

# CENTRAL STATES WATER

The Official Magazine of the Central States Water Environment Association, Inc.

*Time for a  
new voice*



**PROFILE: FORT ATKINSON WWTP**



Central States Water Environment Association  
3809 Shennandoah Dr., Crystal Lake, IL 60012  
ADDRESS SERVICE REQUESTED



*One of two 32 MG tanks for the City of Syracuse, NY; Engineering by CH2M HILL*

## **When we broke ground on these tanks in Syracuse, it was sunny... But then, New York weather changes day to day**

Good thing weather doesn't slow DYK construction crews down. So, whenever you are ready to break ground, your tank will be built on time to the quality standards DYK is known for.

- Water storage, wastewater or thermal energy storage tanks from 100,000 gallons to 40,000,000 gallons
- Buried or disguised
- Architecturally treated or plain

All built to last for over 100 years with little to no maintenance. Owners in New York recently trusted DYK with 94.0 MG of their water. How many gallons can we store for you? Sunny weather not required.

Photography: Pease, Syracuse, NY



**Call us today 1-800-227-8181 or visit [www.dyk.com](http://www.dyk.com)**

**DYK**  
**INCORPORATED**  
Building Lifetimes of Value Today





## Continuing Education Courses for Water and Wastewater Professionals

### Upgrading Your Sanitary Sewer Maintenance Program

February 2-3, 2010, Orlando, FL

April 19-20, 2010, Madison, WI

- Minimize your sanitary sewer overflows and blockages
- Learn the latest repair techniques for pipes and laterals
- Evaluate your system condition and performance

### Designing Wastewater Pumping Systems and Lift Stations

February 4-5, 2010, Orlando, FL

April 21-23, 2010, Madison, WI

- Detailed design workshops
- Station types, pros, cons, pitfalls, rehab options
- Pumps, valves, electrical, controls, VFDs

### Understanding Water Chemistry for Practical Application

March 9-10, 2010, Madison, WI

- Learn the principles and applications
- Current issues in wastewater, drinking water, industry
- Phosphorus, mercury, pharmaceuticals, and more

### New Course: Introduction to Environmental Engineering with Green Applications

March 11-12, 2010, Madison, WI

- Nutrient cycles, ecosystems, materials and energy balances
- Water pollutants, water quality management, solid wastes
- Air pollution, CO2 management, developments in renewable energy

See complete  
course listings at  
[epd.engr.wisc.edu](http://epd.engr.wisc.edu)

To enroll or find out more:

Ned W. Paschke PE

[paschke@engr.wisc.edu](mailto:paschke@engr.wisc.edu)

Toll free 800-462-0876 or

608-263-4705

Earn PDH credits  
all courses!

# Foth.



*Wisconsin Rapids Wastewater Treatment Facility*

# Forward Thinking.

When Wisconsin Rapids needed additional wastewater treatment capacity to support future industrial growth, they contacted long-term partner Foth. Our updated name reflects our heritage, and provides a platform for thinking about the future in ways that can help grow and sustain your local community. For all your wastewater and municipal engineering needs, contact Foth.



**Personally Committed To Your Success**

[www.foth.com](http://www.foth.com) ♦ 1-800-236-8690

Green Bay • Madison • Milwaukee • Des Moines • Cedar Rapids • Champaign • Peoria • Minneapolis

## FEATURES

WEFTEC '09 Review	14
Plant Profile: Fort Atkinson	27
Digester Foam Workgroup Update	31
A Serious Business	32
MN Infrastructure Documentary Project	34
Phytoestrogen in Industrial Wastewater	40
Time for a Single Voice for Water	41
Nutrient Rulemaking Update	44



## DEPARTMENTS

## Messages

President's Message	7
Executive Director's Message	10

## CSWEA News

Operations Challenge	16
Student Design Competition	19
Midwest Water Industry Expo	22
Plant Maintenance Technologist Program	36
Submit for a WEF Award	38
Calendar of Events	47

## Section News

Wisconsin Chair Message	48
Minnesota Chair Message	49
Illinois Chair Message	50



Do your part for the environment – reuse and recycle.

Published by:



Tel: (866) 985-9780 / Fax: (866) 985-9799  
www.kelman.ca

Managing Editor: Cheryl Parisien, [cheryl@kelman.ca](mailto:cheryl@kelman.ca)  
Design/Layout: Stacia Harrison  
Advertising Sales: Al Whalen, [awhalen@kelman.ca](mailto:awhalen@kelman.ca)  
Advertising Co-ordinator: Lauren Campbell  
Federal tax# 23-7378788

©2009 Craig Kelman & Associates Ltd.  
All rights reserved. The contents of this publication, which does not necessarily reflect the opinion of the publisher or the association, may not be reproduced by any means, in whole or in part, without the prior written consent of the publisher.

Central States Water, the official magazine of the Central States Water Environment Association, Inc., is published four times per year. Send comments, news items, gloss photographs or digital images to Eric Lecuyer, [cswea@gmail.com](mailto:cswea@gmail.com)

Send undeliverable addresses to: CSWEA, 3809 Shenandoah Dr., Crystal Lake, IL 60012

## President

Ralph B. (Rusty) Schroedel  
AECOM Water  
920-912-1227  
[rusty.schroedel@aecom.com](mailto:rusty.schroedel@aecom.com)

## 1st Vice President

Jim Miller  
Bonestroo  
612-961-2505  
[jm55313@yahoo.com](mailto:jm55313@yahoo.com)

## 2nd Vice President

Beth Vogt  
Greeley and Hansen  
312-578-2321  
[bvogt@greeley-hansen.com](mailto:bvogt@greeley-hansen.com)

## Treasurer

Carol Strackbein  
CSS Consulting, LLC  
262-243-5412  
[cstrackbein@earthlink.net](mailto:cstrackbein@earthlink.net)

## Immediate Past President

Tim Tack  
LAI, Ltd.  
847-392-0990  
[tim@leyassociates.com](mailto:tim@leyassociates.com)

## WEF Director '10

Daniel L. Lynch  
City of Janesville  
608-755-3116  
[lynchd@ci.janesville.wi.us](mailto:lynchd@ci.janesville.wi.us)

## WEF Director '11

Scott Trotter  
Trotter & Associates  
630-587-0470  
[s.trotter@taiengr.com](mailto:s.trotter@taiengr.com)

## PWO Representative '11

Charlie La Rocco  
City of Elmhurst  
630-688-2003  
[charles.larocco@comcast.net](mailto:charles.larocco@comcast.net)

## YP Representative '10

Rachel M. Lee, P.E.  
Strand Associates, Inc.  
608-251-4843  
[rachel.lee@strand.com](mailto:rachel.lee@strand.com)

## Illinois State Section Trustee '10

Sue Baert  
Wheaton Sanitary District  
630-668-1515  
[baert@wsd.dst.il.us](mailto:baert@wsd.dst.il.us)

## Minnesota State Section Trustee '10

Patti Craddock  
Craddock Consulting Engineers  
651-690-0400  
[pcraddock@craddockconsulting.com](mailto:pcraddock@craddockconsulting.com)

## Wisconsin State Section Trustee '11

Tom Sigmund  
Green Bay MSD  
920-438-1095  
[tsigmund@gbmsd.org](mailto:tsigmund@gbmsd.org)

## Executive Director

Eric R. Lecuyer  
CSWEA  
3809 Shenandoah Drive  
Crystal Lake, IL 60012  
815-954-2714  
Fax: 815-356-7885  
[cswea@gmail.com](mailto:cswea@gmail.com)



# It's not just the purchase. It's the service after the sale. It's the Flygt difference.

When it comes to the finest Flygt products and services, your best source by far is ITT. Our pumps, mixers and aerators have long set the industry standard. Plus, that same Flygt quality extends to system monitoring and control, bypass and dewatering equipment, and all kinds of retrofits.

But we're not just about impeccable product quality alone. In fact, the key to the Flygt difference is the service and support we provide long after the sale has been made.

For consulting engineers and plant operators, your stream of Flygt advantages begin with state of the art product design and innovative engineering. What's more, our products are delivered by teams of experienced professionals. Their expert system design ensures that our products are paired most efficiently with your specific applications.

