

The Clarifier

WISCONSIN WASTEWATER OPERATORS' ASSOCIATION, INC.

Volume 159, February 2005



Red Cliff Wastewater Treatment Facility

***39th Annual W.W.O.A. Conference
October 4-7, 2005
KI Conference Center, Green Bay***

**HOST:
Green Bay Metropolitan Sewerage District**



The Clarifier

Visit our Web Site at www.wwoa.org

Volume 158, February 2005, Page 2



President's Message

Fellow WWOA members:

A little over a week ago I started drafting this next "Message" of mine. My original thoughts were to lead into the "Message" by

focusing on the unusually warm temperatures and subsequent lack of snowfall we had seen this winter so far. Two days later, the Grafton area was shoveling out from a winter storm that dumped 8-10 inches of snow overnight in this part of SE Wisconsin.

Today - just one week after our first big snow storm, this same Grafton area was besieged by daylong heavy rains, thunder, lightning and temperatures in the mid-40's. Two days from now they are calling for an Arctic front to move in bringing with it single digit high temperatures with wind chills well below zero. O.K. - who isn't having fun yet?

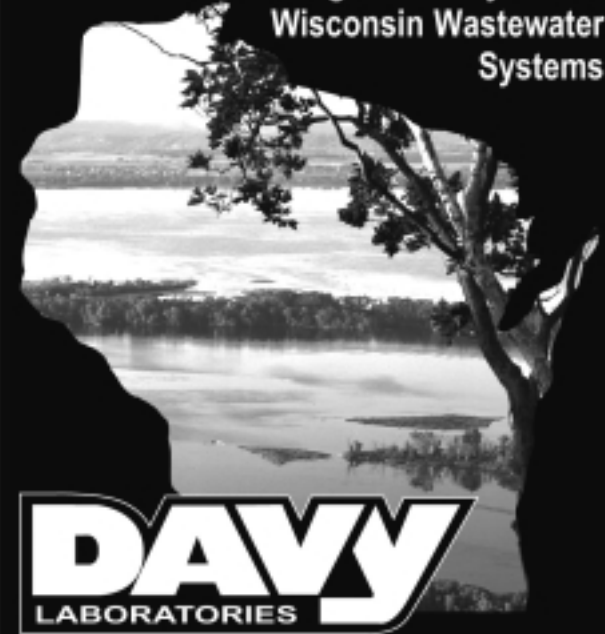
WWOA members should be keenly aware of significant Department of Natural Resources electronic reporting implementation that will be launched in 2005. Primarily these efforts will involve electronic reporting of the CMAR, the DMR and WPDES permit applications.

In particular, the eCMAR will be the first DNR reporting form required to be sent in electronically (pay attention here folks - paper is not an option) and there will certainly be abundant growing pains with its proper use in 2005. CMAR Technical Advisory Committee members were to have pilot tested the new eCMAR in January followed by pilot testing at select WWTPs.

The WWOA is working jointly with Department staff to bring timely eCMAR training to the membership through your upcoming regional meetings and other training opportunities across the state in the months ahead. Our goal is to acquaint everyone with the eCMAR and the proper methods of completing and submitting it successfully. Avoid the last minute rush, stress and hassles; participate in the eCMAR training opportunities ASAP!

The beginning of the new year signals the start-up of WWOA regional meetings and other annually sponsored training events throughout the state in 2005. Regional officers and seminar committee members have been working hard to set-up both informative and interesting meetings in the upcoming year. I truly believe one of the trademarks of this

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great organization is providing outstanding training opportunities at affordable prices for members and non-members alike.

Speaking of non-members, I challenge all employers; particularly you the plant managers and local officials, to actively promote WWOA membership and involvement to your employees in 2005. If they are not members – offer them the opportunity. If they are currently members – assist them with sustaining their memberships. Then take it “to the next level” by allowing them to get out to these training events and network with their peers. The benefits of a WWOA membership are limitless. For a \$40.00 membership fee spread over two years, the cost will easily pay for itself through meetings, seminars and the Annual Conference staff may already be attending as non-members!

This year’s 39th Annual Conference will be held October 4-7, 2005 at the Regency Suites/KI Center in downtown Green Bay. Technical Program Committee Chair Kay Marshall and fellow Committee members are meeting on February 3, 2005 at the Green Bay MSD to start laying the groundwork for another outstanding Conference lineup. 2005 Conference contact information for Housing, Local Arrangements, Spouses & Guest Program and Exhibits can be located out on wwoa.org under the State Conference section.

Winters are a wonderful time here in Wisconsin to experience the great outdoors and all the activities available. Be sure to set aside time for family, friends and yes – even yourself! Whether it is cross-country skiing at one of our many state parks, sitting in an ice shanty jiggin’ for pan fish, snowmobiling down an old logging trail, or spending a few hours at the local sledding hill – enjoy it! Then again, there’s nothing wrong with a warm glowing fireplace, your favorite chair and the latest Clarifier issue either!

In Your Service,

Timothy A. Nennig
WWOA President

RED CLIFF WWTF

Design Criteria

Design Year: 2001	Average Phosphorus Load: 22 pounds per day
Design Population: 1830	Effluent BOD Requirements: 30mg/L
Design Flow: 220,000 gallons per day	Effluent TSS Requirements: 30mg/L
Peak Flow: 550,000 gallons per day	Effluent Fecal Coliform Limit: 400 CFU/100 mL
Average BOD Load: 422 pounds per day	Effluent Phosphorus Requirement: 1 mg/L
Average Suspended Solids Load: 522 pounds per day	pH Discharge Limit: 6.0 to 9.0

The Red Cliff Wastewater Treatment Plant is located along the shores of Lake Superior at the mouth of Chequamegon Bay. The purpose of the new facility is to treat and remove wastes from the water prior to discharging the flow to Lake Superior, protecting the quality of the water in the Lake, and protecting public health. The system is designed to treat 220,000 gallons of municipal wastewater per day. The facility is an Oxidation Ditch, using a treatment process known as Activated Sludge to biologically treat the waste.

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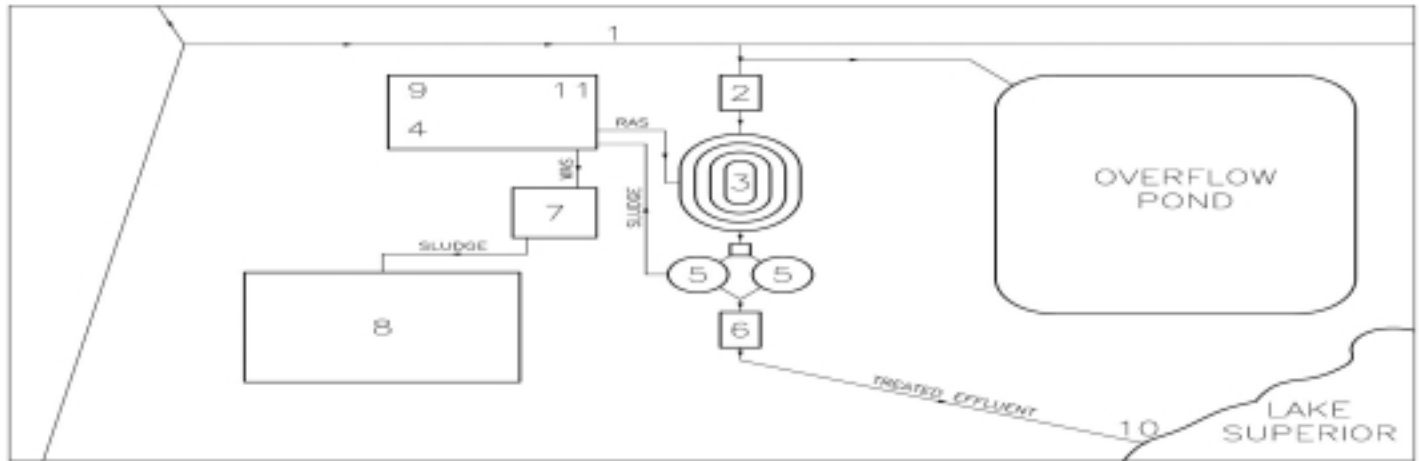
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History

The original plant, a facultative lagoon system, was designed by Indian Health Services and built in the late 1970's. Plant construction on the new facility began in 2002 and continued until 2003, when it first began treating wastewater.

Processes

1. Plant Influent:

Wastewater is conveyed to the new WWTP through gravity sanitary sewers and lift stations. It enters the site from three locations: a sanitary sewer on Merchant Road, a forcemain from the south on Blueberry Road, and a gravity sewer on the north on Blueberry Road. These all combine on the north side of the Pretreatment Building.

2. Pretreatment:

The wastewater passes through a 1 inch bar grate to remove large debris, and then into the Pretreatment Building to a fine screen that removes material larger than 0.25 inch. After the fine screen, the flow is sampled by an automatic sampler, and then passes into a vortex-type grit removal system. After grit removal, the flow passes into a pipe leading into the oxidation ditch.

3. Secondary Treatment:

In the Oxidation Ditch, the wastewater is mixed and aerated by the use of mechanical aerators in the form of rotating discs. The raw wastewater is mixed with microorganisms that feed on the bacteria and organic material. The contents of the Ditch are now called "mixed liquor". The

microorganisms and stabilized organics clump together and form heavier "flock" particles.

4. Pump Room:

In the pump room are the Return Activated Sludge and Waste Pumps, which can either return some of the mixed liquor to the head of the oxidation ditch to "seed" the raw wastewater with microorganisms, or remove (waste) the solids into the digester and out of the system.

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5. Clarifiers:

The Oxidation Ditch effluent flows into two settling tanks, or clarifiers. The flock from the mixed liquor settles to the bottom and is either pumped back to the head of the plant or into the aerobic digester. The clear effluent flows over weirs, down channel, and through a pipe to the disinfection building.

6. UV Disinfection:

The effluent flows through a set of ultraviolet lights that damages the genetic material of any remaining pathogenic organisms, destroying their ability to replicate.

7. Aerobic Digester:

The mixed liquor solids that have been wasted from the activated sludge process are temporarily stored, aerated, and further broken down prior to discharge into the Reed Beds.

8. Reed Beds:

Biosolids from the aerobic digester are pumped to the Reed Beds for storage for 5 to 10 years.

The reed beds both dewater and reduce organic solids and pathogens in the biosolids. The reeds consume and evaporate 90 times their weight in water each day, enabling the beds to dewater quickly. Underdrains carry water that passes through the system back to the head of the plant.

9. Chemical Feed:

An aluminum sulfate, or alum, solution is stored and pumped to the splitter box prior to the clarifiers. The alum combines chemically with the phosphorus in the wastewater, allowing it to be removed along with the biosolids in the clarifiers.

10. Outfall:

The effluent travels by a 12" pipe southeast to a discharge structure 350' into Lake Superior.

11. Control Building:

The control building contains the electronic controls for the plant, the laboratory and offices, the pumps, the chemical room, the generator, and the garage

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THANK YOU

I would like to thank the many operators and utilities that sent flowers, cards, thoughts and prayers to me during the difficult time of the news of Shane's death in Iraq. I really appreciate all of your kind words and deeds that have and continue to bring me much comfort. For those of you that have asked, "What can I do?" I have created a fund through MATC to be used to educate school counselors about apprenticeship programs. If you want to, you can send donations to:

MATC Foundation
Shane O'Donnell Fund
3550 Anderson Street
Madison, WI 53704

Again, thank you for your thoughtfulness and support during this tragedy.

Peg O'Donnell

WISCONSIN WASTEWATER OPERATORS' ASSOCIATION, INC.

Board of Directors Meeting

Monday, October 25, 2004 and

Tuesday, October 26, 2004

**Kalahari Resort and Convention Center,
Wisconsin Dells, Wisconsin**

President Herwig called the meeting to order at 1:00 PM October 25, 2004. All Board members were present except Dale Neis who arrived later. Schreiber not present.

Also present was Gil Hantzsch, chairperson of Local Arrangements.

The minutes of the August 27, 2004 Board meeting were reviewed. President Herwig noted a correction to the room assignments pertaining to the exhibit hall. Under Exhibit Committee it should read Hall A, H and G not A, B and G. Thalke made a motion to approve the minutes as presented with the noted correction. Bond seconded the motion. Motion carried.

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2005 Highlights:

- 16 educational technical sessions
- Over 40 of the industry's top manufacturers
- Accredited by the DNR - credits issued
- Clarifier theory and mechanical design sessions
- Product displays and demonstrations
- And so much more!

Location: Radisson Paper Valley Hotel
& Conference Center
Appleton, WI

Date/Time: May 12, 2005
8:00am - 5:00pm

Cost: Free!



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McKee presented the Financial Statement for Board approval. McKee reported as of September 1, 2004 we have excess revenues over expenditures totaling \$12,126.31.

