>STATUS</th>
<th>MEG POSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Septage</td>
<td>AB 154</td>
<td>Prevents municipalities from refusing septage without prior DNR approval, restricts septage fees.</td>
<td>Failed to pass but bill highlighted need to review septage issues; Legislative Committee now being formed</td>
<td>Oppose</td>
</tr>
<tr>
<td>TABOR (Taxpayer Bill of Rights and Spending Limits)</td>
<td></td>
<td>The Legislature is looking to control local government spending through a constitutional amendment (TABOR) and through legislation spending caps. The effect on utility service fees is unclear.</td>
<td>Special Legislative Council Committee proposed</td>
<td>Monitor</td>
</tr>
</tbody>
</table>

### PENDING REGULATIONS

<table>
<thead>
<tr>
<th>TOPIC</th>
<th>NUMBER</th>
<th>IMPACT ON IMPACT OF BILL ON WASTEWATER FACILITIES</th>
<th>STATUS</th>
<th>MEG POSITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Methods</td>
<td>NR 219</td>
<td>Revisions to update methods based on federal level changes and add cleanup procedures for analysis of PCBs in biosolids</td>
<td>DNR seeking adoption at August NRB meeting</td>
<td>Monitor</td>
</tr>
<tr>
<td>Bacteria Standards</td>
<td>No number assigned</td>
<td>In 2000, Congress passed the BEACH Act, i.e. the Beaches Environmental Assessment and Coastal Health Act. As a recipient of BEACH funds, the state must now revise its bacterial water quality criteria to be consistent with EPA criteria.</td>
<td>Advisory Committee in process</td>
<td>Oppose in part</td>
</tr>
<tr>
<td>CMAR</td>
<td>NR 208</td>
<td>New and expanded format and web-based system for compliance monitoring and reporting requirements.</td>
<td>Approved by NRB 6/23/04; legislative review in progress</td>
<td>Support with amendments</td>
</tr>
<tr>
<td>Lab Certification</td>
<td>NR 149</td>
<td>New rules to add detail on lab procedures and reporting. Could create substantial additional burdens for small wastewater labs.</td>
<td>Advisory Committee in process</td>
<td>Oppose in part; support in part</td>
</tr>
<tr>
<td>Landsparing</td>
<td>NR 243</td>
<td>Revised rules on wastewater from large scale animal feedlot operations. Will control nutrient runoff from agricultural facilities and indirectly benefit point source discharges to affected waterways.</td>
<td>Advisory Committee in process</td>
<td>Monitor</td>
</tr>
<tr>
<td>Landsparing</td>
<td>NRCS 590</td>
<td>Revised standard to control nutrient runoff from agricultural fields; could negatively impact landspreading.</td>
<td>Advisory Committee in process</td>
<td>Oppose application to municipalities</td>
</tr>
<tr>
<td>SSO</td>
<td>NR 210, NR 110</td>
<td>New rules governing sanitary sewer overflows from sewerage systems including collection systems, new definitions of bypass, new provisions for response to SSO events.</td>
<td>Advisory Committee in process</td>
<td>Support in part Oppose in part</td>
</tr>
<tr>
<td>Thermal Water Quality Standards</td>
<td>NR 106</td>
<td>DNR developing rules relating to thermal water quality standards and their applicability for the first time to wastewater treatment facilities</td>
<td>Advisory Committee in process</td>
<td>Oppose application to municipalities</td>
</tr>
<tr>
<td>WET Test</td>
<td>NR 106, 149 and 219</td>
<td>DNR revising WET test methods with stated objective to improve reliability; does not include algal test method</td>
<td>Seeking authorization for public hearings at August 11 NRB meeting</td>
<td>Monitoring; oppose algal standard</td>
</tr>
</tbody>
</table>

*For more information on any of these topics or information about the Municipal Environmental Group, please call Paul Kent and/or Amy Tutwiler at Anderson & Kent at (608)246-8500 or e-mail Paul at pkent@andersonkent.com and Amy at attutwiler@andersonkent.com. |

*Changes from prior table shown in bold.*
This isn’t SCADA like you’re used to, yet it’s the real thing. MISSION manufactures several complete wireless systems, from lift station and rainfall monitoring to in-sewer CSO and real-time SCADA systems. Our low cost options include all hardware and software. They are so simple, they’re installed and running in a morning.