Along the way, we offer the industry's largest network of skilled service facilities, so onsite help is nearby and ready 24/7, should you ever need it.

For over 50 years, Flygt Products have been acknowledged as the industry leader in America. It's no accident. The Flygt difference is this: We stand by our products and our customers.

For full details on what Flygt can do for you, contact your Flygt Product salesperson in WI: 262-544-1922, fax 262-544-1399, ITT Water & Wastewater Flygt Products  
N27 W23291 Roundy Drive,  
Pewaukee, WI 53072  
or in IL: 708-342-0484; Fax 708-342-0491  
ITT Water & Wastewater - Flygt Products  
8402 West 183rd Street, Ste. A,  
Tinley Park, IL 60477  
Visit us at: [www.us.ittwww.com](http://www.us.ittwww.com)



ITT

*Engineered for life*



## ELEMENTS OF YOUR SUCCESS

### **Vision. Value. Passion. Integrity. Relationships. Attitude.**

These elements make up the structure of AE2S. What does that mean to you? Extreme client service, trusted relationships, a shared vision for your future, and passion for every project. They all translate into your success.

#### **Advanced Engineering and Environmental Services, Inc. (AE2S) Offices:**

Minneapolis Moorhead  
Bismarck Fargo Grand Forks Williston  
Great Falls Kalispell  
[www.ae2s.com](http://www.ae2s.com)

WATER ENGINEERING  
MUNICIPAL ENGINEERING  
LAND DEVELOPMENT  
SURVEY/MAPPING/GIS  
FINANCIAL/ASSET MANAGEMENT  
INSTRUMENTATION & CONTROL  
ELECTRICAL ENGINEERING





# Our Industry's Future

By Ralph B. (Rusty) Schroedel

It is hard to believe that, as I write this, we are already half way through our 2009-2010 year. Time definitely flies by. There has been a great deal of activity on which to report. As we approach the holiday season, let me first extend my personal wish for wonderful holidays with family and friends.

The Executive Committee met in conjunction with WEFTEC, as we always do. This year WEFTEC was in Orlando, Florida and, despite the economy, it was very successful with over 17,000 attendees and nearly 1,000 exhibitors. At our board meeting, some time was spent discussing financial issues and our budgeting for the coming year. Our events in 2009 were not as financially successful as anticipated which requires us to more carefully budget for next year. We are sound financially, but need to consider the possibility of reduced attendance at our events in the upcoming budget year. We will meet in December to finalize our budget and plan for next year. We also discussed some issues in our Standard Operating Procedures regarding the awards program and our Technical Program Committee. We look to continue to improve our association and look forward to your comments, suggestions, and concerns.

I would be remiss to not mention the successes of our Central States representatives in competition at WEFTEC. Once again our two Operations Challenge teams participated, still excellently coached by Jim Miller and Rick Ashling. The CS Pumpers team included Captain Dennis Egge, Janesville, WI, Darcey Thoen, Moorhead MN, Ken Bloom, Marathon, WI and Rob Barnard, Moline, IL. The Shovelers team included

*"I will be encouraging our Student Chapter contacts to enhance their level of contact and want to continue to help our Young Professionals become more active contributors to the success of Central States."*

Captain Jeff Mayou, Marionette, WI, Todd Carlson, Duluth MN, Lyle Lutz, Amherst WI and Matt Schmidt, Green Bay, WI. They were excellent representatives of our association. We had two student chapter teams participate. The University of Wisconsin team competed in the Design Competition. The University of Minnesota team competed in WEF's new "Environmental Design" category and took second place. Their plaque and monetary award will be presented soon. The future of our industry is in good hands with the intelligent, dedicated students who will soon (hopefully!) become active members of our industry

(Continued on page 8)



## Unison Solutions, Inc.

5451 Chavenelle Road

Dubuque, IA 52002

Phone: 563-585-0967

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

- Biogas Conditioning Systems
- H<sub>2</sub>S, Moisture And Siloxane Removal Systems
- Gas Blower And Compressor Systems
- Vessels & Custom Fabrication
- Capstone Microturbines
- Distributed Generation

**SPECIALIZING IN RENEWABLE ENERGY SYSTEMS**





**ENGINEERING**

Multi disciplined  
Nationally recognized  
Locally dedicated

Madison 608-251-4843  
Milwaukee 414-271-0771  
Joliet 815-744-4200  
www.strand.com

**STRAND**  
A QUALITY SYSTEMS COMPANY

Rotary Lobe Pumps  
Macerating Technology

**BÖRGER**  
Innovation.

## Börger Macerating Technology in MIP-Design



**Multicrusher**  
(Twin Shaft Grinder)



Robust, reliable Twin Shaft Grinder. Wide operation speed range available due to external gear reduction. Many construction and design configurations offered.



**Multichopper**  
(Single Shaft Grinder)



Widely applicable Single Shaft Grinder with integrated rock trap. Börger Macerating Technology equipped with quenched mechanical seals.

**Wisconsin Representative:**  
Mulcahy / Shaw Water

**Minnesota Representative:**  
Engineering America

**Illinois Representative:**  
Doonan Environmental



**Maintenance In Place**  
All fluid wetted parts are replaceable onsite through the front cover without removal of pipe or drive systems.

Börger, LLC | 740 NE Harding Street, Minneapolis | Phone 612-435-7300 | america@boerger-pumps.com | www.boerger-pumps.com


and Central States. We also again held our reception on Sunday at WEFTEC. Please be sure to thank all of the sponsors of this well-attended event. A special thanks to Scott Trotter who again managed the arrangements.

Several other activities are in progress. Our Anaerobic Digester Foaming Ad Hoc Committee has been formed, held one conference call, and has another scheduled. Please look for a survey soon to help us assess this as an issue. On another topic, I will be encouraging our Student Chapter contacts to enhance their level of contact and want to continue to help our Young Professionals become more active contributors to the success of Central States.

Several upcoming events are in the planning stages. Please block out time on your busy calendar to attend these events and encourage your co-workers to do likewise. These events are successful when well attended by interested individuals with an open sharing of data, information, and technology. The Midwest Industry Expo, which we co-sponsor with the Wisconsin Water Association, will again be held at the Kalahari in Wisconsin Dells on February 9-10, 2010. This event is an especially good opportunity for "hands on" staff to learn about the latest in the equipment and materials used in our facilities. I have attended and can assure you this is a unique learning experience.

Our nationally recognized Education Seminar is scheduled for April 6 at the Monona Terrace in Madison. This event has become recognized as one of the best technology based one-day seminars in the United States, and it is held right here within Central States. Please consider attending. This year's topic will be bio-solids management, including digestion and reuse.

Lastly, plans are well under way for the 2010 Annual Meeting, also to be held at the Monona Terrace in Madison. Local Arrangements Chair Jay Kemp and the committee have already aligned key speakers and entertainment. The call for abstracts is out. Please consider submitting to help this conference continue to be very high quality. This event is the best combination of learning, networking, and fun we have. You will agree when you attend.

As you can see, we have a great deal going on. However, it is only successful with the dedicated efforts of many of our members. Future success depends on you. Attend an event. Join a committee. Become an active member. I'm sure you will find you get much more out of your participation than you give. 





**Get  
on Board  
with  
J & S Valve!**

**IMPROVING THE STANDARD!**



**Largest Resilient Seated Gate  
Valves in the World!**

**2" - 72"**

**Thru 96" Coming Soon!**



Ph: 281-324-3990  
[sales@JandSValve.com](mailto:sales@JandSValve.com)  
[JandSValve.com](http://JandSValve.com)

**J & S Valve**  
**AWWA Gate Valves**

# Our Fiscal Health

Eric R. Lecuyer



To quote Bill Bertera, Executive Director of WEF, managing a not-for-profit association like Central States is a *"Serious Business"* (see Bill's article on page 32). The attention to detail, the assurance by all officers and directors that the association is being properly managed is part of the serious business and fiduciary duties of those officers. That level of attention should never vary, but as with any business during difficult economic times, it is our duty to focus closely on the fiscal health of the association. The economy, travel restrictions and the need for cutbacks across the board as our economic growth remains flat, has had an impact on CSWEA as well. Your Executive Committee has worked hard to maintain core services and meet our members' expectations while providing for responsible budgeting to match the flat-trending economy.