McKee presented the vouchers 220-231 and 1- 8 for Board approval. After a brief discussion, Kruzick made a motion to approve the vouchers and Financial Statement as presented. Marshall seconded the motion. Motion carried.

COMMITTEE REPORTS

NOMINATIONS - President Herwig reported for Dale Neis. The candidates for office are President -Elect Tom Kruzick, Vice-President Kay Marshall. Neis has received the following nominations for Directors, Jim Thalke, John Bond, Dave Carlson, Bruce Bartel and Dan Tomaro.

PROMOTIONS - Bond reported to the Board we have approximately \$7,131.85 worth of merchandise on hand.

We have added men and women's dress shirts, golf pullovers, camouflage shirts and women's polo shirts.

Bond suggested to the Board for 2005 that we sell the older items at a reduced rate, update the website to include the entire inventory and update website order forms.

MEMBERSHIP - McKee reported we have a total of 2,036 members.

SCHOLARSHIP - Conine informed the Board our \$1000.00 4-year scholarship recipient is Justin Stanek. He is attending U.W. Platteville majoring in Civil Engineering.

EXECUTIVE COMMITTEE - No report.

CLARIFIER - President Herwig reported for Dan Busch. The Committee now has the most recent version of Quark Express, the desktop publishing software used to layout the CLARIFIER.

Busch commented the District is going through some changes. The District would like the committee to

track the time they spend on the CLARIFIER formatting. Busch will provide the Board next April with a cost to prepare the CLARIFIER for printing.

Busch also informed the Board he plans to continue serving with the CLARIFIER until September 2007 assuming all goes well. Busch wanted to make the Board aware of this so they can plan accordingly with the idea of a new editor in the future.

CAREER DEVELOPMENT - Marshall stated the Public Service Announcements for WWOA have arrived. Tom Kruzick is kindly arranging to have 100 copies of the CD made for distribution at the Annual Conference. The announcement has also been sent to the website. Judy Tholen is working on a letter to go out to all the radio stations in the state.

The Committee is working on an article for the DNR magazine.

AWARDS - Nennig provided the Board with a copy of an Awards Banquet Program and also a list of the annual award winners.

OPERATOR TRAINING - Thalke stated the Committee had a very busy year sponsoring three different events at seven different locations around the state.

The first event took place in Oshkosh and later Waukesha, then Madison and finished in Eau Claire. The event was organized by Jack Annis U.W. Extension Stevens Point and titled Mercury Reduction and NR106 Mercury Compliance.



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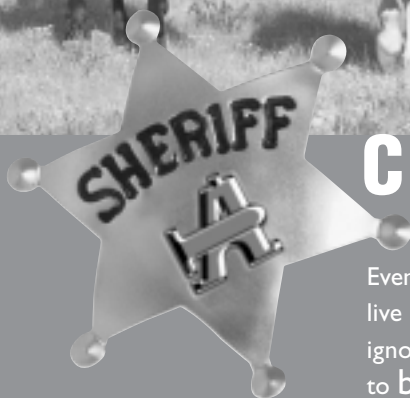
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The second training event was two Wastewater Security Workshops held in Rice Lake and Sussex. The workshops were organized by Julia Riley from the DNR.

The third event was the Trouble Shooting Electric Motors and Controls Seminar held in Green Bay. It was suggested by the Training Committee that this class be considered by the Technical Committee for the 2005 WWOA Pre-Conference.

DIRECTORY - No report.

PUBLICITY - No report.

REGIONAL COORDINATOR - Marshall provided the Board with copies of the Regional Officers Meeting Agenda and the Regional Officers Newsletter.

GOVERNMENT AFFAIRS - President Herwig provided the Board with a tentative schedule for the Government Affairs Seminar. The seminar will be held March 3, 2005 at the Marriott Hotel in Madison.

President Herwig commented the NR149 re-write is currently in limbo. The last meeting of the 149RAC was August 18, 2004. No further meetings have been scheduled.

LIAISON - Kruzick stated the CSWEA Wisconsin Section met on August 11, 2004 at the Nine Springs WWTP in Madison Wisconsin.

WEB SITE - Nennig commented his report is meant to paint a picture of what the web site is facing down the road, the challenges and where we are going with the web site.

The Mail List currently has 34 individuals signed up for participation. Subscribers have been slow to come back on board with mail list participation. Actual usage of the WWOA mail list has been very slow over the past few weeks and months.

The Web Site Committee budget has generally always been self-sufficient meaning that its annual expenses were covered entirely by annual revenue generated by the site.

Web Master Thompson asked Nennig to discuss with the Board if we need to maintain the Web-Site as self-sufficient. There are many avenues we can collect revenue from. Is having the web site remain self-sufficient a concern among the Board and Committee members? A discussion ensued.

Nennig will report back at the December Board meeting with some ideas of what direction we may want to go regarding the web site operating budget.

TECHNICAL PROGRAM - Kruzick stated preparations are complete except for some minor changes to the program.

EXHIBIT COMMITTEE - Strackbein provided the Board with copies of the revised exhibit hall layout with a list of exhibitors. We have sold 126 booth spaces.

The exhibitors will again pay for 1/2 of the coffee breaks and the luncheon. The cost of the exhibitor reception and the social hour before the banquet will also be paid for by the exhibitors.

OPERATORS COMPETITION - Thalke reported five events will be on the roster this year. To date we have six four person paid teams that will be competing this year.

LOCAL ARRANGEMENTS - Gil Hantzsch reported the volunteers for the registration and security have been assigned.

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SPOUSE PROGRAM - Gil Hantzsch commented the tour is all set for the International Crane Foundation. The gift packets are ready.

GOLF OUTING - McKee reported we have approximately 130 attendees registered for the golf outing.

PERMANENT ARRANGEMENTS - No report.

PERMANENT PROGRAM - No report.

RESOLUTIONS AND BYLAWS - No report.

HISTORICAL - No report.

MANUFACTURERS AND CONSULTANTS - No report.

Thalke made a motion to approve the committee reports as presented. Marshall seconded the motion. Motion carried.

OLD BUSINESS

OTHERS - President Herwig read a letter he received from Jim Schreiber. Schreiber wrote he must resign as Director for WWOA. He has been unable to fulfill his duties for a variety of reasons. Schreiber apologizes for the inconvenience and additional burden this has created for the WWOA and the Board of Directors.

President Herwig asked for a motion accepting Jim Schreiber's resignation. Marshall made a motion to accept the resignation of Jim Schreiber. Kruzick seconded the motion. Motion carried.

NEW BUSINESS

REVIEW AND APPROVAL OF THE ANNUAL BUSINESS MEETING - McKee provided the Board with copies of the agenda for the Annual Business Meeting for their review. After a brief discussion, Bond made a motion to approve the Annual Business Meeting Agenda. Conine seconded the motion. Motion carried.



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OTHERS - The Board met with the Kalahari staff in regards to communication problems with room assignments. A discussion ensued. The Board will review the contracts for 2006, 2008, 2010 and 2012 to make sure we have all the exhibit area reserved.

There being no further business Neis made a motion to adjourn. Kruzick seconded the motion. Motion carried.

The meeting adjourned at 11:00 AM on Tuesday, October 26, 2004.

Respectfully Submitted,

Richard D. McKee

Richard D. McKee
Executive Secretary

23rd Annual Spring Biosolids Symposium
March 15, 2005
Country Springs Hotel & Convention Center
Stevens Point
(Formerly Holiday Inn - Holidome)

Why should you attend?

The Symposium provides information on current issues related to biosolids and septage management, enabling municipal officials, plant operators, contractors, and consulting engineers to respond proactively to new challenges. The Symposium continues its tradition of providing a forum for discussion and information exchange by assembling speakers who are recognized experts in their respective fields.

Symposium Agenda

7:15 am Registration Opens
8:15 am Welcome – **Jay Kemp**
8:25 am EPA Policy & Regulatory Update –
Bob Bastian

9:10 am DNR Update – **Greg Kester**
9:45 am NRCS-590 Revision & Impacts to Septage, Biosolids, and Industrial Waste Land Application –
Pat Murphy
10:15 am Break
Moderator: Paul Schlecht
10:30 am Legislative Council Committee on Septage & Wastewater Issues –
Mark Patronsky
11:15 am Fate & Availability of P from Biosolids, Manure, and Fertilizer –
Chip Elliott
12:00 pm Lunch
12:50 pm Morning Panel Question & Answer –
Art Peterson, Moderator
Moderator: Dave Taylor
1:30 pm Using GIS for Site Approval & Application Programs – **Kate Barrett**
2:00 pm NR 114 Update – **Greg Kester**
2:15 pm Break
Moderator: Jim Thalke
2:30 pm UW-Extension Update –
Dick Wolkowski
3:00 pm The Crystal Ball into the Future of Land Application – **Bob O'Dette**
3:30 pm Closing Remarks – **Jay Kemp**
3:35 pm Adjourn

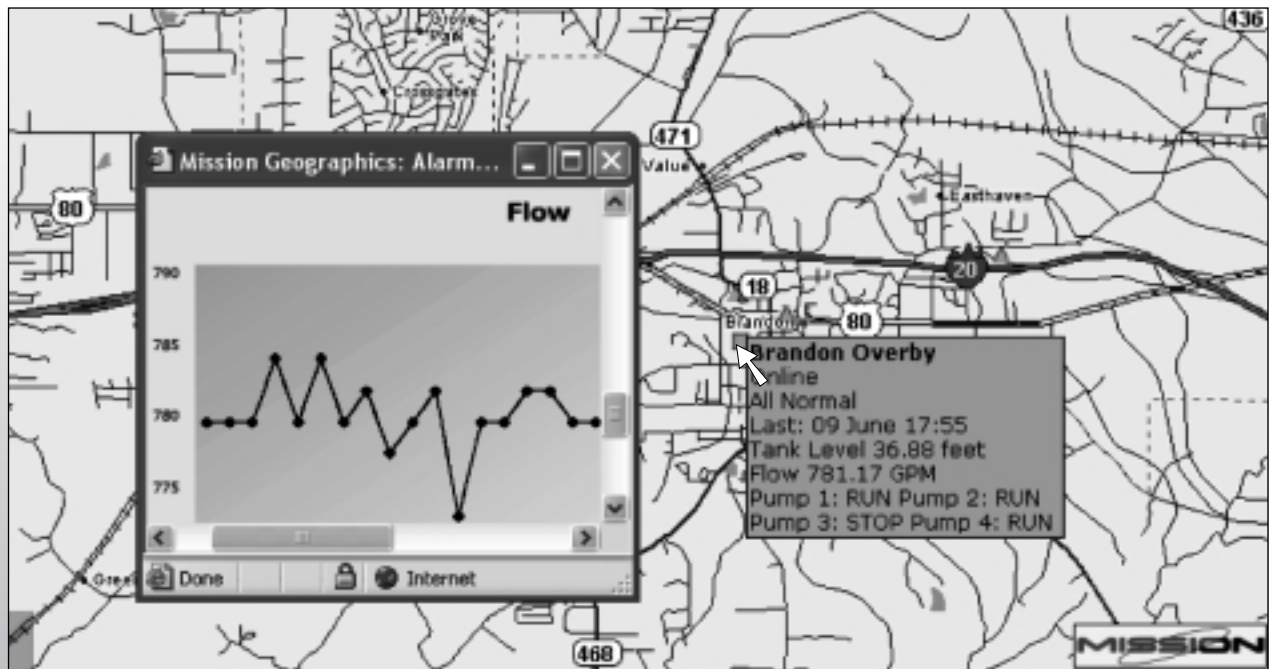
Pre-registration is encouraged! Deadline is Friday, March 4, 2005 and fee is \$45. On-site registration is \$60. Registration fee covers program materials, breaks, and lunch. Make checks payable to WWOA, and mail with registration form to:

Rich McKee
416 Herman Street
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The History of Wisconsin's CMAR

By Tom Asmus / WWOA Historical Committee

What does the state of Wisconsin have that the other states do not? Besides the Packers? The Compliance Maintenance Annual Report, or CMAR as it's known in the industry. For nearly 18 years, Wisconsin's CMAR has been a model of progressive wastewater treatment infrastructure planning and protection. The CMAR was spawned in an era of big spending on treatment works that ultimately fell short due to a lack of planning and foresight. In response, visionaries at the state and local levels created what is today recognized as one of the most progressive mechanisms for promoting clean water in the nation.

During the federally funded "Grant Days" extending from the early 1970's to the early 1990's, billions of dollars in federal funding poured into state coffers to fund municipal wastewater treatment infrastructure. It was a consequence of the 1972 amendments to the Federal Clean Water Act. With newly enacted permit standards, treatment facilities were forced to treat wastewater to higher secondary and even tertiary limits. This meant the addition of biological treatment systems to many primary treatment only systems. Additionally, the State of Wisconsin had a complimentary grant program that pumped even more tax dollars into WWTF construction.