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Southern District Meeting, Merrimac, Wisconsin  
June 24, 2004

The Southern District WWOA held its last meeting on June 24 at Merrimac, Wisconsin. The Meeting was hosted by the Village of Merrimac and held at their village hall building.

Mark Kane of LW Allen followed with an interesting overview of lift station monitoring and controls. Mark discussed the pros and cons of controlling with floats or level sensors. He also talked about the need for installing a PLC at each lift station. He covered the elements involved in actually configuring a lift station control panel. LW Allen was involved with control work at Merrimac's new lift station.

The morning concluded with the Southern District business meeting. Skip Poster reminded members of the upcoming district meeting on August 26 at Sun Prairie and the Spring 2005 joint meeting with the Southeast District scheduled for Beaver Dam. Skip said that hosts are needed for the remaining two-district meeting in 2005. WWOA State President Randy Herwig was on hand and reminded members to submit nominations for 2004 awards by the August 1 deadline. Also Randy said scholarship applications are still available. Randy said the WWOA mailing list is up and going again and encouraged members to

The day began with a warm welcome by Merrimac Village President Al Shanks. Al gave a brief background of the history and growth of the village. He explained the villages need for a wastewater facility upgrade and praised the village staff for their work in getting the new system up and going.

Vice Chairman Skip Poster then introduced Gil Hantzsch of MSA as the first speaker. Gil discussed the results of the Sewer User Charge Survey he has been working on. He reviewed user charges, special assessments, property taxes, and connection fees as revenue sources for a community. Survey data was collected from 369 of 677 state sewer utilities, which serve population sizes from 61 to 1.2 million people. Gil then gave strategies on how to minimize the impact of sewer rates.

After a short break to visit the vendor displays Jack Saltes of the WDNR spoke about progress on the Compliance Maintenance Annual Report (CMAR). He explained the timetable for the eCMAR and what treatment Plants can expect to happen as the new system is implemented. Jack displayed actual screens of what operators will be navigating as they use the eCMAR website in the future.
After a delicious lunch members listened to Laura Marcolini of Anox Kaldness explain the moving bed biofilm reactor process. She described how the process is the marriage of the trickling filter and the activated sludge processes. The moving bed can be utilized to aid nitrification in extreme temperatures, as well as roughing of high organic loading. Laura explained how biofilm carrier elements were used at the Merrimac wastewater facility.

The DNR updates were given by area engineer George Osipoff. George explained upcoming changes in disinfection indicators. The future change will require plants to test for E.coli instead of fecal coliforms. He also reviewed upcoming changes to ammonia limits on facility permits as well as reminding members to include LOD/LOQ numbers when submitting monthly data to the DNR.

Gil Hantzsch then described the journey taken by the Village of Merrimac from their facility plan to facility completion in 2003. The resulting treatment facilities were so successful that the Village received a Best of State Award from the American Council of Engineering Companies.

The Village of Merrimac hosted a tour of their treatment facilities following the meeting.

Front row, left to right: Vern Weisensel-Trustee, Al Shanks-Village President, Shellie Benish-Village Administrator, Helen Knapp-Deputy Clerk; Back row, left to right: John Schueman-Maintenance/Operator, Gil Hantzsch-Village Engineer, Jeff Voll-Maintenance/Operator

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What does the passage of 50 years mean to the Upper Peninsula wastewater treatment industry? Clean water and a habitable human environment for starters. Or at least that was the re-occurring theme throughout this year's Section 21, Upper Peninsula Wastewater Operator's conference held in Watersmeet, Michigan May 17 - 19th. The industry began when many municipalities initiated the construction of their own wastewater treatment infrastructure as funding became available. The human environment has seen steady improvement ever since.

This year's 1-1/2 day conference hosted numerous technical and social events including the presentation of the 1st Annual Jack R. Rydquist Award. Technical topics included composting biosolids, headwork's design considerations, an update on the dead river basin flooding event, oxidation ditch aerator drive improvements at the Ishpeming WWTP, ATAD for class A biosolids, and capacity improvement at a small Wisconsin WWTP. Equipment vendors provided technology updates and application of improved technologies to the industry. Dan Holmquist and Doug Hill of the MDEQ operator's training unit made the trip to provide lagoon operator's with a half day of lagoon specific training.

The Jack R. Rydquist Award was presented to Bob Houvener of the Ishpeming WWTP. The award recognizes a "hands on" operator who went above and beyond the call of duty in the face of obstacles to get the job done. The award was presented to him by Jack R. Rydquist himself. What an honor for both of them.