CSWEA remains fiscally healthy, and very fortunately has grown a healthy reserve fund in keeping with the association's fiscal reserve policy. As Executive

Director, I have heard comments over the past few years about why the association has all that money in reserve, and some folks thought it would be a good idea to spend those reserves down. Reserve funds are meant for rainy days, and folks, its starting to sprinkle a little. Due to lower anticipated revenues from the annual meeting and two workshops last fall and cash flow issues created by our investment in the Water For People fundraiser reward package, we have needed to dip into reserves a little this year. With adjustments to the 2010 fiscal year budget, our expenses should match expected revenues and once the economy begins to grow again, we will be able to grow our fiscal reserves. As we experienced at the 82nd Annual Meeting in Lincolnshire, we expect to have a little lower turn out for the 83rd Annual Meeting in Madison, and those folks who attend will not stay as long. As in Lincolnshire, we expect full conference registrations to be lower than normal and one-day registrations to be higher than normal, and we are adjusting to meet those expectations.

We are not alone in confronting this situation; WEFTEC '09 was a good success, with 17,772 water professionals attending. And those who attended spent less time at WEFTEC, with one-day registration numbers much higher than in the past. Like WEF, in my opinion, we are a well-managed association, with leaders committed to fulfilling their responsibilities while continuing to provide the training and education that is our association's core service. Your association is in good hands.

As we make those often difficult decisions about maintaining programs at current levels, or reduce those levels, the Executive Committee will work to assure that those programs that will sustain the association are maintained. We will also be looking to partner with our State Sections, so that some cost burdens that benefit both the association and the sections are shared, such that they may be sustained. And this partnership exists at all levels of the association and its sections, what is good for one must be good for all.

I am aware of some professional associations being forced to revert from professional, paid staff, to relying solely on volunteers to conduct the business of the associations. We reviewed that possibility at the last Executive Committee meeting and the consensus was that the association could not continue to thrive only on the strength of volunteers. My goal is to continue to execute the policies of the Executive Committee and navigate the remainder of our current economic recession in a manner to preserve the association's funds and continue to provide the services you want as Central States members. [CS](#)



**GREELEY AND HANSEN**

*Designing for better urban environments*

Water ■ Wastewater ■ Water Reuse

100 South Wacker Dr., Suite 1400 ■ Chicago, IL 60606  
[www.greeley-hansen.com](http://www.greeley-hansen.com) ■ 800-837-9779



# Global Technologies, Local Solutions.



Degremont Technologies offers trusted, globally proven solutions for your water treatment challenges.

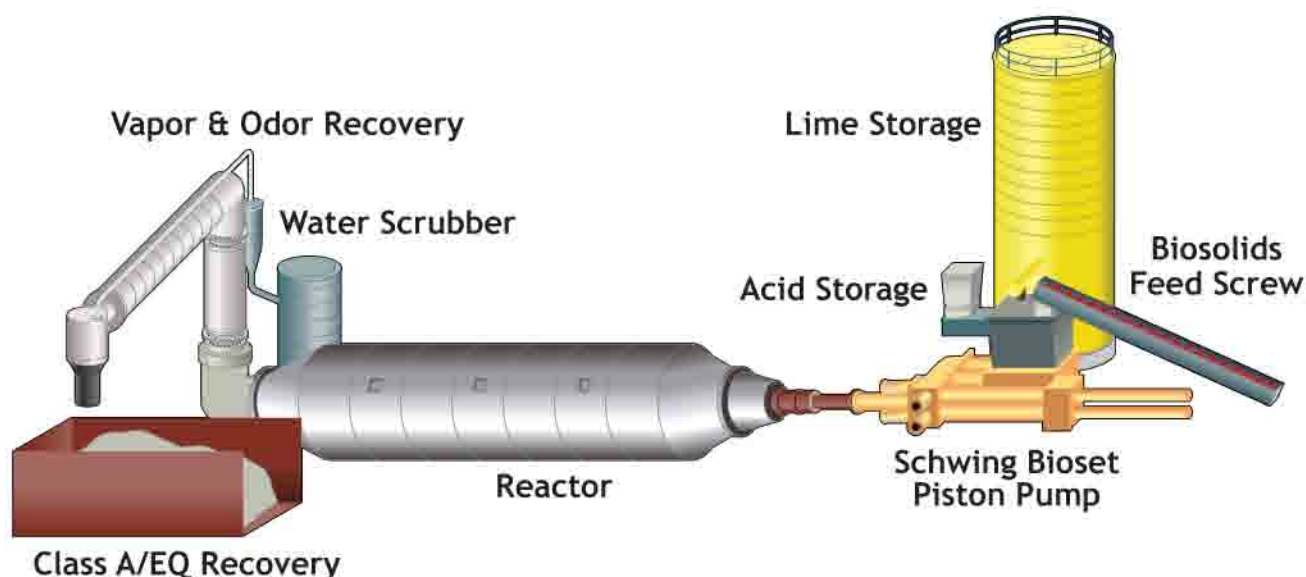
HEADWORKS  
BIOLOGY  
SEPARATION  
MEMBRANE  
DISINFECTION  
BIOSOLIDS  
SYSTEMS



[www.degremont-technologies.com](http://www.degremont-technologies.com)

# How do you convert sludge into Class 'A' Biosolids?

## Get the right equipment



The staff at the Dane-Iowa WWTP in Mazomanie, WI and the West Central Wisconsin Biosolids Facility in Ellsworth, WI installed the **Bioset** process after recognizing the benefits of producing Class 'A' biosolids. One of the features of the **Bioset** process that appealed to plant staff was its ability to integrate seamlessly into their existing operations without requiring any additional Operators or Mechanics. Other key selection criteria included:

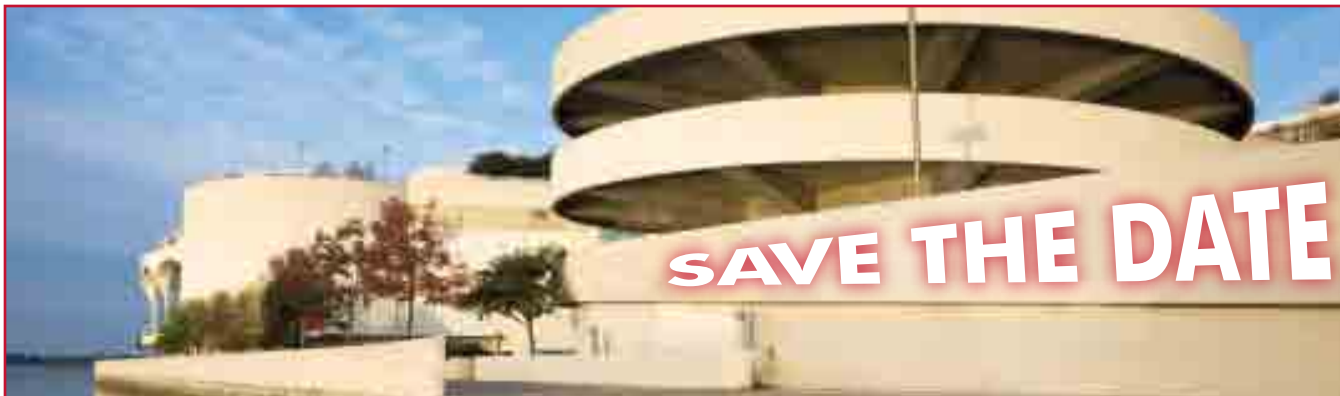
- Low capital and operating costs
- Minimal maintenance and ease of operation
- Consistent production of Class 'A' biosolids with long-term stability
- A clean system that operates virtually free of dust and odor

**These were important items for the Dane-Iowa WWTP and the West Central Wisconsin Biosolids Facility. The question is, what is important to you?**

Schwing Bioset, Inc.  
350 SMC Drive  
Somerset, WI 54025  
[www.schwingbiosetcs.com](http://www.schwingbiosetcs.com)







**SAVE THE DATE**

**May 11-14, 2010**

**Central States Water Environment Association 83rd Annual Conference**  
Monona Terrace Convention Center, Madison Wisconsin

The planning for the 83rd Annual Conference is well under way. Arrive in Madison on Tuesday May 11 for golf and catch up with friends and associates at the Meet and Greet on the scenic rooftop of Monona Terrace.