The passage of time would prove that growing pains were being felt as some treatment facilities began to outgrow their design capacities; failing and falling from permit compliance. State regulators, leaders in the WWWOC (today's WWOA), and municipal officials, recognized that the infusion of dollars and technology, without a tool for measuring performance and planning for future needs, left many municipalities with complex compliance problems. In addition, all signs pointed to an end to the grants programs, with talk of replacement with a revolving loan program. The Wisconsin DNR responded by convening a series of workshops to solicit input from wastewater treatment plant operators and local government officials (see photo below). As a result, a multi-disciplinary "Technical Advisory Committee"

was formed to work directly with DNR staff. The committee drafted a plan to study the problem and develop a viable solution. As the WDNR's Roger Larson stated, "We could not allow these failures to happen again."



CMAR Tech Advise Committee

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New Area Code

This was the origin of the compliance maintenance program in Wisconsin. The CMAR would provide both the WDNR and WWTF owners with an objective assessment of the condition of the WWTF. Chapter NR 208 of the Wisconsin Administrative Code was promulgated to require the submittal of the CMAR. A series of indicators of impending problems was identified and a point system was devised to gauge the significance of each. Submittal of the CMAR was to be accompanied by a resolution from the WWTF's governing body in which they acknowledged review of the report. The DNR would be informed of any actions to be undertaken to maintain permit compliance.

By the early 1990's, the DNR recognized that the compliance maintenance program did not adequately address the needs of WWTFs that operated lagoons and groundwater discharge facilities. So, for the second time in CMAR history, a technical advisory committee was formed to advise the DNR on revisions to the compliance maintenance program. This culminated in the first revision to NR 208.

More recently, a second set of revisions was completed to further fine-tune the CMAR. The new CMAR includes the incorporation of a collection system evaluation and electronic submittal. The new revisions became effective January 1, 2005.

The result and recognition of these problems are reflected in today's CMAR. The CMAR promotes reliable wastewater treatment through objective capacity and performance analysis. It serves as a mechanism to prompt proactive planning and promote permit compliance into the foreseeable future. Treatment plant personnel benefit by using the CMAR to promote self-facility evaluation and to put numbers before local government decision-makers. State regulators use the CMAR for facility evaluations, planning upgrades, and to keep in touch with a facility's issue. The key to success of this program has been the multi-disciplinary inclusion from the beginning and a common sense approach.

The photograph is from the initial meeting held to solicit input from wastewater plant staff and DNR regulators on what would soon transform into the CMAR. Shown are Jeff Haack DNR; Ray Schultz,

City of Two Rivers (ret.); Bob Behrens DNR (ret.); Dave Carlson; City of Fond du Lac, and Mike Geurts, City of Kiel.

Thanks to the following individuals who contributed to this article: Jeff Haack, Roger Larson, and Jack Saltes of the WDNR, Dave Carlson, City of Fond du Lac.

WWOA Conference Schedule

- | | | |
|-----------------|----|--|
| 2005 Conference | -- | October 4 - 7
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GOVERNMENT AFFAIRS SEMINAR**Thursday, March 3, 2005****Marriott Madison West, 1313 John Q. Hammonds Drive, Middleton, WI****8:00 Registration****8:20 Welcome/Opening Remarks***Bernie Robertson***3:15 DNR Update***Roger Larson***3:45 Seminar Adjourns - See you next year!****Session Moderator: Jim Kleinschmidt****8:30 Keynote***Water Division Administrator - Todd Ambs***8:50 Annex 2001***Chuck Ledin***9:20 Effluent Reuse Opportunities***Christmas Mountain - Kim Wollner**Heart of the Valley - Mark Surwillo**Madison Met Perspective - John Schellpfeffer***10:15 Morning Break****10:35 Endocrine Disrupting Compounds***Bill Sonzogni***11:05 Federal Nutrient Regulations***Jim Baumann***11:35 NRCS 590 Land Nutrient Management Standards***Amy Tutwiler***12:00 Lunch****Session Moderator: Linda Vogen****1:00 Environmental Management Systems for Biosolids Program***Tim Williams***1:30 State Budget Deficity: Closing the \$1.6 Billion State Deficit***Dan Thompson***2:00 Afternoon Break****2:20 DNR Sanitary Sewer Overflow Strategy***Duane Schuettpelez***2:50 Bacteria Standards***Mike Doran***Pre-Registration: \$55.00 (before 2/16/05)****Registration After 2/16/05: \$65.00**

(both fees include program materials, breaks and lunch)

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W W W . H A W K I N S I N C . C O M

TOM ZAGER RETIRES

Tom Zager has retired after 36 years in the wastewater profession. He went to UW-Stevens Point in '67, '68 and first semester in '69. His interest was natural resources and the bars. He also spent time at the Steven Point Treatment Plant learning about wastewater and sewer work. He worked for the City of Wis. Rapids the summer of '68 on sewer construction doing separation work until their money ran out and then went back to Point. The City called him back in '69 to work on sewer separation. They had more money from the federal govt. to work on the sewers and they had started construction on a new 4 MGD Treatment plant. When the time came to go back to school later that year they asked him to stay on.

Tom continued to do ditch work until the plant started up. At the Wastewater Dept he started as an asst. mechanic and ran the old treatment on the west side. In 1973 the force main under the Wis. River was completed and the old plant was shut down. He then worked as relief operator and asst. mechanic. He became a full operator later that year and worked shift work until 1983. The Superintendent had some health problems so he was given the Chief Operator position. In 1988 he was named Superintendent, his present

position.

Tom has been the chairperson, secretary and treasurer of the North Central District and recently served on the District's Steering Committee. In 1994 he was honored with the WWOA Operator of the Year award for the North Central District, and in 2003 received the State Operation Award from Central States Water Environment Association.

Tom has always believed in donating his time as a United Way volunteer, City ethics committee member, three foster children, high school and tech school volleyball coach, Wisconsin Ducks Unlimited District chairman, Wood County Social Services Citizens Advisory Committee member and etc.

Tom says he hopes to remain active in the industry. In fact the City has hired him to head up the construction and installation of the new control and monitoring system for the Wastewater Plant and lift stations. He says it looks like he'll get a couple of months off and then will be starting the new project.

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Contact: Rich Gannon

WISCONSIN WASTEWATER OPERATORS' ASSOCIATION, INC.**Statement of Revenue****Cash Basis Ending August 31, 2004**

Acc. Number	REVENUE	CURRENT REVENUE	BUDGETED REVENUE
42010	Membership Dues	\$34,840.00	\$33,000.00
42020	Co-Sponsored Seminars	\$3,470.50	\$2,000.00
42030	WWOA Seminars	\$1,110.00	\$2,000.00
42040	Operators Competition	\$600.00	\$600.00
42050	CLARIFIER Advertising	\$22,425.00	\$21,000.00
42060	Annual Conference- Registration	\$54,011.00	\$50,000.00
42065	Annual Conference- Spouses	\$4,045.00	
42070	Exhibits	\$14,331.00	\$13,000.00
42080	Interest	\$1,537.74	\$2,000.00
42090	Promotional	\$1,378.65	\$1,500.00
42100	Miscellaneous	\$85.00	\$200.00
42110	Regional Charter Fees	\$300.00	\$300.00
42120	Regional Insurance	\$122.05	\$150.00
42130	Web-Site	\$4,200.00	\$3,000.00
42140	Pre- Conference	\$1,230.00	\$500.00
Total Cash Receipts		\$143,685.94	\$129,250.00

Statement of Expenditure**Cash Basis Ending April 31, 2004**

Acc. Number	EXPENDITURES	CURRENT EXPENDITURES	BUDGETED EXPENDITURES
51000	Office	\$26,724.39	\$28,180.00
52000	Board of Directors	\$7,475.25	\$10,950.00
53000	WWOA Seminars	\$395.82	\$1,900.00
54000	CLARIFIER	\$23,646.97	\$19,650.00
55010	Nominations Committee	\$0.00	\$0.00
55020	Membership	\$2,610.13	\$3,200.00
55030	Directory	\$0.00	\$100.00
55035	Career Development	\$722.14	\$2,000.00
55040	Publicity Committee	\$0.00	\$0.00
55050	Historical	\$1,033.93	\$800.00
55060	Governmental Affairs	\$0.00	\$0.00
55070	Resolution Committee	\$0.00	\$0.00
55080	By-Laws Committee	\$0.00	\$0.00
55090	Awards	\$1,063.07	\$1,000.00
55100	Permanent Arrangements	\$937.49	\$2,000.00
55110	Permanent Programs	\$0.00	\$0.00
55120	Scholarship	\$1,000.00	\$1,500.00
55130	Liaison Committee	\$262.05	\$300.00
55140	Regional Coordinator	\$499.98	\$700.00
55150	Tuition Aid	\$300.00	\$400.00
55160	National Operations Competition	\$0.00	\$400.00
55165	Miscellaneous	\$0.00	\$100.00
56000	Annual Conference	\$53,597.86	\$56,499.00
56350	Pre- Conference	\$293.34	\$300.00
57000	Web - Site	\$2,435.06	\$2,900.00
58000	Exhibits	\$6,387.15	\$6,200.00
59000	Promotional Items	\$2,175.00	\$3,050.00
	Total Expenditures	\$131,559.63	\$142,129.00
Excess Revenue (Excess Expenditures)		\$12,126.31	(\$12,879.00)

WISCONSIN WASTEWATER OPERATORS' ASSOCIATION, INC.
Cash Basis Ending August 31, 2004
Balance Sheet

Acc. Number	ESCROW ACCOUNT TRANSACTION	
43000	Escrow Accounts Increases	\$32,106.69
61000	Escrow Accounts Decreases	\$32,679.27
Excess Escrow Revenue (Excess Escrow Expenditures)		(\$572.58)
	Cash on Hand, August 31, 2003	\$98,270.55
	Excess Revenue (Excess Expenditures)	\$12,126.31
Excess Escrow Revenue (Excess Escrow Expenditures)		(\$572.58)
		\$109,824.28
	Cash in Bank, Checking Account	\$13,731.84
	Money Market Account	\$14,173.83
	Certificate of Deposit Account	\$81,918.61
	Total Assets	\$109,824.28
LIABILITIES AND FUND BALANCE		
	LIABILITIES	
	FUND BALANCE	
	Reserved (Escrow Accounts)	\$14,244.84
	Unassigned	\$95,579.44
	Total Fund Balance	\$109,824.28
	RESERVED FUND (Escrow Accounts)	
	Southern Region	\$589.92
	Southeast Region	\$358.33
	Lake Michigan Region	\$586.68
	West Central Region	\$432.94
	North Central Region	\$2,893.16
	Northwest Region	\$177.87
	Manufacturers & Consultants	\$5,601.20
	Golf Outing	\$302.17
	Governmental Affairs	\$0.00
	WWEA	\$698.97
	Sludge Symposium	\$2,603.60
	Total Reserved Funds	\$14,244.84

Richard D. McKee

Richard D. McKee
Executive Secretary

OPERATOR COMPETITION

1st Place - Lake Michigan



Lagoon Squad

(L to R) Tom Kujava, Frank Bonney,
Pete Dombrowski, Bill Ciske

2nd Place - Lake Michigan



Grit Heads

(L to R) Jeff Smudde, Eric Storm, Mike Gelhar,
Dan Vanden Avond

3rd Place - Southeast



Fecal Fanatics

(L to R) Michael Gagne, Tim Zimmerman, Tom
Dickson, Jim Bergles

Southern



Crappers

(L to R) Skip Poster, Eugene Doro, James Birch,
Darrick Marchwich

Southeast



Wastewater Warriors

(L to R) Darrell Russell, Kory Holmes, Rich Kositzky,
Chris Winkowski

Southeast



Wizards of WIZ

(L to R) Wade Barkstrom, Tom Tetzlaff, Kathy
Laubinger, Bruce Rabe

OPERATOR COMPETITION

Judges



Back (L to R) Joan Hawley, Frank Tiefert, Greg Alden, Tom Steinbach
Front (L to R) Monty Baker, Jeff Bratz, Dan Tomaro, Paul Lange, Pete Wachs
Not Pictured: Gordy Koch

Operator Competition Teams and Judges



Wastewater Utility Manager

The City of Clintonville (population 4,700) is accepting applications for the position of Wastewater Utility Manager. Qualifications: Associate Degree or Bachelor of Science Degree in Wastewater Treatment or related field preferred. Applicants must possess or have the ability to gain within one year a Wisconsin Grade 4 a,c,e,i,j operator license. This individual must have or gain a Commercial Drivers License within 6 months of hire. This position will oversee all aspects of the Wastewater Utility including but not limited to, plant operations, facility planning, facility construction, record keeping, plant maintenance, lab operations, lift station maintenance, sewer system maintenance, bio-solids management, industrial pretreatment program, safety. Computer skills a must. This position oversees two full-time operators. Pay range: \$40 – \$50 K DOQ. Full benefit package includes WI State Retirement and Health Insurance. The successful applicant will be required to live within 12 miles of the Clintonville City Hall. Submit application to City of Clintonville, Attention: Lisa Kotter, City Administrator, 50 Tenth St., Clintonville, WI 54929 no later than Wednesday, March 9 (715) 823-7600 www.clintonvillewi.org clintonville@wcedc.org.