Following tradition, after a full day of technical training, a social hour and dinner were held. What followed is now history, but will not be soon forgotten. Da Yooper's Price is Right, conspired by long time conference supporter Greg Burk was hosted again by Greg and Bruce Hawkinson. To make a long story short, nearly $1,000 in gifts donated by organization supporters, were distributed equitably based on one's knowledge of consumer good prices in 1954! After nearly two hours of gut bursting humor, most had to resign to their rooms to rest their weary bodies.

History is about the past. Our knowledge of it affects the future. Fifty years ago in the Upper Peninsula the need for an annual training conference for operators was recognized. This union of fellowship and sharing ideas in a highly technical and noble profession has been and will be the future of this annual event.

FOR SALE

The Reedsburg Utility Commission has for sale an Allen Bradley (Catalog Number - 150-B240NBDB) solid state soft start unit rated at a maximum 200 HP capacity, 460 Volts. Also included are 3 coil transformers and related equipment for a complete installation. The unit is intended for installation in a MCC and is in brand new condition having been used for only 5-6 hours. Price is negotiable. For more information contact Frank Brey at (608) 524-6468.
Chairman Craig Walkey opened the meeting with a hardy welcome. Craig informed the group that we had 60 registered participants at this meeting. Craig then introduced the Village of Butternut President, Mike Neumann. Mike welcomed the operators group to Butternut and commended the wastewater operators for a job well done in the State of Wisconsin. Mike told the group to be proud of what you do. Chairman Walkey then introduced the WWOA President Randy Herwig. Randy promoted the state organization and the state conference in Wisconsin Dells this fall. Randy also encouraged the group to think about nominations for state awards and to consider the advantages of being a state member such as scholarships, mailings and price discounts. Following Randy, Peg O’Donnell was introduced and Peg briefly discussed certification and what the procedure was for getting experience forms and testing forms.

Chairman Walkey introduced the first presenter Bob Rybac who represented Schaffer Oil Company. Bob discussed the different types of oils and lubricants and how each of these products reacted in different applications. To back up his points, Bob had brought a machine that he could demonstrate how a lubricant reacts under heat and pressure. The demonstration was very eye opening and indisputable as to what happens under load condition.
Chairman Walkey then introduced Martin Degenhardt representing Safefast Inc. Martin discussed many different types of eyewear and the proper use of each. Martin suggested if you're not sure what is needed in a specific application, give your insurance companies a call and they will work with you.

To be sure you're wearing a safety lens look for the D-87 somewhere on the lens or bow of the glasses. Martin discussed eye wash stations and where they should be placed, specifications, and proper use of these stations. A safety point Martin brought up was "in order for eye wear to work you have to wear it." Martin next went into sound and noise. Noise is defined as unwanted sound. OSHA requires hearing protection for any level over 85 decibels. The pain threshold is listed at 120 decibels. Martin went over the use of earmuffs and the different type of earplugs. Martin discussed chain saw safety and the proper protective equipment including chaps, hard hat, face shields and a first aid kit. Speaking of first aid kits, they should be inspected annually at least, just in case someone removed something and did not replace the item and also to look for date sensitive products which may have expired.

Work zone safety was discussed next. Use 28-inch traffic cones with reflective bands in 45-mph zones and dusk and dawn times. Traffic vest can be orange but the trend is bright yellow. It is felt that the orange traffic barrels distract from a person wearing an orange safety vest. Martin finished up with discussion of a 4-gas monitor and the importance of regular calibration and documentation.

Chairman Walkey introduced the next speaker, Jon Standridge. Jon is semi-retired from the State Lab of Hygiene. Jon's topic was "Emerging Water Contamination Issues". A very interesting presentation so I will try to be brief. Jon first discussed the Typhoid fever epidemic from years past and how the introduction of Chlorine wiped that out in drinking water. Here is an interesting fact, 25,000 people still today die from water borne diseases worldwide. Research on surface waters of the United States has revealed that all waters contain varying amounts of chemicals with prescription drugs being identified as a problem. The body uses prescription drugs to the tune of 10% of dose and the rest is excreted into the waste stream, which eventually ends up in the surface waters. Jon briefly discussed the book "OUR STOLEN FUTURE" and how chemicals in the environment are slowly whittling away on the human race. Jon discussed antibiotic resistant bacteria found in hospitals and most recently in well water. Recent test of air samples around and in ground water wells showed that 85% of hand dug wells tested positive, 34% of drilled and cased wells tested positive, and 17% of point driven wells tested positive. Wells with vegetation around the site are 60% more likely to test positive, wells with paved and graved around the well are 29% more likely to test positive and wells that are enclosed are 5% more likely to test positive for air born coliform bacteria.