Wednesday May 12 wake up early and take a run or walk along Lake Monona over to the Nine Springs Wastewater Treatment Plant. (You

get a ride back!) This first full day of the conference is packed with activities including the keynote address, three parallel tracks of technical sessions; a full day of exhibits, winding up with evening social event.

Thursday May 13 opens with the State Section breakfasts and another full slate of technical sessions, plus exhibits will again be open in the morning. The Association

Luncheon will feature good food and recognition of our members. Wind up the day at Annual Awards Banquet.

Friday May 14 we say goodbye to another conference with the Farewell Breakfast.

The Central States Annual Conference is a great event. Come and enjoy the beautiful Monona Terrace and explore Wisconsin's capital city.

**Technology**

**Maintenance**

**Certification**

Swanson Flo-Systems is the single source solution for all of your municipal water and wastewater needs. We are equipped to handle any point in the process including: product application, equipment selection from our warehouse of products, maintenance and certification either in-house or on-site by certified technicians.

Let efficiency start with your service company.  
**Call Swanson today!**

**From a Single Source**



**763.383.4700**  
[www.swanflo.com](http://www.swanflo.com)

151 Cheshire Lane N. Suite #700  
Plymouth, Minnesota 55441

## CSWEA-IWEA WEFTEC '09 Welcome Reception

Over 250 members and guests of CSWEA and IWEA attended the 15th Annual Welcome reception at the Peabody Orlando to kick off the week at WEFTEC'09. This fun-filled event featured great food and refreshments, including adult beverages and provided the opportunity for old friends to meet as well as making new friends. As always, it is our many sponsors who make this great event possible. Please be sure to thank them and patronize their businesses. Plans are under way for our WEFTEC 2010 reception in New Orleans, another great event you will not want to miss.

### Reception Sponsors

AECOM Water  
Allied-Locke Industries  
Ashbrook Simon-Hartley  
Baxter & Woodman  
Black & Veatch  
Centrisys  
Crawford, Murphy & Tilly, Inc.  
DeZurik  
Donohue & Associates, Inc.  
Doonan Environmental, LLC  
Drydon Equipment Inc.  
Energenecs  
Engineering America, Inc.  
Environmental Dynamics  
Flow-Technics, Inc.  
Flowserve  
Gabriel Novac & Assoc., Inc.  
G.A. Industries, Inc.  
Gasvoda & Associates, Inc.  
Geosyntec Consultants  
Greeley and Hansen  
HDR Engineering  
Howard R. Green Company  
IHC Construction Companies, LLC  
In-Pipe Technology Company  
ITT Flygt  
ITT Sanitaire  
JDV Equipment Corporation  
Jim Jolly Sales-GA Industries  
JWC Environmental  
Hydroaire, Inc.  
Kruger, Inc.  
LAI, Ltd.  
Lakeside Equipment Corp.  
Liquid Dynamics Corp.  
Natgun Corporation  
North Coast Environmental, Inc.  
Peterson & Matz, Inc.  
Praxair, Inc.  
RJN Group  
Rotork Controls Inc.  
RPS Engineering  
Siemens Water Technologies  
Strand Associates, Inc.  
Temcor  
Tnemec Company Inc./  
Taylor Coating Sales Inc.  
Trojan Technologies  
Trotter and Associates, Inc.  
Visu-Sewer  
Walker Process  
Walter E. Deuchler Associates, Inc.  
Weir Specialty Pump (Wemco)  
Yeomans Pump, Chicago Pump Co.  
and Morris Pumps



**M.E. SIMPSON Co., Inc.**

*The Goal is Crystal Clear*

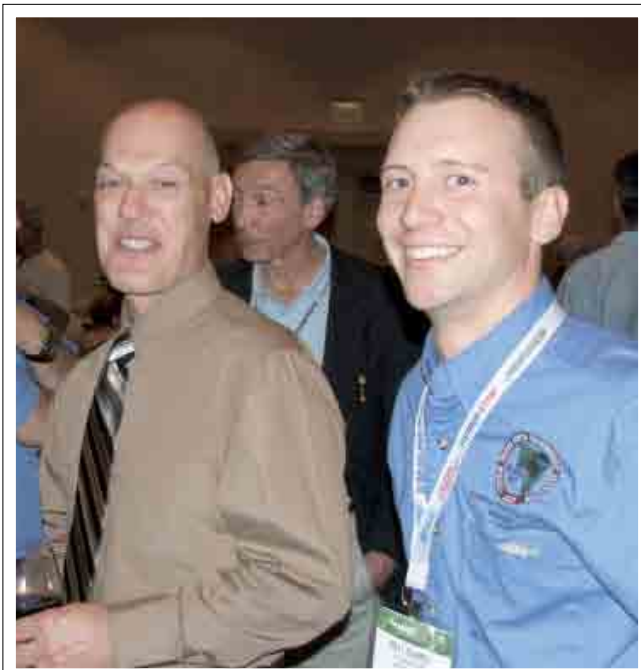
**Optimizing Water System Operations**  
Water Audits - Leak Surveys  
Large Meter Evaluation, Testing & Repair  
Hydrant Flow Testing - Unidirectional Main  
Flushing - Mainline Valve Assessments  
Flow Measurement & Testing  
GPS Locating & CAD Mapping

**Improving Wastewater System Operations**  
Sewer Flow Monitoring - Smoke Testing  
Manhole Inspection & Inventory  
GPS Locating & CAD Mapping

[salesinfo@mesimpson.com](mailto:salesinfo@mesimpson.com)  
Phone: (800) 255-1521  
Fax: (888) 531-2444  
[www.mesimpson.com](http://www.mesimpson.com)

Valparaiso, IN - Phoenix, AZ - Dyer, IN  
Gwinnett Co., GA - Waukegan, IL - Chicago, IL  
Indianapolis, IN - Savage, MN - Baltimore, MD





*You Know Us For The  
Products  
We  
Sell...*



*Now Get To Know Us For The*

**Systems  
We Integrate**



**Energenecs**

has long been associated with long lasting, high quality products... but we can offer so much more.

Our experience in SCADA and process control system integration provides our customers with systems that are more reliable, efficient, and offer a single source of responsibility.

**Stop by  
our booth at  
the Midwest Water  
Industry Expo  
Feb. 9-10**

**Energenecs**

W59 N249 Cardinal Ave  
Cedarburg, WI 53012  
1-800-343-6337  
www.energenecs.com

**WEFTEC 2010, New Orleans  
Don't miss out!**



Congratulations to the Pumpers and Shovelers representing Central States at the WEFTEC Operations Challenge. Special congratulations the Pumpers who once again secured third place in the Process Control event. This is only the third team out of 44 teams representing Central States in the

22-year history of this competition to bring home a trophy. It is also a two-time repeat for the pumpers. A phenomenal accomplishment considering that the team had just met and only had two practice sessions prior to the competition.

Forty-one teams consisting of more than 200 of the world's best and brightest wastewater treatment professionals competed in this year's unique, fast-paced skills competition for wastewater operations and maintenance professionals. Now celebrating its 22nd year, the competition took place October 11-13 at Orange County Convention Center in Orlando, Florida. As the largest water quality event in North America and largest annual water quality exhibition in the world, WEFTEC hosts more than 17,000 of the world's leading water quality experts and 1000 companies featuring the latest in water quality technology.

Growing from an original 22-team event to its current 41-team, 2-division format, each four-member team was judged on the best combination of precision, speed and safety. Winners were determined by a weighted point system for five events including collection systems, laboratory, process control, maintenance and safety. The events were designed to test the diverse skills required for the operation and maintenance of wastewater treatment facilities, their collection systems and laboratories – all vital to the protection of public health and the environment.

The main coordinator for the teams is Charlie La Rocco, CSWEA, Professional Wastewater Water Operator representative to the CSWEA Executive Committee.

The Pumpers are: Coach Rick Ashling,

Albert Lea, MN; Captain Dennis Egge, Janesville, WI; Darcey Thoen, Moorhead, MN; Ken Bloom, Marathon, WI; and Rob Barnard, Moline, IL.