THE 18th ANNUAL COLLECTION SYSTEM SEMINAR

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2005 Clarifier Deadlines

<u>Issue</u>	<u>Submittal Due Date</u>
April 2005	March 11
June 2005	May 13
September 2005	August 12
December 2005	November 11



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December 29, 2004

To Our Good Friends and Valued Customers:

With the advent of 2005, the team of Technical Equipment Sales, Inc. and ITT Flygt Corporation will be changing. Effective January 1, 2005, ITT Flygt Corporation will assume the marketing responsibilities for the Municipal Engineered Sales marketing in Wisconsin and Western U.P. of Michigan.

We will work together throughout 2005 to assure a smooth transition. This change in marketing will not affect open orders with Technical Equipment Sales, Inc. Active current projects in the planning or design stage will be assumed by ITT Flygt Corporation. Technical Equipment Sales, Inc. will be available, not only to you, but to Flygt to answer any questions and assist with these projects.

We, as a team, are exceedingly grateful for your trust and valued business over the past 38 plus years. We pledge to continue providing you with highest level of quality products and service.

If you have any questions feel free to contact either one of us.

Very truly yours,

TECHNICAL EQUIPMENT SALES, INC.

A handwritten signature in black ink, reading 'Stephen R. Resan'.

Stephen R. Resan
President

ITT FLYGT CORPORATION

A handwritten signature in black ink, reading 'Robert A. Wright'.

Robert A. Wright
Midwest Regional Manager
(800) 232-1417

Honoring Dr. Crabtree

As I read and appreciated both the letter about receiving the Bernauer Award and the person, Wally Thom, I was inspired to put my thoughts together about receiving the Crabtree award. I looked up Koby Crabtree in the internet and found an article from the Clarifier. I excerpted the following two paragraphs:

“Dr. Crabtree was born in Japan and was a survivor of the atomic bomb attack on Hiroshima. He moved to this country in 1945. His formal education consisted of a B.A. in Chemistry from Ohio Wesleyan University (1958), a M.S. in Bacteriology (1963), a Ph. D. in Bacteriology and Civil engineering from UW-Madison (1965). He joined the UW-Marathon Center in Wausau in 1966. Dr. Crabtree was Chairman of the Department of Biological Sciences from 1974 until 1993. He was made an Honorary Member in 1986 in recognition of his never ending support of the wastewater profession and the WWOA.

In Japan, a teacher is called "sensei", a guide who follows the development of his students

far beyond the classroom. Dr. Crabtree exemplified this same selfless serving to his students and the wastewater operators of the state. He was a "teacher's teacher" who kept in touch with current developments in his field, yet was never too busy to offer advice over the phone to a operator who had an activated sludge problem. In everything he did he was knowledgeable, thorough, and caring. Transfer of information and more importantly, understanding the information were of the utmost importance to him. His presentation to Wastewater operators were not only enlightening but at the same time extremely entertaining. He was without doubt a "Sensei" or "Master" in the wastewater profession.”

I like the comparison to “sensei” because it seems to really convey what Koby was about. I remember attending an advanced activated sludge course presented by Ken Maki and Koby Crabtree in Wausau in the early 70's. It was not just a quality training program, but also an opportunity to meet and learn



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with two individuals who were warm and sincere and really cared about their students. That experience set in my mind a standard for training that I have attempted to live up to ever since. It was and is a high standard and over the years I occasionally missed my mark. But knowing people like Ken and Koby, inspired me to get back up and try again!

I am honored to receive this award but feel more honored to be part of a classy organization like WWOA that would think to honor Koby Crabtree by giving an award in his name.

In the "sensei" tradition, we are the product of all our friends, family, teachers, trainers, and coaches. I think of receiving the Crabtree award as a way of recognizing all the quality trainers and educators I have had the opportunity to work with. When I think of the people who helped me over the years, I think of A. W. "Bud" Tandy, Professor Lawrence Polkowski, Ken Maki, Koby Crabtree and hundreds of operators I have had the opportunity to work with. I have also learned a great deal by working with many DNR employees. I have had the opportunity to work with include A. W.

"Bud" Tandy, Ralph O'Connor, Tom Mickelson, Charles Kozel, Harold Erickson, Stuart Durkee, Tom Mugan, Roy Lembcke, and many others. I have been especially helped, encouraged and supported by my long term friendship with DNR engineer, George Osipoff.

So how do we adequately honor all that has gone on before us? By continuing what we are doing -- advancing our profession, sharing our learning, and helping others join in on the joy of discovery and learning about water and wastewater treatment.

Wally, it may have taken a while for you to find your words but it was worth the wait! I may forget occasionally; but the passion for the industry demonstrated by people like you, and all the others I mentioned earlier, is what really helps keep me and many others going! To me, that is what honoring George Bernauer and Koby Crabtree is really all about!

THANK YOU

Glenn Smeaton

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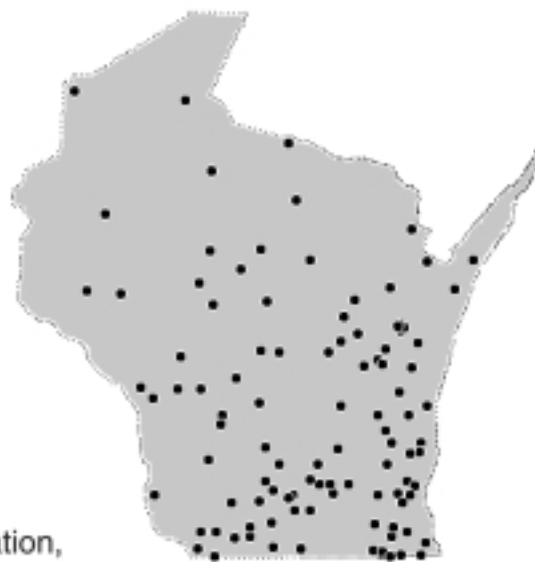
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**10th Annual Central States Water Environment Association Education Seminar
Extreme Activated Sludge: What's Out There Now?
April 5, 2005**

Monona Terrace Convention Center, Madison, Wisconsin

As regulations become stricter and budgets become tighter, wastewater treatment professionals are being asked to do more with existing facilities or are finding it necessary to consider alternate treatment technologies. Plan to attend the 10th Annual Central States Water Environment Association (CSWEA) Education Seminar at the Monona Terrace Convention Center in Madison, Wisconsin to hear the latest from national experts on new and emerging technologies for capacity enhancement, wet weather treatment, advanced treatment and tools that can be used to optimize process control.

Lodging

Lodging is available at the host hotel, the Hilton Madison Monona Terrace located at Nine East Wilson Street, Madison, Wisconsin, phone (608) 255-5100. A limited number of rooms have been reserved at conference rates of \$135 per night for single or double occupancy. Rooms will be held until March 4, 2005, and will be filled on a first-come, first-served basis. For reservations, please call the Hotel toll-free at 1 (866) 403-8838 and indicate your affiliation with the Central States Water Environment Association Education Seminar in order to obtain the

conference rates. Parking is available at the hotel for \$10 per day or in nearby municipal ramps for a fee.

Seminar – April 5

7:20-7:55 a.m.	Registration and Continental Breakfast
8:00-8:10	Introduction and Welcome Jim Roth, CSWEA President
8:10-8:40	Emerging Wastewater Treatment Challenges - Glen Daigger, CH2M HILL
8:40-8:50	Questions/Answers and Transition
8:50-9:30	Stress Management & Operational Control and Design for Wet Weather Flow, High Loads and Low Temperatures Eric Wahlberg, Brown and Caldwell
9:30-9:40	Questions/Answers and Transition
9:40-10:10	Wet Weather Policy Regarding Blending Peter Swenson, USEPA Region V
10:10-10:20	Questions/Answers
10:20-10:40	Morning Break
10:40-11:10	CSO High Rate Treatment Processes and Performance George Zukovs, XCG Consultants Ltd.
11:10-11:20	Questions/Answers and Transition



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11:20-11:50 Integrated Fixed Film Activated Sludge (IFAS) A Solution to Nitrification and Land Space Limitations
Kenneth D. Rutt, Broomfield, CO

11:50-12:00 Questions/Answers and Transition

12:00-12:55 Lunch

1:00-1:40 Membrane Bioreactors for Wastewater Treatment: Status and Case Histories
Glen Daigger, CH2M HILL

1:40-1:50 Questions/Answers and Transition

1:50-2:20 A Case Study: Utilization of a Membrane Bioreactor for Advanced Treatment of Food Processing Wastewater
Robert D. Pharmer, Pharmer Engineering

2:20-2:30 Questions/Answers and Transition

2:30-2:50 Afternoon Break

2:50-3:20 Alternatives to DO Measurement for Activated Sludge Process Control
How I Learned to Quit Worrying and Love ORP
J. Stewart Shaffer, Royce Technologies

3:20-3:30 Questions/Answers and Transition

3:30-4:00 FISHing in Activated Sludge
Daniel Oerther, University of Cincinnati

4:00-4:10 Questions/Answers

4:10 Closing Thoughts and Seminar Adjournment

Registration Fee: (Includes continental breakfast, lunch, refreshments and proceedings.)

Fee per person by	<u>March 18</u>	<u>After March 18</u>
Full	\$150	\$175
Student	\$20	\$25

Lunch will not be provided for those registering after March 28 or on-site. No refunds will be given after March 28. Make check payable to: Central States Water Environmental Association, Inc. Mail form and check to:

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**Lake Michigan District
November 11, 2004
Marinette, Wisconsin**

The November 11, 2004 Lake Michigan District meeting was held at the Best Western in Marinette, Wisconsin. A total of 65 people attended. Chairman Bruce Bartel called the meeting to order at 9:00 a.m., thanking Ayres Associates for the rolls, refreshments, and door prizes and thanking Warren Howard, from the Marinette WWTP, for making the local arrangements.

Bruce began the meeting by reading the minutes of the August 19, 2004 meeting and the Treasurer's Report. A motion was made to approve the minutes and Treasurer's Report which was seconded and approved.

Under Old Business, Bruce began by introducing Kevin Skogman of the Heart of the Valley MSD, who will be taking over as Chairperson in February 2005, and Ron Austreng of the Village of Hortonville, who will be the Vice-Chair. The two LMD operator competition teams, along with coach Kevin Skogman, were recognized for taking first and second place at the WWOA conference. The first place team, LaGoon Squad, consisted of Tom Kujava and Frank Bonney of GBMSD, Bill Ciske of Hortonville, and Pete Dombrowski of Manitowoc. The second place team, the Grit Heads, consisted of Jeff Smudde and Dan VandenAvond of GBMSD, Mike Gehlar of Oshkosh, and Eric Storm of Manitowoc. Great Job! Anyone interested in participating next year should contact Ron Austreng. Bruce then informed the group that Larry Lambries of Two Rivers was chosen as LMD Operator of the Year. Congratulations Larry! It's not too early to start thinking about nominating somebody for next year. Nomination forms should also be sent to Ron.

There being no New Business, Bruce proceeded directly to the Announcements, beginning by introducing Pete Conine. Pete is the Regional Coordinator on the WWOA Board of Directors. Pete welcomed Bruce to the Board of Directors, and noted that the next annual conference will be in Green Bay, October 4 – 7, 2005. He also noted that the conference in Wisconsin Dells this past October had a total

attendance of 998, with 140 vendors. Pete is also the scholarship coordinator and he briefly reviewed the scholarships and tuition aid that are available through the WWOA. He also made a pitch for the WWOA website, and informed the group that Bruce is the chairman of the website committee.

Next, Bruce announced a job opening at the Oshkosh WWTP.

Next up were three announcements by the DNR. Jeff Haack informed the group that Michelle Lehner has been hired as a regional septage coordinator working out of the Oshkosh office with the same phone number as her predecessor. Bob Hannes announced that the DNR has sent questionnaires to municipalities to complete the Needs Survey and emphasized that it is to everyone's advantage to complete and return that survey so that adequate



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funds are budgeted. And finally, on a sad note, Jack Saltes informed the group that the son of Peg O'Donnell, a US Marine, had been killed in action in Iraq.

Ending up the announcements, Bruce advised of the following regional meetings for 2005:

Feb. 17th in Hortonville

May at Marion

August in Door County, hosted by Egg Harbor

November in Manitowoc

Bruce then entertained a motion to adjourn the business meeting. Motion was carried and seconded. The business meeting ended at 9:25 am.