The latest cutting edge technology is working on a hepa filter for wells that will reduce the potential of air borne coliform bacteria by 90%.

Chairman Walkey introduced the next speaker, Jack Saltes representing the WDNR. Jack did comment that it is a long way up to Butternut from Madison, it is not at the end of the earth but you can see it from here. Jack's main focus was to introduce the newly revised CMAR. First and foremost the CMAR is a management tool, not an enforcement tool and can be very useful in the plant operations. Jack went over some of the web screens that were new and gave a handout on how to navigate around the new program. This did not need to be said but the obvious is you will need to have access to a computer. As always, Jack was saddled with the task of selling this idea and did a great job.
Throughout the water and wastewater industry, Energenecs has long been associated with long lasting, high quality products…but we can offer you so much more. Our knowledge and experience in SCADA and related control system integration will make your water and wastewater systems more reliable and more energy efficient. We will also help you save money and serve your community more effectively.

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Chairman Walkey introduced Trevor Zimmerman representing Push Inc. Trevor discussed the options of pipe installation without open cutting. Trevor discussed directional drilling and the advantages of this type of installation as well as the capabilities, including pipe sizes. Trevor then discussed the option of pipe bursting and described how this concept works and the advantages of this technology. With these two technologies available it still may be more cost affective to open cut. Each situation needs to be evaluated to factor in practicality, inconvenience to public, timing, permits, and cost.

Chairman Walkey introduced Jim Hanson representing DNR from Park Falls. Jim's main focus was to go over recommendations for pH monitoring at ponds & lagoon systems. With the adoption of the new rules to regulate ammonia discharges from wastewater plants it becomes more critical that pH monitoring is as accurate as possible. Four suggestions were presented: 1) The pH test must be performed within the first three hours of sampling, which means on site testing would be preferred. Most laboratories will give you a pH result from your sample you send in but do not use it, it is too old. 2) The pH test must be done with a meter that is calibrated and in good shape. Use fresh buffers, not the ones that came with the meter 18 years ago. 3) The pH of wastewater effluent from a lagoon changes from season to season and even throughout the day. In the future, it may be very useful to know how much and when the pH changes. Monitor throughout the day for historical data. 4) Keep the data organized so you can find all the information. Information that will be useful is time of day collected, date, weather conditions of the day, and what the pond surface looks like (% of duckweed, algae)

Chairman Walkey opened the business meeting with comments on mailing list updating, help with agenda development for meetings, and emphasized the importance of pre-registration. The treasurer report was given by Wally Thom, District Secretary, in the absence of Mike Romso, District Treasurer. As of July 7, 2004, the checkbook has a balance of $2368.62. There was no old or new business. The next District meeting will be in Turtle Lake on October 8, 2004 at the Casino conference center. The meeting was adjourned.

Respectfully submitted,
Wally H. Thom
Secretary NWWOA
Wisconsin Wastewater Operators’ Association 2004 Annual Convention Reservation Form
October 26-29, 2004

INSTRUCTIONS
Reservations can be made by faxing this form or calling in directly.
Please print clearly!
PHONE: 608-254-5466
FAX: 608-254-6116

DEADLINE: September 30, 2004
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.

INSTRUCTIONS
Reservations can be made by faxing this form or calling in directly.
Please print clearly!
PHONE: 608-254-5466
FAX: 608-254-6116

DEADLINE: September 30, 2004
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.

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 the conference rate and reservation requests
will be honored on a 1st come 1st basis. Overflow hotels may be used to accommodate all reservation
requests.

Kalahari Resort
$99.00 per night Hut Room
(Two Queen sized beds, full bath and deck or patio, includes up to 4 Waterpark passes)

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$109 per night per Lodge Room
(King bedroom, living room with fireplace and full sized pullout couch, full kitchen and deck or patio,
includes up to 2 waterpark passes)

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____________________________________________________________________________________

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.

DEPOSIT INFORMATION
All reservation requests must be accompanied by a credit card. Credit card will be charged for an amount equal to one night's room charges plus appropriate tax amount at the time the reservation is made. In lieu of a credit card, a signed purchase order for the total amount of the stay may accompany reservation requests. Reservation forms received without a credit card or purchase order will not be processed.