The Shovelers are: Coach Jim Miller, Buffalo, MN; Captain Jeff Mayou, Marionette, WI; Todd Carlson, Duluth, MN; Lyle Lutz, Amherst, WI; Matt Schmidt, Green Bay, WI. Special mention for Captain Jim Huchel, Crystal Lake, IL who could not compete due to plant problems but contributed greatly to the success of both teams. Also thanks to Captain Jeff Mayou for stepping in at short notice as Jim's replacement.

These professionals competed against the best from around the United States and Hawaii to Canada and Argentina. Charlie La Rocco stated, "We should be very proud of what we were able to accomplish with just two practice sessions and with operators from three different states." Also quoted was Todd Carlson as saying, "To put eight people together with such a variety of back grounds and to have them perform as we did... WOW

## Main Coordinator:

Charlie La Rocco, CSWEA

## The Pumpers:

Coach Rick Ashling  
Albert Lea, MN  
Captain Dennis Egge  
Janesville, WI  
Darcey Thoen  
Moorhead, MN  
Ken Bloom  
Marathon, WI  
Rob Barnard  
Moline, IL

## The Shovelers:

Coach Jim Miller  
Buffalo, MN  
Captain Jeff Mayou  
Marionette, WI  
Todd Carlson  
Duluth, MN  
Lyle Lutz  
Amherst, WI  
Matt Schmidt  
Green Bay, WI

## The Shovelers







**Ops Challenge Photo 1:**  
Matt Schmidt in a blur of speed as he works the Pump Maintenance event.



**Ops Challenge Photo 2:**  
(L-R) Darsey Thoen, Matt Schmidt, Ken Bloom, Jeff Mayou, Todd Carlson, Jim Miller, Rob Barnard, Rick Ashling, Dennis Egge, Charlie La Rocco and Lyle Lutz.



**Ops Challenger Photo 3:**  
The Pumpers

**Ops Challenger Photo 4:**  
The CS Pumpers compete in the Collection System Event.


**Ops Challenge Photo 5:**  
The CS Shovelers take their turn at the Collection System Event.

**Ops Challenge Photo 6:**  
The CS Pumpers with their favorite pump.

what an experience. It was truly an honor to be part of the success of these teams!"

Congratulations to everyone for being able to pull together so quickly and smoothly. This demonstrates the diversity, tenacity and teamwork potential of the people in the wastewater profession. **CS**






**Planning, Design and Construction Engineering**  
Services for Municipal Infrastructure

**Experienced Professionals – Better Solutions**

**Wastewater Engineering**  
Street and Parking Improvements  
Municipal Buildings  
Capital Improvements Planning  
Utility Mapping/ GIS Data Collection  
Topographic Surveys  
Construction Engineering

**Water Engineering**  
Stormwater Management  
Public Works Facilities  
Subdivision/ Development Review  
Land and Route Surveying  
Construction Layout  
Subdivision/ Development Review



**40W201 Wasco Road, Suite D**  
**St. Charles, IL 60175**  
**Phone (630) 587-0470**  
**Fax (630) 587-0475**  
**[www.trotterandassociates.com](http://www.trotterandassociates.com)**



## Keen on Green



Eliminate the use of hazardous chemicals in your disinfection process with TrojanUV. Reduce your carbon footprint thanks to Trojan's high-efficiency lamps and the elimination of bulk chemical transportation.

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

Represented by:

Engineering America, Inc. (MN & NW, WI) | Tel. 651.777.4041 | [tbelden@engamerica.com](mailto:tbelden@engamerica.com)

Mulcahy/Shaw Water, Inc. (WI) | Tel. 262.241.1199 | [info@mulcahyshaw.com](mailto:info@mulcahyshaw.com)

Peterson & Matz, Inc. (N.IL) | Tel. 847.844.4405 | [chuhans@aol.com](mailto:chuhans@aol.com)

Ressler & Associates., Inc. (S.IL) | Tel. 636.391.8992 | [kressler@resslerassociates.com](mailto:kressler@resslerassociates.com)

TROJAN  UV™

# CSWEA Student Design Teams Shine at WEFTEC '09

Photos courtesy of Charles Tyler, New England WEA

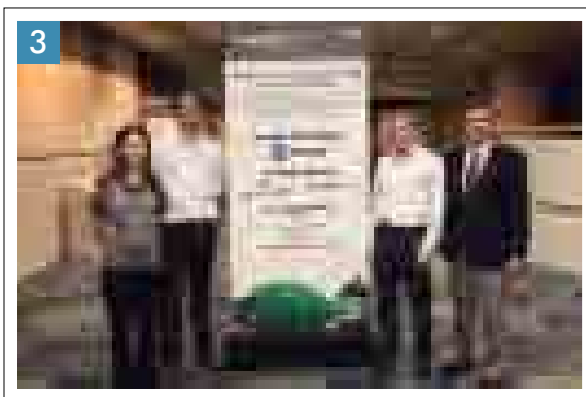
Uof W Photo 1:  
(L-R) Hiroko Yoshida,  
Joshua Gable,  
Mike Sergeant, Nick Bartelerio  
and Dan Bauknecht with WEF  
Past President  
Jim Clark.



U of W Photo 2:  
(L-R) Dan Bauknecht, Hiroko  
Yoshida, Nick Bartolerio and  
Josh Gable present their  
design.



U of MN Photo 3:  
The U of MN design team  
took second place.



U of MN photo 4.  
(R-L) Doug Henrichsen  
presents Adam Both and  
Eric Hettler with the WEF  
\$1,000 prize.



Once again, CSWEA sponsored two student design teams to compete at WEFTEC '09 at WEF's Student Design competition. Brand new this year, (following CSWEA's example) WEF created a second category of competition for "environmental designs", and our team from the University of Minnesota presented their Humanitarian Project in this category. Our team from the University of Wisconsin competed in the "classic engineering" category and both teams made outstanding, highly professional presentations.

The team from the University of Wisconsin, Madison, comprised of Nick Bartelerio, Daniel Bauknecht, Joshua Gable, Michael Sargent, Hiroko Yoshida and Kevin Ziolo for their project titled: "The Application of Co-Digestion in Madison, Wisconsin and Its Surrounding Communities." A summary of the project was published in the summer issue of *Central States Water*, and can be found at [www.CSWEA.org](http://www.CSWEA.org).

Our team from the University of Minnesota are the Engineers without Borders team and includes Adam Both, Steve Hankey, Grete Schmalte and Eric Hettler, for their project titled: "Water Supply in Rural Uganda" and this project was also profiled in the summer issue of *Central States Water*.

While both teams did well, the University of Minnesota team was honored with the second place award in the "environmental design" category, and received a cash reward of \$1,000 as well as a plaque from WEF for this accomplishment. The U of MN team chose to have their financial reward made out to the project they have been working on, the Engineers Without Borders Uganda Project, in order to further advance the effort to bring safe drinking water and sanitation facilities to this rural community in Uganda. The team was presented with this award at the MN Section's Conference on the Environment.

The University of Minnesota chapter of Engineers Without Borders is partnering with the Uganda Rural Fund to design and implement a locally sustainable water supply for the Hope Integrated Academy and the Mulobere



community and a sustainable alternative to the current sanitation practices. The systems will not only meet the existing needs of HIA but will also be designed to sustain the school when it is built to capacity. Overall, the design objectives for this water project are:

- A sustainable water system to provide for up to 500 people.
- The necessary water treatment.
- A distribution system to provide access to water throughout the school grounds.
- A sustainable sanitation system to serve up to 500 people.

CSWEA is extremely proud of both teams and these young peoples commitment to the profession, improving the environment and their social conscience in brining safe drinking water to people half-way around the world. The feed back from our students was also very gratifying since they were all so excited to be able to attend WEFTEC and meet their peers and future employers. Congratulations to all involved! [CS](#)



Eric, I want to thank you for all your hard work to send the University of Minnesota team to WEFTEC for the student design competition. I had a wonderful time at the conference, and I really appreciate the assistance you

and CSWEA have provided to our team through this process. It was an honor being able to present in such a prestigious competition.