Doug Oitzinger, Mayor, City of Marinette

City of Marinette Mayor, Doug Oitzinger, welcomed everyone to Marinette and recognized the veterans in the group. A fitting welcome on Veterans Day.

The first technical presentation was an introduction to the eCMAR, the electronic Compliance Maintenance Annual Report, by Jack Saltes of the Wisconsin DNR. Jack especially encouraged everyone to log on to the WAMS system and get a user ID and password. Don't forget them!

After a short break, Tim Barnett of Ayres Associates gave the second presentation, entitled "GISing Your Utilities." He described the benefits of having utility information such as manhole or fire hydrant locations, stored in a geographical information system. And he described how utilities can get started using aerial photography.

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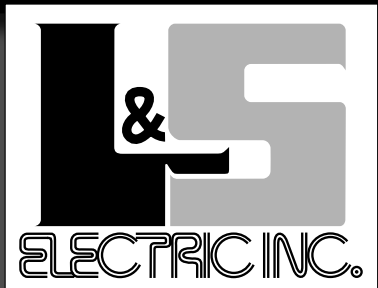
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Next, Daren Lucas and Jerrad Murphy of Calpine Corporation gave a presentation regarding the reuse of wastewater treatment plant effluent for electric power generation. At this time, Calpine is constructing a power plant north of Kaukauna that will be using effluent from the Heart of the Valley MSD's treatment plant for cooling and internal use. They described water use within a gas-fired steam electric plant, and the treatment needed for that water.

After lunch, Joan Hawley of Superior Engineering provided the final technical presentation, with an update on CMOM regulation – that's Capacity, Management, Operation and Maintenance of the sewer collection system. Joan mentioned that many communities are already performing many of the proposed requirements, but documentation may be missing.



Warren Howard and Dale Marsh

Dale Marsh of Ayres Associates then gave a history of the Marinette WWTP and the plant introduction. Warren Howard of the Marinette WWTP thanked everyone for attending and welcomed the group to tour the wastewater treatment plant. Bruce concluded the meeting by thanking Ayres Associates for sponsoring the meeting, Warren Howard for hosting the meeting, and Robert E. Lee & Associates and Hach Company for providing door prizes. The meeting adjourned and DNR credit slips were handed out.

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



Airforce Sewer Treatment, Iraq

By Jim Bergles



*407th AEG Main office
"The Plumbing Shop"*

Some of you who know me would know how I came about to put this article together. For the rest, here is the short overview. I have a friend who was stationed in Iraq. By the time my letter caught up with him, he was already in Japan, but he gave the address of the unit where he came from. After a package was sent over, a surprise email came back. I have been in

contact with SmSgt Bryan Palmer, who I found out helps run a "small" scale waste treatment facility for the Airforce. I asked him if he wouldn't mind answering questions for an interview. He and his crew were happy to. They also emailed some pictures that are all to familiar to a wastewater operator. Here they are, enjoy.

- 1) When you arrived there what was the first real challenge you had with the treatment plant?

Ans. Right after we arrived, the main lift station that forces the wastewater out to the drying beds malfunctioned. When we pulled the two pumps from the pit and found one of the pumps float system was caked with soap and grease scum; the other was plugged with an empty water bottle. Once the obstructions were cleared everything operated as expected.



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- 2) Did you have to construct any of the collection system or plant or repair it?

Ans. We have had to replace sections of the piping; some of it is above ground and the people here not realizing that they should not walk in the area have stepped on the piping and broken it on several occasions. We maintain the system for the Coalition Members and the ground in the Dutch and Italian compounds is very low and there have been pump malfunctions and broken piping in their areas. When this has happened it is mainly because of power outages; if we do not get the back up generators on line quick enough the Dutch and Italian personnel are deep in.....well I think you get the picture!!!

- 3) Is this plant temporary or long term. Are any locals involved with the operation also?

Ans. The present set up has all of the appearances of being long term as the US government is attempting to obtain 79 year leases. This set up is entirely what is known as "HARVEST FALCON" assets. They are intended to be temporary but no one seems to be in a hurry to make the decision to construct a permanent waste plant. When I saw how tenuous the situation was when we first took over, I informed our Commander, LTC Casson, that with the projected growth of the base population something was going to need to be done. When we first arrived, it was only Tent City, Coalition

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Member and the Dining Facility assets that were on the system; but since we have arrived here, there has been 3 more Army Living Areas added onto "OUR" system!!! The lines from the last lift station out to the drying beds are on 6 inch to start with and they were then past what I would classify as "maximized"!!! I returned to LTC Casson and reiterated my earlier warning. I am not sure where we stand at the present time; however, I fear that it will soon be "knee deep"!!!

4) Is your flow all military or residential or mixed?

Ans. Our system flow at the present time is all military but it does include our living areas, the dining facility and the local "Pizza Hut" and "Burger King" restaurants.



Installing water supply tank for the Firedawgs

5) "My attempt at humor." Is the BOD strength stronger from the officers latrine or the enlisted personals? Feel free to elaborate.

Ans. Since we all tend to "bomb the harbor" from the same carrier fleet I really cannot differentiate between officer and enlisted!!!

6) Do you operate a lab and what do you test for? Also what are you average numbers for your tests?

Ans. At the present time, all we have is our drying beds to handle the system flow; we run no laboratory tests of any kind. Our present system is limited and shall we say "very primitive"!!!

7) What does your whole plant consist of?

Ans. The entire system consists of the waste piping from our latrine and shower trailers, the dining facility and the Army Living Areas through 2 very small lift stations in Tent City to 1 slightly larger lift station that forces the waste to the drying beds.

8) Do any of you plan to continue in the waste water field when you get out? Or are you lifers 20 and out?

Ans. Most of the people that are in the Utilities Shop (Plumbers) plan to carry on for the rest of their military careers but there are a few of us that will be retiring in the fairly near future. We do like what we are doing in this field; taking a lot of "CRAP" from everyone (my attempt at humor) but at the same time, it is very gratifying to be able to take extremely mis-matched fixtures, fittings and repair parts and make sure that the waste winds up in its intended final destination!!!

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Our system is very primitive and rudimentary; but it does however work quite well!!! The evaporation rate at the present time is not near as high since the temperatures have dropped due to the rainy season. During the warmest time of the year when the temperatures are in the 120 to 135 degree Fahrenheit range the burn off rate is quite high!!!

I hope that my ramblings have been helpful to you.....Later

Palmer E Bryan, SMSgt, USAF
407th AEG / ECES / CEOU

- 9) When you have to go out in the field does some one have to stand guard over you for security reasons? Is it as bad as a M-16 in one hand and a pipe wrench in the other?

Ans. For the most part, all of our assets are within the base perimeter; however, we do deliver potable water outside of the inner perimeter to the local contactor operations (ie..... the concrete plant and the construction contractors). If we have to go outside of "The Arches" as the front gate is known due to the arches over the entrance; we are required to wear our body armor, Kevlar helmet and be accompanied by an "armored humvee" fully manned!!! We have also in the past, went out to the local Bedouin village and set up primitive filtering systems to improve the quality of their drinking water; that however, has been brought to a halt by orders from Lt Gen Buchanan, the CENTAF Commander.

- 10) If there was one thing you wish you had to run the plant there, what would it be?

Ans. If I could have just one thing to improve the operation here, it would be a complete waste water plant. Our current system is just woefully inadequate by anyone's standards.

- 11) You had mentioned earlier that you have drying beds. If one took a direct hit from a mortar how big would the splatter pattern be with a fresh load in it?

Ans. Our drying beds are roughly 75 feet wide by 300 feet long by 4 feet deep (there are a total of 13 beds but only 7 of those are in Air Force under USAF control) so a direct hit by a mortar round would create quite a "stir" right at ground zero but not much else due to the fact that they are approximately one mile away from our location.

"If you have integrity, nothing else matters; if you do not have integrity, nothing else matters!!!"

The end of January this unit's tour is up. I would like to wish them the best of luck and a safe trip home. You're all in our prayers.

James T. Bergles, Eagle Lake Sewer Utility



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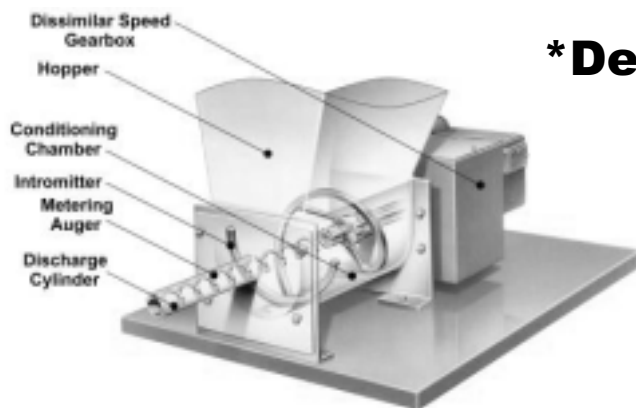
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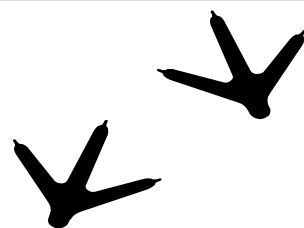
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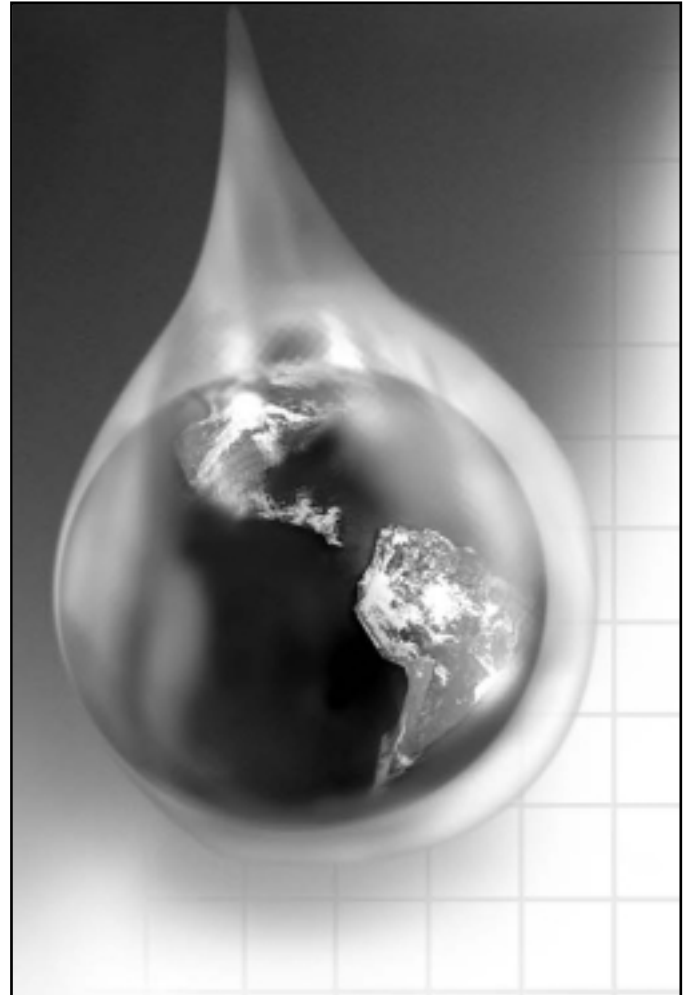
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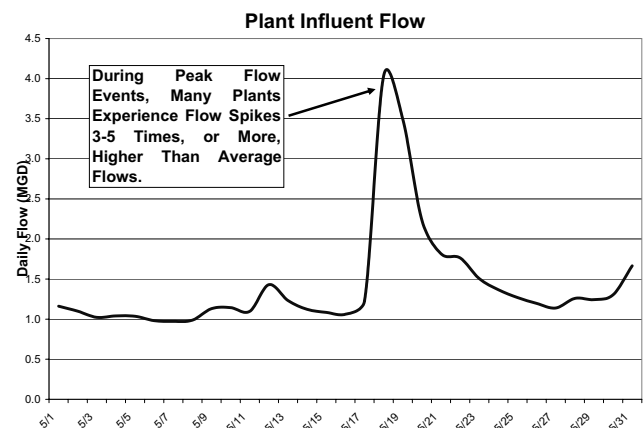
Maximizing Secondary Treatment Wet Weather Capacity Part 1 (of 5): The Big Picture: Peak Wet Weather Capacity Considerations

Bill Marten, Wastewater Process/Operations Engineer
Triad Engineering Inc.