____ Visa   ____ MasterCard   ____ Discover   ____ American Express   ____ Purchase Order
Guarantees
Card Number __________________________________________________________
Name on Credit Card __________________________________________________________________________
Expiry Date ______________

I hereby authorize 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.
Let's get wasted. Yep, wasted! No, no, not you but your mixed liquor. Too much mixed liquor and your plant will most certainly have a hangover of solids. Not only will they be hanging all over the plant, it is also likely they will be going over your weirs. So what are you going to do about it? Get wasted…..that's what.

Professor Koby Crabtree always used to say that many operators love their (mixed liquor) solids so much they don't want to part with them. After 18 years in the field at many activated sludge plants, I found he was unfortunately right all too often. If you don't waste often enough, the plant becomes drunk with solids and will, as some say, puke them out into the creek or river. If that happens, then DNR may come along and issue you an OUI (Operating Under Insufficient wasting) and then you have to get an IOU. The fish don't like it much either.

So how wasted should you get? Here are some ways to estimate your wasting rates:

(1) Wasting Based on Constant MLSS
Many operators have learned that keeping their MLSS at a certain level that gives them good plant performance and a high quality effluent. This method works only with a relatively stable daily influent loading. Through operating experience, operators have determined the amount of sludge to waste each day based upon maintaining a desired MLSS. If MLSS is higher than expected after wasting, more can be wasted next time. If MLSS is lower than expected after wasting, less can be wasted next time.

The methods described below give an operator a good idea of the amount to waste (WAS), but actual operating results will determine actual wasting amounts to achieve the optimum MLSS level. Wasting regularly and frequently (3-7 days per week) is preferred to batch wasting (wasting large amounts after several days or even weeks). Regular wasting keeps the aeration basin biomass healthier and fresher than batch wasting, which can result in old, poor settling and filament-laden mixed liquor.

(2) Wasting Based on Sludge Production
"Typical" unit sludge production rates (USEPA Handbook - Retrofitting POTW's , 1989) are based upon the type of activated sludge plant you have:

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DO YOUR DOMES SPARKLE OR SHINE?
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Shooting for 90% removal, you can estimate the wasting rate based on this method, with the following formula:

\[
AMOUNT = \frac{\text{Flow (MGD)} \times \text{BOD}_\text{Infl} (\text{mg/l}) \times 0.90 \times \text{Sludge Yield Coefficient}}{\text{WAS (mg/l)} \times 8.34} \times \text{Sludge Yield Coefficient}
\]

### (3) Wasting Based on Sludge Age

Many operators operate their plants around a desired sludge age or solids retention time. Under this method, the amount of solids to waste daily uses the following formula:

\[
AMOUNT = \frac{\text{MLSS (mg/l)} \times \text{Aeration Basin Volume (MG)}}{\text{WAS (mg/l)} \times \text{Desired Sludge Age (days)}}
\]

### (4) Wasting Based On Settled Solids

Many operators perform a 30-minute settleable solids test, in which a sample of the mixed liquor is allowed to settle in a one-liter graduated cylinder or similar vessel. This test, in conjunction with a desired sludge age, can be used to determine wasting (Activated Sludge, WI VTAE, 1980) as follows:

\[
AMOUNT = \frac{\text{Aeration Basin Volume (MG)}}{\text{WASTE (MGD) x (ml settled sludge per 1000 ml)}}
\]

For the last three methods (2, 3 & 4) above, you can convert the final answer to gallons per day simply by multiplying the answer from the equation by one million (1,000,000).

If any of you are interested in an Excel process control spreadsheet that calculates wasting rates, please contact me. Okay, now you can go get wasted! Cheers…..to regular wasting, happy bugs and staying S.O.B.E.R. (Stable Operations By Everyday Removal of solids!)

---

### Table: Activated Sludge Process type

<table>
<thead>
<tr>
<th>Process type</th>
<th>Sludge Yield Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional w/ Primary Clarifiers</td>
<td>0.7</td>
</tr>
<tr>
<td>Conventional w/o Primary Clarifiers</td>
<td>0.85</td>
</tr>
<tr>
<td>Extended Aeration</td>
<td>0.5 – 0.65</td>
</tr>
<tr>
<td>Contact Stabilization</td>
<td>1.0</td>
</tr>
</tbody>
</table>

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