Before this experience with the design competition, I did not know anything about CSWEA or WEF. As I learn more about both organizations, I am confident I will continue to support them throughout my professional career. I am hoping to speak to one of our student organizations, MEESE (Minnesota Environmental Engineers, Scientists, and Enthusiasts) to encourage them to participate in the design competition next year

Again, thank you for all of your work to send our team to WEFTEC. I hope you had a great time at the conference.

Regards, Eric Hettler, University of Minnesota

## progress. innovation. expertise.



Howard R. Green Company is a professional services firm bringing experience and innovation to your wastewater projects. We are committed to serving our clients, preserving our environment and meeting regulatory standards by designing state-of-the-art, easy-to-operate and cost-effective wastewater collection systems and treatment facilities.

- Wastewater facilities planning
- Wastewater collection, conveyance and pumping stations
- Wastewater treatment
- Solids processing
- Biosolids end use
- Treatment process evaluation
- Plant start-up and operation
- Nutrient removal



Minnesota Office: 888.368.4389

For a complete listing of HR Green locations, please visit [www.hrgreen.com](http://www.hrgreen.com)

TRANSPORTATION SERVICES • COMMUNITY RESOURCES • WATER/WASTEWATER SERVICES  
ENVIRONMENTAL RESOURCE MANAGEMENT • BUILDINGS SERVICES • TECHNOLOGY SERVICES

# Pollardwater.com



Pollardwater.com has competitive pricing on all colorimeters, reagents and chemical feed pumps!

VITA-D-CHLOR

## Free Wastewater and Water Catalog

Phone 800-437-1146 or online at [www.pollardwater.com](http://www.pollardwater.com)

COMPACT

## cabinet cooler

HEAT EXCHANGERS by NOREN PRODUCTS  
for sealed electrical enclosures



remove  
waste heat  
while keeping  
contaminants  
out



Noren thermal solutions feature:

- low maintenance
- easy installation
- hazardous location
- below ambient cooling
- stainless steel

Ideal for:

- pump stations
- local district plants
- waste water treatment plants

650.322.9500  
[NORENPRODUCTS.COM/ccc](http://NORENPRODUCTS.COM/ccc)

**NOREN**



# 5TH ANNUAL MIDWEST WATER INDUSTRY EXPO

## Tuesday & Wednesday February 9-10, 2010

### Kalahari Resort, Wisconsin Dells



The Expo is a favorite mid-winter getaway that offers the chance for highly cost effective CEUs, and fun. The Vendor Talks offer an outstanding way to get up-to-date information on new technology and is a great way to kick off 2010. If you haven't been to the Midwest Water Industry Expo or you haven't visited the event recently come see what you've been missing.

The Expo has been the perfect venue for attendees and exhibitors alike. Both groups found it to be a productive and valuable use of their time with the low pressure atmosphere providing for plenty of time to visit each exhibitor and learn what's new. Everyone leaves looking forward to next year. Over the years, a lot of people have brought their families so they

can give them a little break from winter at the Kalahari's Water Park. You get a room with up to four water park passes for only \$99.

We have worked to enhance our Vendor Talks and are getting more operator credits and generating more floor traffic in the exhibit hall. The Expo is intended to be a means to bring utility personnel (or anyone in this profession) into contact with equipment suppliers and manufacturers to promote the free exchange of information. Essentially our goal is to bring a quality water and wastewater exposition to the upper Midwest so operators and others can see equipment that they wouldn't normally have a chance to see.

The Expo is the exhibitors' opportunity to present their goods

and services to their customers and potential customers early in the year when purchases are being considered and to provide the opportunity for open dialogue with the vendors for awareness of upcoming projects and utility needs. The Midwest Water Industry Expo accomplishes that goal.

So besides the numerous comments from vendors and attendees alike that the EXPO was a hit, here are some fun facts about EXPO 2010:

- Like last year, we expect the fundraising raffle that gave away well over \$5,000 in prizes including a 42-inch flat screen television, three smaller flat screen televisions and many other exciting prizes. Over the years, the raffle has given away \$20,000.
- We expect raffle proceeds of over \$2,000 to be raised for Water For People and Wisconsin Water for the World on behalf of Central States and WWA. This raffle has raised over \$10,000 for these two causes in past years.
- Once again, we expect more than 400 individuals, not counting exhibitors, attended the Expo over the two days.
- We expect to sell out our exhibit space, with 95 exhibitors on hand.
- There will be as many as 32 half-hour vendor presentations where vendors discuss their products and services in an educational way, earning you CEUs.
- Earn four CEUs per day, up to a total of eight for water or wastewater.
- Continental breakfast and lunch provided both days.
- Meet and greet from 3:00 to 5:00 on Tuesday, February 9.

Registration is open, and you can register on line by visiting [www.wiawwa.org](http://www.wiawwa.org) or [www.cswea.org](http://www.cswea.org) and clicking the registration link. Be sure to come back for the 5th Expo and bring a friend. **CS**




**CRISPELL-SNYDER, INC.**  
**PROFESSIONAL CONSULTANTS**

*Providing customized wastewater and drinking water solutions to Wisconsin and northern Illinois communities for over three decades.*





- Facilities planning
- Collection & treatment
- Inflow/infiltration studies
- Lift stations
- Drinking water supply, storage & treatment

**800.203.7700**  
**[www.crispell-snyder.com](http://www.crispell-snyder.com)**  
**Lake Geneva | Milwaukee Regional | Madison | Racine | Fox Valley**



# *The power of integration*

Engage stakeholders, preserve resources,  
protect the environment, stimulate  
economic vitality. Making life better in  
smart and sustainable ways.

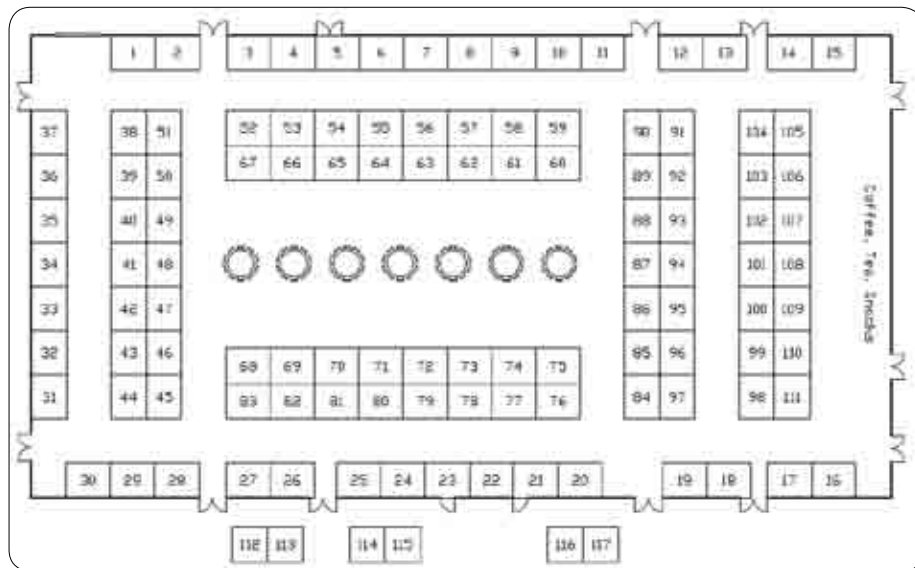


**CDM**<sup>®</sup>  
[www.cdm.com](http://www.cdm.com)

Chicago, Illinois • St. Paul, Minnesota • Milwaukee, Wisconsin

# MWIE FLOOR PLAN & EXHIBITORS

\* At time of publication. More to follow.