This is the first of a five-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 will include:

- Part 1: The Big Picture: Peak Wet Weather Capacity Considerations*
- Part 2: Optimizing Mixed Liquor Settleability*
- Part 3: Optimizing Secondary Clarifier Performance*
- Part 4: Minimizing Clarifier Loadings*
- Part 5: Putting It All Together: Integrated Strategies for Success*

Many wastewater utilities are faced with the challenge of how best to handle peak flows that occur during wet weather conditions, such as from heavy rainfalls or rapid snowmelt. Whether due to combined sewers, leaky sewer systems, illegal hookups or other causes, the end result of such weather conditions is often a dramatic increase in plant flows.



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When such flow increases occur, plant staff are faced with the dilemma of trying to fully treat as much flow as possible while also protecting plant equipment and processes. With ever-increasing public awareness/intolerance of, and media focus on, sewer overflows and treatment bypasses, operators are under a lot of pressure to push as much peak flow through their treatment plants as possible. However, they can't be irresponsible in this endeavor, because pushing too much flow through a plant could have disastrous consequences such as equipment damage from flooding or a serious process upset, either of which could take weeks or months to recover from. So what's an operator to do?

One answer is building additional facilities to handle the worst-case peak flow event. This option isn't usually practical or reasonable, though, for a number of reasons. First, it would likely be so expensive that most communities couldn't afford it. Second, even if affordable, the expense to build full treatment capacity to handle events that may occur only a few times a year (or less), would probably be considered a questionable use of ratepayers' money.

Another option is to make modifications, both constructed and operational, to existing facilities to maximize their potential to handle as much flow as possible. Often such modifications can be made at very low, or no, cost, while providing significant increases in peak flow capacity. The key to deciding what modifications to implement involves understanding what you've got, how what you've got works, and how what you've got may be modified to work better. As with most things, it all starts with basic fundamentals.

Basic Considerations

Before jumping into modifying one's activated sludge facilities or operations, an operator first needs to understand some bigger picture issues including:

The magnitude of the problem. What kind of weather events produce high flows, and how high do flows get? While it is impossible to predict every peak flow event, and how high flows might get under all peak flow conditions, through good record keeping and experience operators can develop a feel for their

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system, and what kind of flow increases they usually see under a variety of weather conditions. This experience can serve a long way in terms of defining the problem, and the peak flow capacity that will be sufficient to handle most conditions. And if one's collection system is too large or complicated, or if a new operator doesn't have the experience base to define the range of peak flows to expect, the good news is that there are tools and resources available to help. Examples include performing sewer system monitoring programs and developing sewer system models that can be used to predict flows and loads throughout all areas of collection systems, both large and small.

Plant Hydraulics. When considering what kind of peak flows you want to handle through secondary treatment, you need to be sure the rest of your plant can handle such flows as well. Depending on your plant processes and specific treatment facilities, there may be one or more potential hydraulic bottlenecks that need to be checked to confirm your plant's hydraulic, flow-through capacity. Key places to focus on include influent pump stations, preliminary treatment facilities (particularly if you have fine screens), disinfection facilities (particularly with UV disinfection units), and the overall hydraulic grade line through the plant, with a key consideration being the water elevation available between successive treatment units.

Other Process Impacts. Inter-related with hydraulic capacity through upstream and downstream processes, you also need to consider if your peak flow target will have an impact on the actual performance of other processes. While the efficiency of screening, grit removal, and primary clarification will likely all decrease under peak flow conditions, probably the most important process to consider in this regard would be disinfection. This is because if the secondary treatment process is operating adequately it can usually absorb short-term impacts if the performance of upstream processes deteriorate. However, since disinfection is located downstream of secondary treatment, this buffering ability isn't available and so one needs to ensure adequate disinfection will still occur at the peak flows to be treated.

Activated Sludge Peak Capacity Issues

Assuming the basics discussed above are covered, let's now consider what are the key factors influencing the peak capacity of activated sludge systems. The answer is pretty simple. ***The key factor that controls the peak flow capacity of activated sludge systems is solids separation – making sure that mixed liquor solids will settle in secondary clarifiers, concentrate and be removed as return activated sludge (RAS).***

One might argue that low aeration basin hydraulic detention times might also limit peak secondary treatment capacity, but this is not usually the case for a couple reasons:

- Often, under peak wet weather conditions, the wastewater coming into the activated sludge system has been diluted so much that it's BOD₅, TSS, etc., concentrations are near or below effluent permit requirements. As such very little "secondary treatment" may be needed to meet permit limits.
- The microorganisms in the activated sludge system have the ability to absorb and store soluble, colloidal and fine material, thus removing them from the liquid. These microorganisms may take some time to actually break down this stored material, but it is removed from the liquid. As a result the secondary clarifier effluent should meet secondary treatment standards, provided the microorganisms aren't lost over the secondary clarifier weirs (again reinforcing that secondary clarifier solids separation is the key). The Contact Stabilization variation of the activated sludge process was developed based on this absorbance/storage principal.

So, the bottom line is that maximizing secondary clarification capacity is the key to maximizing activated sludge peak wet weather flow capacity. In that regard, there are several factors that affect secondary clarification capacity, including:

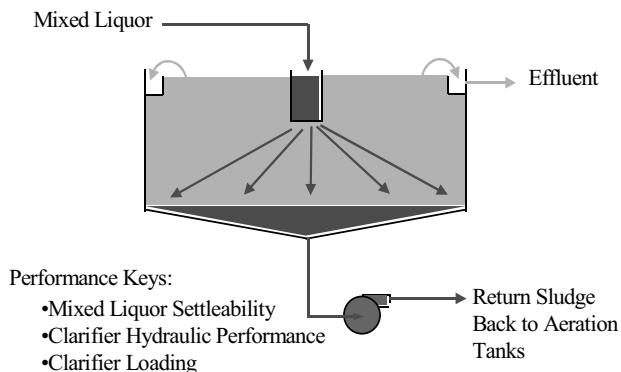
- Mixed liquor settleability, often measured in terms of the sludge volume index (SVI).

- Secondary clarifier performance efficiency.
- Secondary clarifier loadings.

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Secondary Clarifier Performance The Key to Peak Capacity



There are a number of low cost facility or operational modifications that one can make to affect these factors, and as a result increase or maximize secondary clarification capacity. Future segments of this series will examine each of these factors, discussing options and giving examples of how they have been used to maximize peak secondary wet weather flow capacity, so please stay tuned.

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As the operational software for the Internet improved, so did the Internet's popularity. The user-friendly World Wide Web protocol soon became the accepted standard for Internet users.



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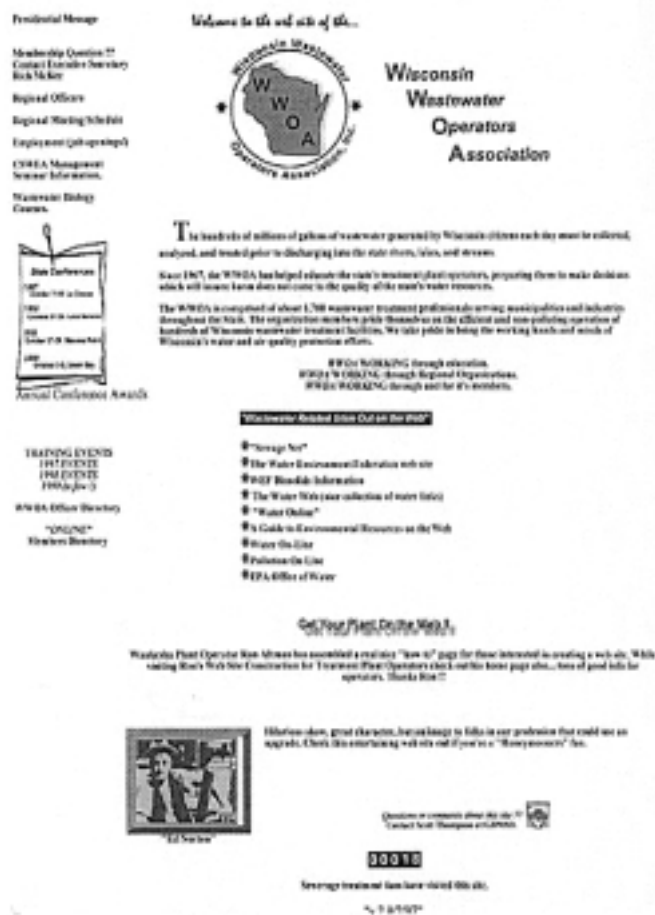
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Shortly afterward, wastewater organizations and manufactures began their Internet presence with their own web sites. One in particular was the Water Environment Federation (WEF) web discussion groups that provided national attention to your problems. One of the most popular wastewater groups was the Sewer-list e-mail discussion group, with early members excited about, and eager to find the information on the Internet. Discussions not only centered on troubleshooting and advice, but new web sites were eagerly sought after. Oh yeah, don't forget all those "Under Construction" web sites during this period. There was always some link that took you to a backhoe, bulldozer, or dump truck asking you to stop by later.

It was at this time that the WWOA began its presence on the Internet. It all began with an initial nudge from Scott Thompson and Dan Busch of the Green Bay Metro Treatment Facility. Scott gathered information about having a web site for WWOA board members to review. Soon afterward, at the April 1996 Board of Directors (BOD) meeting, the idea was pitched to the Board. The following excerpt is from minutes published in the June 1996 Clarifier:

Hanson asked the Board to allow McKee to purchase the equipment and the needed service for getting on-line to enable electronic communication of information. Hanson made a motion and directed McKee to purchase the necessary equipment and services. We could even post on the WWOA bulletin Board the schedule of meetings as put out by the WWEA calendar so our membership with computers can use it. Busch seconded the motion. Motion carried.

Scott designed our first site and put it on-line September 26, 1996 with a URL of <http://www.win.bright.net/~wwoi> (the "i" at the end is for incorporated). Scott unveiled the site to WWOA members during a technical session at the 1996 annual conference in Oconomowoc. To the upper right is a print out of that first web site.



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Quality Always

As the web site grew in content, more direction was needed for new ideas. Another goal was to find a liaison between the Board and the webmaster. During an Internet Workshop at the annual conference in La Crosse, President Gary Hanson discussed the possibility of forming a web committee within the WWOA to Scott. As a result, at the December 1997 BOD meeting, it was decided to form a web committee. Below are the meeting minutes published in the February 1998 Clarifier:

President Hanson stated he would like the Board to consider forming a Web Site Committee. Scott Thompson feels a committee would help handle the job of keeping the site current. With representation from each of the state regions, the web site would truly belong to the entire state organization. Regional representation could mean promotion of the site at the regional meetings. It's important that the committee also have Executive Board representation. As the site grows there will be more instances where the Board should be in on the decision making. Busch would like Boden to consent to being the Web-site committee Chair.

Fales made a motion to form a standing committee for the WWOA's electronic mailing and web site. Schulfer seconded the motion. Motion carried.

President Hanson asked Boden to become the Chairperson of this standing committee. President Hanson also directed McKee to insert a section in the policy book for this electronic mailing committee.

Fales made a motion we move ahead with expenditure funds to develop this committee under the direction of Rich Boden, Scott Thompson, and Ron Altmann. Strackbein seconded the motion. Motion carried.


A web committee was put together soon afterward with Rich Boden of Plover as Chair, Scott Thompson of Green Bay, Dan Busch of Green Bay, Bob Scherr

of Lake Mills, and Gary Zimmerman of Beloit. In the spring of 1998 the web committee met for the first time at the Green Bay treatment plant. Discussions included a domain name, and general direction the site should take.


In 1998 the WWOA purchased its own domain name. The new URL is simply: wwoa.org. A new version on the web site came out soon after.

Wisc Wastewater Operators Association <http://www.wisbright.net/~wwoa/>

Welcome to the home page of the...



Wisconsin Wastewater Operators Association, Inc.



WWOA President
Carol Strackbein

The site's purpose is to provide another way of getting information out to the members around the state, feel free to submit information for publication. Just as with most treatment plants, this site will be under constant upgrade... and it looks best when viewed with Netscape.

An Introduction to the WWOA

The hundreds of millions of gallons of wastewater generated by Wisconsin citizens each day must be collected, analyzed, and treated prior to discharging into the state rivers, lakes, and streams.

The WWOA helps educate the state's treatment plant operators, preparing them to make decisions which will insure harm does not come to the quality of the state's water resources.

The WWOA is comprised of about 1,700 wastewater treatment professionals who serve municipalities and industries through out the State. The organization members pride themselves on the efficient and non-polluting operation of hundreds of wastewater treatment facilities across Wisconsin. We take pride in being the working hands and minds of Wisconsin's water and air quality protection efforts.

WWOA WORKING through education.
WWOA WORKING through Regional Organizations.
WWOA WORKING through and for it's members.

WWOA Training Events	State Conference Dates & Locations
1996 Events	October 7-10, 1997 LaCrosse
1997 Events	October 21-23, 1998 Lake Geneva
1998 Events	October 27-29, 1999 Stevens Point
1999 Events (a few so far)	October 3-5, 2000 Green Bay

[Employment Opportunities](#)

[Directory of WWOA Officers](#)

[Some WWOA History](#)

Some popular wastewater treatment related sites out on the web...

11/15/96 6:45 PM

Below is a screen capture of a June 2000 web site design.



Up to this time, Scott Thompson performed his web site duties while employed as an operator at Green Bay's treatment facility. When he left to pursue other interests, Rich Boden recommended keeping Scott on as a hired webmaster. Those details can be found in the February 2000 Clarifier BOD minutes along with other site developments, such as the searchable database and the creation of a Wisconsin treatment plant directory.

Today's web site was renovated in the spring of 2001. Better coding allows pages to download faster. The site has a personal feel as random photos of Wisconsin treatment facilities appear on the pages. (Members are encouraged to provide a photo or digital jpeg of their facility for the site.)



The WWOA web committee has tried a lot of new ideas to better serve the membership. The site has expanded its content beyond announcements. It now offers an online e-mail listing, archived digital copies of the Clarifier, wastewater demonstrations for plant tours, tips from other wastewater operators, Bob's Big Bug page, and a Wisconsin treatment plant database.

Submitted by the WWOA web committee.

Now More Than Ever: Tools For Utility Management

Gilbert A. Hantzsch, P.E.
MSA Professional Services

More stringent effluent limits. Aging collection systems. Escalating construction costs. Dwindling funding sources. These are the conditions that many communities are facing today with respect to their wastewater collection and treatment infrastructure.

Taken individually, they can be daunting. Taken in the aggregate, these conditions may spell disaster for communities who fail to plan for the needs of the future.

More stringent effluent limits.

Fact: In adopting new ammonia toxicity criteria, the Wisconsin Department of Natural Resources (DNR) will be re-evaluating effluent ammonia limits for all facilities upon reissuance of their WPDES permit. While for some, the limit may actually increase; many smaller facilities may find themselves with water quality based effluent ammonia limits for the first time. This will mean many lagoon systems will require upgrading or replacement.

Aging collection systems.

Fact: The DNR issued over 70 Notices of Violation due to sanitary sewer overflows (SSOs) in 2004 as a result of wet weather related bypasses. SSO elimination is a goal of the US Environmental Protection Agency and Wisconsin DNR. A Capacity, Management, Operations, and Maintenance (CMOM) program will eventually be

implemented to aid in achieving that goal by driving the rehabilitation or replacement of failing collection system components.

Escalating construction costs.

Fact: Steel prices rose in excess of 35% in 2004, fueling a 10% increase in general construction costs in the last year.

Dwindling funding sources.

Fact: The Wisconsin Department of Commerce, who in the past has funded many wastewater treatment facility upgrades through their Community Development Block Grant (CDBG) Program, is currently focusing on funding projects that can spur economic development rather than replace aging infrastructure. The USDA Rural Development is faced with a reduction in the amount of grant monies that they can award to rural communities, and are considering reducing the maximum available grant from 45% to 35% while increasing the affordability threshold. The DNR's Clean Water Fund Program is primarily a low interest loan program, whose Hardship grant program is of marginal value anymore due to its strict eligibility criteria and high user charge requirement.

The need for sound utility management has never been greater than it is now. While construction grants of 70% or more were the norm when many of Wisconsin's nearly 600 municipal wastewater treatment facilities were constructed or upgraded following the passage of the federal Clean Water Act, such financial assistance is a distant memory. Many of these same facilities are at or beyond their nominal 20-year design life, and will need an infusion of cash in the coming years as equipment and structures wear out, become obsolete, or cannot keep up with current demand.

Sound utility management requires doing what's best for the ratepayers in the long term. Often, that will mean recognizing a need long before it becomes a crisis, and taking steps to provide resources to address that need. Five-year capital improvement planning is one way to do this. Staying current with

regulations is another. For example, most lagoon operators can be granted a five-year delayed implementation on a new ammonia limit. These advance warnings can allow time to evaluate funding sources and to raise money that can reduce the future debt load.

Utility management can be approached from a number of different angles, including the following:

- Cost Control
- Revenue Generation
- Education

Cost Control includes selection of an *appropriate technology* for a given goal. The KISS (Keep it Simple, Stupid!) principle applies in many cases, and can avoid unnecessary cost and complexity. *Sharing resources* such as sewer jetting or televising equipment or services with a neighboring community can also help keep costs to a minimum. *Early debt retirement* is another way communities reduce overall interest costs and keep debt from periodic upgrades from overlapping. Many of us apply this technique ourselves by adding a little bit to the mortgage payment each month.

Revenue Generation includes using all sources of revenue to the sewer utility to moderate their impact on the ratepayers. Revenue to sewer utilities is generally limited to the following types:

- User charges
- Property taxes
- Special assessments
- Connection & Impact fees

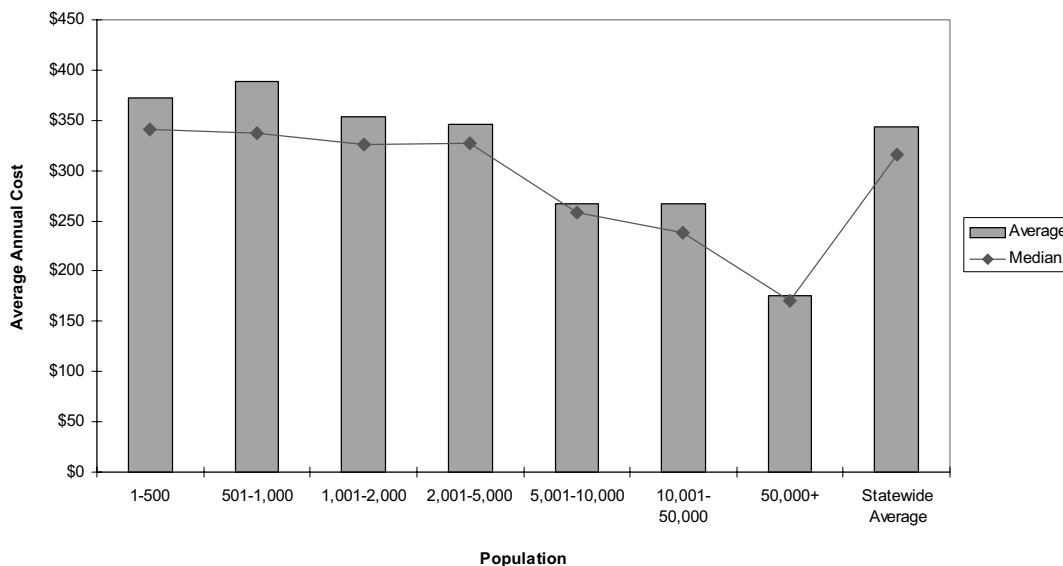
User charges are by far the most commonly used source of revenues for sewer utilities. These are the monthly or quarterly bills charged to residents and businesses in relation to the amount of water they use. Wisconsin's proactive environmental approach comes at a cost. Compared to the neighboring states of Iowa, Illinois and Minnesota, Wisconsin's sewer use charge rates are the highest. In 2004, the average residential sewer user charge in Wisconsin was \$345 per year, or about \$29 per month. This ranged from

a low of \$0 (for a utility funded solely through property taxes) to a high of \$1,120 per year.

Lower rates were generally seen in the largest communities, with communities under 5,000 bearing the highest burden. **Figure 1** shows the relationship between

sewer user charges and population. As can be seen in the figure, residents living in the largest communities pay half as much for sewerage service than residents living in rural communities. In addition, those communities having the highest rates are seeing the highest rates of increase, meaning this service gap will worsen.

2004 Average and Median Annual Cost vs. Population
For 55,000 Gallons of Water Used



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
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User charges are used to fund the operation, maintenance, debt service, and equipment replacement costs associated with running a wastewater collection, treatment, and disposal system. The fee system should be evaluated every one to two years, and adjusted upward as needed. More frequent, smaller rate hikes are preferable to infrequent but dramatic increases, as they keep pace with rising costs and are less disruptive to the ratepayers.

Property taxes are usually reserved for municipal services and facilities for which there is no user charge, such as street repair, police service, and garbage collection. However, some communities elect to collect property taxes to provide an additional revenue source for the sewer utility. While it eliminates the direct connection between usage and payment, it can provide homeowners with an income tax deduction that is not available for user charges.

Property taxes are used in approximately 10% of Wisconsin communities to supplement the income received from user charges. Communities utilizing property taxes charge an average of \$60 per household, but can amount to hundreds of dollars per residence.


Special assessments can be used to defray the costs of improvements ranging from sanitary sewer lines to centralized facilities such as lift stations and treatment facilities. They offer the property owner the ability to pay off the entire burden in one payment, or to pay on an installment plan offered by the community. While the installments will appear on the annual property tax bill, they are not truly tax deductible. Special assessments are apportioned on a methodology intended to be fair to all parties. In many cases, each resident can be said to have received an equal benefit, allowing for an equal assessment of charges to each, unlike property taxes that are in proportion to the value of one's property.

Connection fees or impact fees are collected at the time a new user applies to connect to the collection system, or in some cases at the time land is platted for development. These fees are a way to insulate existing residents from the costs associated with growth by charging for the privilege of connecting to

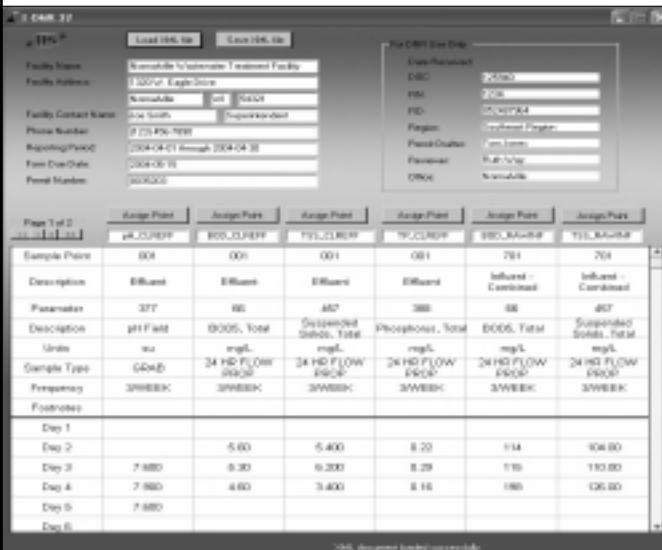
a municipal sewer system. These costs do not include the cost of any portion of the sewer lateral.

The legal distinction between connection fees and impact fees is somewhat blurred, in that opinions vary from attorney to attorney. In general, impact fees are those in which the fee charged is linked directly to the cost of capacity provided for future users. Impact fees that are collected are specifically earmarked for those facilities providing that capacity. Connection fees tend to be less rigorously derived, and the use of the proceeds is not restricted. In the face of a legal challenge, properly implemented impact fees are more likely to survive than a connection fee.

Two-thirds of Wisconsin communities charge a sewer connection or impact fee. **Figure 2** shows the use of these fees in relation to population. The average residential connection fee is about \$950, while the average impact fee runs around \$1,500. These fees range from a few hundred dollars to nearly \$6,000 per residential sewer connection.