## Adaptor, Inc.

2151 South 54th Street  
West Allis, WI 53219  
414-303-7834  
ddodge84@yahoo.com  
www.adaptorinc.com

## Alpha Terra Science

1237 Pilgrim Road  
Plymouth, WI 53073  
920-892-2444  
jerryhirt@alphaterra.net  
www.alphaterra.net

## American Flow Control

21695 Highview Avenue  
Lakeville, MN 55044  
952-469-1100  
bkeyes@acipco.com  
www.acipco.com/afc

## ASA Analytics

2325 Parklawn Drive, Suite I  
Waukesha, WI 53186  
262-717-9500/800-665-7133  
jed@chemscan.com  
www.asaanalytics.com

## BÖRGER<sup>®</sup> Innovation.

### Boerger, LLC

740 NE Harding Street  
Minneapolis, MN 55413  
612-435-7300

[america@boerger-pumps.com](mailto:america@boerger-pumps.com)  
[www.boerger-pumps.com](http://www.boerger-pumps.com)

*Boerger Rotary Lobe Pumps are self-priming, valveless, positive displacement pumps. Flow rates are between 2.2-5,500 usgpm and the flow is reversible.*

## BOLTON & MENK, INC.

Consulting Engineers & Surveyors



St. Peter, MN Wastewater Treatment Facility:  
Council of Engineering Companies (CEC) Grand Award (2006),  
Minnesota Society of Professional Engineers (MSPE) 2006 Seven Wonders of Engineering Award

Engineering in Civil, Water, Wastewater, Transportation,  
Water Resources and Surveying Services.

607-625-4171 [www.bolton-menk.com](http://www.bolton-menk.com)  
Eight offices serving the upper midwest

**DESIGNING FOR A BETTER TOMORROW**



## DYK<sup>®</sup> INCORPORATED

*Building Lifetimes of Value Today*

### DYK Incorporated

P.O. Box 696  
El Cajon, CA 92022-0696  
619-440-8181/800-227-8181  
[dykinc@dyk.com](mailto:dykinc@dyk.com)  
[www.dyk.com](http://www.dyk.com)

*DYK Inc. offers economical, low-maintenance, machine-wrapped, prestressed concrete tanks for water and wastewater storage, in sizes ranging from 80,000 to 40 million gallons.*

**Energenecs**

3476 Country Aire Drive  
Cedarburg, WI 53012  
262-377-6360

[larry@energenecs.com](mailto:larry@energenecs.com)  
[www.energenecs.com](http://www.energenecs.com)

Energenecs provides system integration services, application engineering, and equipment field service.



*Engineered for life*

**ITT Sanitaire**

9333 N. 49th Street  
Brown Deer, WI 53223  
414-365-2200

[info@sanitaire.com](mailto:info@sanitaire.com)  
[www.sanitaire.com](http://www.sanitaire.com)

Leading manufacturer of aeration, SBR and filtration equipment and processes for the wastewater treatment industry.

**L&S Electric**

5101 Mesker St.  
P.O. Box 740  
Schofield, WI 54476  
715-359-3155  
[dmanney@lselectric.com](mailto:dmanney@lselectric.com)

**LAI Ltd.**

5400 Newport Dr., Suite 10  
Rolling Meadows, IL 60008  
847-392-0990

[rich@leyassociates.com](mailto:rich@leyassociates.com)  
[www.leyassociates.com](http://www.leyassociates.com)

Manufacturer Representative of Water and Wastewater Products in Northern Illinois and Wisconsin.

**Mulcahy/Shaw Water Inc.**

10144 N. Port Washington Road  
Mequon, WI 53092  
262-241-1199

[tmulcahy@mulcahyshaw.com](mailto:tmulcahy@mulcahyshaw.com)  
[www.mulcahyshaw.com](http://www.mulcahyshaw.com)

Process and instrumentation equipment servicing the water and wastewater market. Contact Team Mulcahy for your different needs.

**Therma-Stor LLC**

4201 Lien Rd.  
Madison, WI 53704  
608-237-8400/800-533-7533  
[wmobley@thermastor.com](mailto:wmobley@thermastor.com)  
[www.thermastor.com](http://www.thermastor.com)

**USEMCO**

1602 Rezin Road  
Tomah, WI 54660  
608-372-5911  
[bruhling@usemco.com](mailto:bruhling@usemco.com)

**Water Remediation Technology, LLC**

Suite D100, 9500 W. 49th Street  
Wheat Ridge, CO 80033  
303-424-5355  
[sanderson@wrtnet.com](mailto:sanderson@wrtnet.com)  
[www.wrtnet.com](http://www.wrtnet.com)

**Wonderware Midwest**

175 N Patrick Blvd., Suite 110  
Brookfield, WI 53045  
866-826-9725  
[joe.finn@wonderwaremidwest.com](mailto:joe.finn@wonderwaremidwest.com)  
[www.wonderwaremidwest.com](http://www.wonderwaremidwest.com)

**CONSERVING MORE INTELLIGENTLY**

We are AECOM. As a global leader, our expertise in water, wastewater, water resources, community infrastructure and water design-build enables us to provide comprehensive solutions to manage, protect and conserve our water. With skills extending beyond technical knowledge, our scientists, engineers and construction managers work with our clients to solve their water issues.

AECOM...Enhancing the world's built, natural and social environments.

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

**PRO-DIVE, INC.**Underwater Contractors

501 Illinois Avenue Ottawa, Illinois 61350  
Phone (815) 433-5228 Fax (815) 434-2433

**Potable Water and Wastewater Inspections/Cleaning/Repairs****Randy Jacobs**

President

[www.pro-dive.net](http://www.pro-dive.net)

**24-HR SERVICE**

Toll Free (888) 505-DIVE

e-mail: [info@pro-dive.net](mailto:info@pro-dive.net)



# KRÜGER

## Keeping Your Water Clean for Generations

Building upon our past, Kruger offers advanced treatment technologies to meet today's regulatory requirements. The ACTIFLO® and Hydrotech Discfilter processes, independently or combined, are ideal for your phosphorus removal needs.

- Proven performance and experience backed by a large installation list
- Small footprint
- Meets effluent phosphorus concentrations from 0.5 to 0.05 mg/l
- Easily able to retrofit into existing facilities



Hydrotech  
Discfilter



401 Harrison Oaks Blvd. Suite 100  
Cary, NC 27513  
Phone: 919.677.8310  
Fax: 919.677.0082  
krugerincmarketing@veoliawater.com  
www.krugerusa.com

 **VEOLIA**  
WATER

Solutions & Technologies



# City of Fort Atkinson Wastewater Treatment Plant



## Plant history

The City of Fort Atkinson Wastewater Treatment Plant was built in 1972. The plant at that time was a conventional activated sludge plant. The plant was modified in 1981 to a diffused air system for the digesters, and in 1982 there was the addition of a 890,000 gallon liquid storage tank. In 1989 there was another upgrade to the plant that included a diffused aeration system for the activated sludge process. Currently the City of Fort Atkinson Wastewater Plant is operating under the modifications and expansions it received when it was constructed in 1991 and 1992. It was necessary to upgrade the plant to accommodate the increasing wastewater loads from families and industries. With the new plant upgrades the city was also able to focus on important issues like dechlorination, nitrification, and a better solids processing procedure.



### Raw wastewater

Raw wastewater that enters the plant comes from many different places. The bulk of our city's wastewater comes from residential homes, commercial establishments and industry located in Fort Atkinson. Wastewater flows mainly by gravity to the plant. However, there are places in the city where this is not possible, so there are three lift stations located throughout the city. A lift station pumps the wastewater to a higher level where it can then flow by gravity to the plant. The average flow of wastewater entering the treatment plant in 2007 was 2.43 mgd. In 2008 with the flooding that happened to the Rock River our daily flow averaged 3.29 mgd. When flooding was at its worst in June the plant flow peaked to 9.6 mgd and averaged 6.84 mgd for the month. Due to the extreme conditions of the 2008 flood, 2007 numbers will be used in this article. The strength of the wastewater entering the plant is measured under several different parameters: Total Suspended Solids (TSS), Biological Oxygen Demand

(BOD), Total Kjeldahl Nitrogen (TKN) and Phosphorous. In 2007 the BOD averaged 373mg/L, TSS averaged 210 mg/L, Phosphorous averaged 8 mg/L and TKN averaged 33mg/L.

### Primary clarification

Primary clarifiers remove settled and floating solids from the wastewater. On average 65% of solids and 30% of the organic load are removed by flowing into these large, calm tanks. Once solids either float to the top or settle to the bottom they travel out to the digesters and the flow then travels to the activated sludge system.