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Description	pH Field	BOD5, Total	Suspended Solids, Total	Phosphorus, Total	BOD5, Total	Suspended Solids, Total
Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sample Type	24 HD FLOW	24 HD FLOW	24 HD FLOW	24 HD FLOW	24 HD FLOW	24 HD FLOW
Frequency	3WEEK	3WEEK	3WEEK	3WEEK	3WEEK	3WEEK
Footnotes						
Day 1		5.60	5.400	8.22	114	104.80
Day 2		5.30	6.200	8.29	116	110.80
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Day 4	7.880					
Day 5	7.880					
Day 6						


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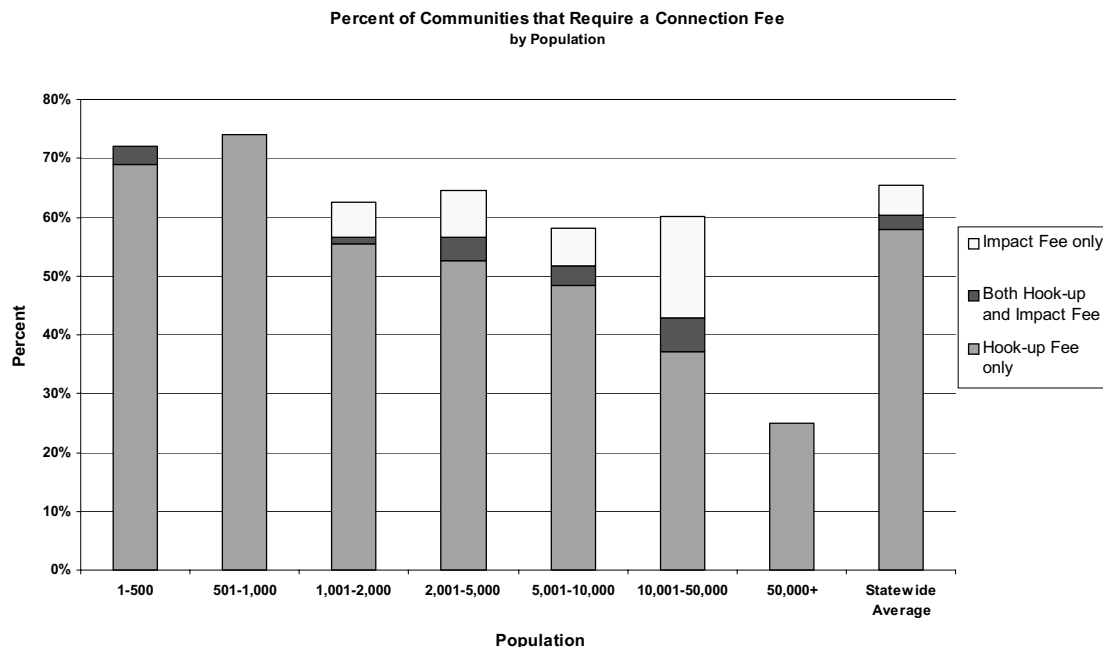
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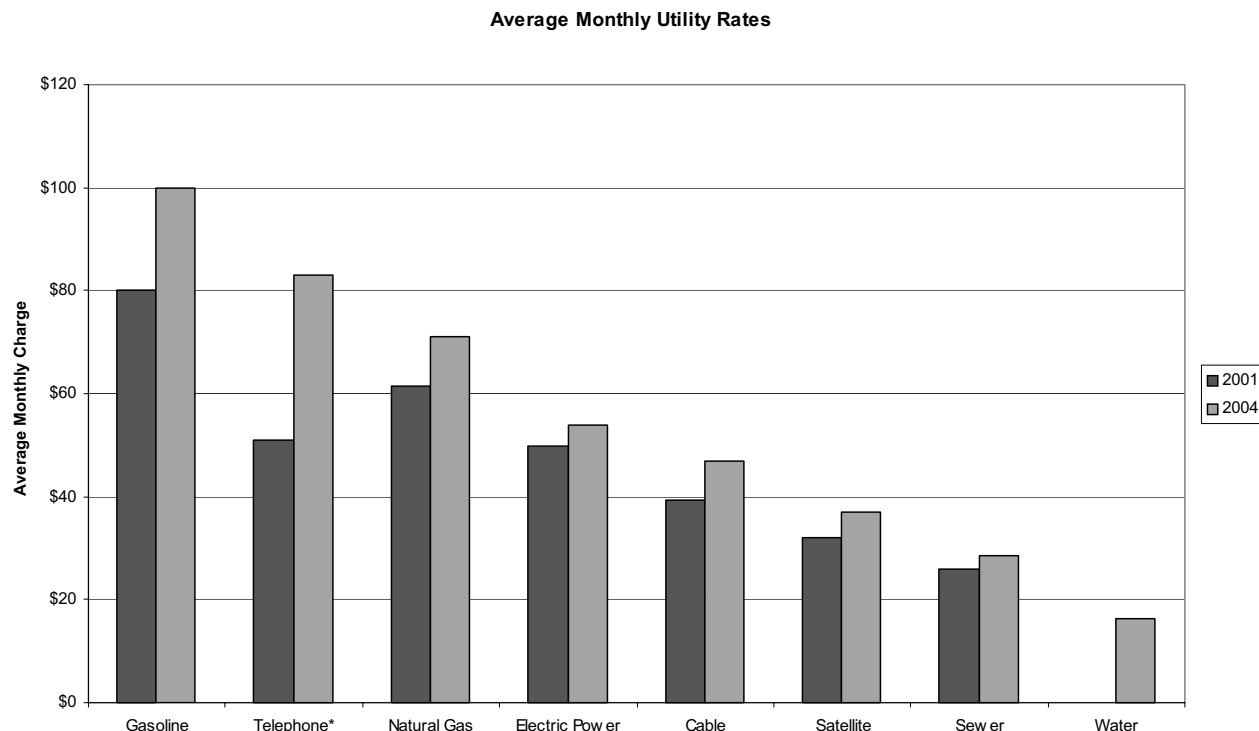
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Education is an important element in running a solvent utility. While no one is happy about having to pay higher costs, people are more likely to accept the situation if it can be put in the proper context. When cost increases are necessary, public informational meetings should be used to explain the circumstances causing the need for higher costs. The costs to be paid by the ratepayer should be explained relative to what others in a similar geographic area, or in similar communities are paying. Citizens should be given the opportunity to provide input as to

how costs should be divided, using the cost recovery methods described earlier.

Finally, people may need to be reminded what a bargain clean water and sanitary wastewater disposal really is. **Figure 3** shows the average cost of these services compared to other utility and non-utility services for which people gladly pay. Water and sewer service continue to be cheaper than the monthly fees associated with cell phones, cable TV, and high-speed Internet, yet



the relative worth is unquestionably more.

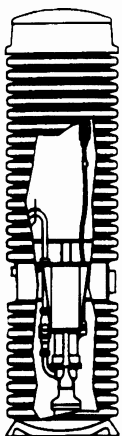
In summary, in the current climate of increasing costs and decreasing funding, utility managers need to be more proactive in anticipating future costs and preparing for them. What you have now will not last forever, and environmental standards are not likely to loosen.

Officials need to be more creative in packaging repayment programs and more diplomatic in dealing with a public that is beleaguered by the higher cost of utility service. An educated ratepayer is a more willing ratepayer.

Following these guidelines will help your community be prepared for the challenges of the future, and will help keep Wisconsin as the standard bearer in providing a safe, clean, and enjoyable environment for generations to come.



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**WISCONSIN WASTEWATER
OPERATORS' ASSOCIATION, INC.
38th Annual Business Meeting
Kalahari Resort & Convention Center
Wisconsin Dells, Wisconsin
October 28, 2004**

President Herwig called the meeting to order at 12:35 PM October 28, 2004. All Officers and Directors were present. Approximately 280 attendees were present.

President Herwig asked for a moment of silence for all the members who have passed away in the past year.

Dean Falkner made a motion to dispense with the reading of the minutes from the October 23, 2003 Annual Business Meeting and to approve the minutes as written. LaMont Albers seconded the motion. Motion carried.

Executive Secretary McKee distributed copies of the Financial Report. McKee reported the revenue of this fiscal year ending September 1, 2004 is \$143,685.94. Expenditures totaling \$131,559.63 with excess revenues over expenditures totaling \$12,126.31. A motion was made by Dean Falkner to approve the Financial Statement as presented. Pete Albers seconded the motion. Motion carried.

President Herwig introduced Jim Miller Secretary/Treasurer and Dean Nelson President of the Minnesota Wastewater Operators' Association.

NOMINATIONS-ELECTION OF OFFICERS

Nominations Chairperson Dale Neis reviewed nominations and election procedures. President Herwig appointed John Allen, LaMont Albers, Jim Krueger, John Leonhard, Wally Thom, Leo Templeton, Pete Albers, Dean Falkner, Judy Tholen, Rich Boden and Carol Strackbein as ballot clerks. Dale Neis was appointed recorder.

The Nominations Chairperson, Dale Neis, announced our new President for 2004-2005 is Timothy Nennig. Dale Neis placed into nomination the name of Tom Kruzick for the office of President-Elect. President

Herwig called three times for nominations from the floor. There being none, Jim Krueger made a motion the nominations be closed and a unanimous ballot be cast electing Tom Kruzick to the office of President-Elect. John Fales seconded the motion. Motion carried.

The Nominations Chairperson, Dale Neis, placed into nomination the name of Kay Marshall for the office of Vice-President. President Herwig called three times for nominations from the floor. There being none, John Fales made a motion the nominations be closed and a unanimous ballot be cast electing Kay Marshall to the office of Vice-President. Jim Miller seconded the motion. Motion carried.

ELECTION BOARD OF DIRECTORS – 4

President Herwig explained to the membership there are two (2) two-year Directorships and two (2) one-year Directorships to be filled. Jim Schreiber resigned his position as Director and Kay Marshall is now Vice-President. President Herwig informed the membership in attendance we have five candidates for the positions of Directorships; Dave Carlson, Bruce Bartel, Dan Tomaro and two incumbents John Bond and Jim Thalke.

President Herwig asked for nominations from the floor 3 times. There being no further nominations, John Leonhard made a motion to close the nominations. La Mont Albers seconded the motion. Motion carried. Each candidate spoke briefly to the membership. President Herwig instructed the membership to vote for four.

The elections results for Directors were Jim Thalke and Dave Carlson for the two-year Directorships and John Bond and Bruce Bartel for the one-year Directorships. President Herwig congratulated Jim Thalke, Dave Carlson, John Bond and Bruce Bartel.

LaMont Albers made a motion to destroy the ballots. Dean Falkner seconded the motion. Motion carried.

COMMITTEE REPORTS

PROMOTIONS - John Bond commented we have added men and women's dress shirts, golf pullovers, camouflage shirts and women's polo shirts. The promotional items are available in the North Hall. We are selling the older items at a reduced rate.

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MEMBERSHIP - Conine reported we now have a total of 2,036 members. Our 2000 member is Kent Price from Marshall-Bond Pumps.

SCHOLARSHIP - Conine stated Justin Stanek is the only qualifying recipient of the \$1000.00 4-year scholarship.

CLARIFIER - Jeff Haack introduced the CLARIFIER staff, Jean Van Sistine and the chair Dan Busch.

CAREER DEVELOPMENT - Kay Marshall informed the membership the Committee attended a couple of career conferences this year.

The Committee has made a Public Service Announcement for WWOA. There are copies on CD that are available at the Conference and have also been sent to the web site.

OPERATOR TRAINING - Thalke commented the Committee had a very busy year sponsoring three

different events at seven different locations around the state.

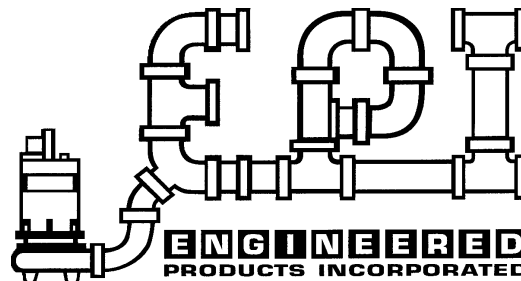
The first event took place in Oshkosh and later Waukesha, then Madison and finished in Eau Claire. The event was organized by Jack Annis and titled Mercury Reduction and NR106 Mercury Compliance.

The second training event was two Wastewater Security workshops held in Rice Lake and Sussex. The workshops were organized by Julia Riley.

The third event was the Trouble Shooting Electric Motors and Controls Seminar held in Green Bay.

REGIONAL COORDINATOR - Kay Marshall thanked everyone for all their hard work.

LaMont Albers made a motion to accept the Committee Reports as presented. John Leonhard seconded the motion. Motion carried.



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President Herwig informed the membership the 39th Annual Conference will be held in Green Bay on October 4 – 7 at the Regency Suites/KI Convention Center.

President Herwig thanked Gil Hantzsch and his staff from MSA Professional Services for all their work with Local Arrangements and the Spouse Program.

President Herwig thanked Gary Hanson and Amy Kistner from Earth Tech for their work on the abstracts. President Herwig also thanked Tom Kruzick, chair of the Technical Program, the committee, moderators, and speakers for all their help.

NEW BUSINESS

PRESENTATION OF THE OPERATOR COMPETITION AWARD - Jim Thalke stated we had six teams competing this year: Southern Region had one team - The Crappers; Lake Michigan Region had two teams - Grit Heads and Lagoon Squad; Southeast - Fecal Fanatics, Wizards of Wiz and Wastewater Warriors.

Thalke introduced the judges and suppliers for this year's competition and thanked them for their help.

Jim Thalke stated that all the scoring was very close within some only being tenths of a point difference. Lake Michigan team Lagoon Squad took First Place, Lake Michigan team the Grit Heads took second place and Southeast team Fecal Fanatics took 3rd place.

There being no further business, John Leonhard made a motion to adjourn the 38th Annual Business Meeting. La Mont Albers seconded the motion. Motion carried.

President Herwig adjourned the meeting at 1:30 PM October 28, 2004

Respectfully submitted,

Richard D. McKee

Richard D. McKee
Executive Secretary

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24 hour Composite/Discrete Wastewater Sampling • Sludge Characteristic Analysis • Wastewater Toxicity Sampling • Confined Space Entry Projects
Stormwater Management Plans • Groundwater Monitoring • Air Quality Monitoring • Asbestos Management • Lead Inspections

WWOA REGIONAL OFFICERS 2004 - 2005

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ADDRESS CORRECTION REQUESTED

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