### Aerobic digesters

Aerobic digesters are used to stabilize the sludge prior to land application. Primary sludge from the primary clarifiers and thickened activated sludge from the secondary clarifiers is fed to the digesters. Air is then introduced to the sludge to provide

oxygen to the bacteria and stabilize the biosolids. This turns the biosolids into a natural organic soil conditioner.

### Phosphorous removal

Phosphorous removal is also required here at the treatment plant. Instead of using chemical to eliminate the phosphorous we remove ours biologically. In the front of our first two aerations tanks are what we call anaerobic zones. Anaerobic areas are where oxygen is only available in forms such as nitrate, nitrite and sulfate. The micro-organisms are so starved that they are able to uptake a larger concentration of phosphorous than they require. This then lowers the amount of phosphorous discharged into the river. A chemical feed system is also on hand, but is only used to assist phosphorous removal when we may be struggling to meet our DNR limits.

### Activated sludge system

These large tanks contain what is a very important step to our treatment process called the activated sludge system. We have six of these tanks in all. In this system, bacteria and micro-organisms feed on organic material in the wastewater. From this feeding, the waste materials are reduced by 80-90%. The micro-organisms that perform the treatment process are a population of bacteria, protozoa and other life forms. These life forms use the organic matter as food to grow and reproduce. Once the micro-organisms are fed they digest the food, relax and then they feed again in this continuous cycle. As required here at the treatment plant we have to remove ammonia. To do this we use the bacteria to convert the ammonia to another form of nitrogen called nitrate. This is called nitrification. Nitrification takes up a lot of oxygen, so in these tanks we supply a lot of air to keep the bacteria converting the ammonia to nitrate.

### Secondary clarification and disinfection

Secondary clarifiers are used to separate the activated sludge micro-organisms

**SPECIFIED MUNICIPALLY**  
more than any other scale

CHLORINE SCALES

DRUM & TANK SCALES

**FORCE FLOW**

[WWW.FORCEFLOW.COM](http://WWW.FORCEFLOW.COM)

5 YEAR WARRANTY

NO FINGER POINTING. NO FINE PRINT.

INSTALLATIONS IN OVER 100 COUNTRIES



from the treated water. This is done by letting the mixed liquor flow into these large calm tanks. Here the heavier solids (micro-organisms) sink to the bottom of the tank leaving a clear effluent to head to disinfection. The secondary effluent always runs to the disinfection area but is only chlorinated in the summer months of May through September. The micro-organisms now get pumped from the bottom of the clarifier and returned into the activated sludge system with the primary effluent before they discharge back into the aeration basins. Mixing the primary and the secondary return provides the activated sludge system with healthy organisms at all times to feed the incoming waste.

everyday to maintain balance between the amount of waste coming into the plant and the amount of microorganisms we have to feed on the waste.

### Gravity belt thickener

The belt press is also designed to remove the water from the biosolids. With the belt thickener we take digested biosolids and it is pumped into the belt press and thickened with polymer. It is then squeezed between the two belts to dewater it. By doing this we end up with a end biosolids product of approximately 13% solids and 87% water. From this point the solids are either taken directly to a farmers field or we will store in on site in our biosolids storage area. **CS**



### Biosolids thickening

A portion of the biosolids that doesn't get returned into the system from the secondary clarifiers is wasted out of the system on a daily basis. It is transported to the gravity belt thickener. Once thickened it goes into our digesters. We waste

To learn more about the  
City of Fort Atkinson WWTP  
[www.fortatkinsonwi.net](http://www.fortatkinsonwi.net)

**SEVERN  
TRENT  
SERVICES**

**Capital Controls®**  
Water and Wastewater Disinfection Products

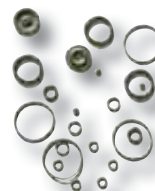
**Capital Controls® 1870E**  
*Chlorine Residual Analyzers*



**Microchem®2**  
*Residual CL2/pH/ORP Analyzers/DO/  
Bromine/Ozone/Conductivity*



**Capital Controls® Series 200**  
*Cylinder or Ton Mounted Feeders  
CL2/SO2/NH3/CO2*



**Capital Controls® FX4400**  
*Cabinet Gas Feed Systems*

**Capital Controls® Gas Feed Systems**  
*Original Spare Parts*

Illinois:

**Drydon Equipment, Inc.**  
Woody Wolff  
2445 Westfield Drive • Suite 100  
Elgin, IL 60124  
Tel 224 629 4060  
Fax 224 629 4061  
[wwolff@drydon.com](mailto:wwolff@drydon.com)  
[www.drydon.com](http://www.drydon.com)

Wisconsin:

**Drydon Equipment, Inc.**  
Jeff Williamson  
3033 South 128th Street  
New Berlin, WI 53153  
Tel 262 827 9201  
Fax 262 827 9203  
[jwilliamson@drydon.com](mailto:jwilliamson@drydon.com)  
[www.drydon.com](http://www.drydon.com)

Minnesota:

**Engineering America**  
Tony Belden  
647 Hale Avenue N.  
Oakdale, MN 55128  
Tel 651 777 4041  
Fax 651 777 5312  
[tbelden@engamerica.com](mailto:tbelden@engamerica.com)  
[www.engamerica.com](http://www.engamerica.com)

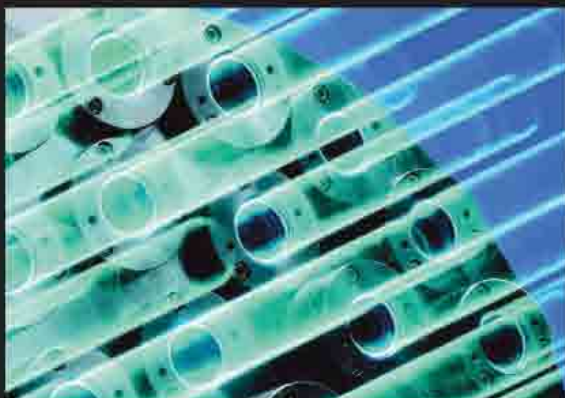
[www.severntrentservices.com](http://www.severntrentservices.com)

# WEDECO UV & Ozone

**Leading the market with two chemical-free water treatment systems... UV Disinfection and Ozone Oxidation.**

The WEDECO brand is synonymous with chemical-free water treatment. Indeed, 30 years of experience – and over 250,000 installed systems – make WEDECO products an essential component of treatment plants across the globe.

Go with far greater confidence. Go with the market leader who offers two great solutions. Go with WEDECO. Call 704-716-7600 or visit us at [www.us.ittwww.com](http://www.us.ittwww.com)



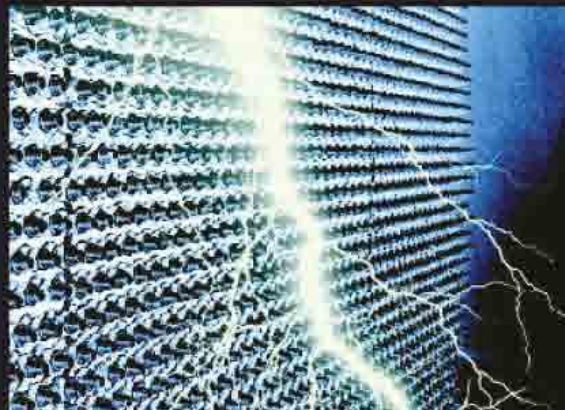
## **WEDECO LBX Series Closed Vessel UV Reactors**

NWRI-certified!

Energy efficiency and extraordinary reliability make the WEDECO LBX Series an excellent choice for wastewater and reuse applications.

Features include:

- Spektrotherm® low pressure/high intensity UV lamps for temperature stability and long lamp life expectancy
- The only low pressure/high intensity NWRI certified UV system on the market
- Easy mounting, horizontally or vertically, into existing pipe lines



## **WEDECO SMO/SMA Ozone Generators**

Setting the standard for ozone generation

Completely integrated, highly efficient systems that meet the greatest demands for municipal and industrial applications. Features include:

- Patented EFFIZON® HP electrodes for reliable generation of high concentration ozone from oxygen or air feed gas
- These compact "Plug and Play" systems are completely mounted and instrumented
- Low-maintenance. Unlike conventional systems, there's no need for routine cleaning or regular electrode replacement

**Think about ITT.**

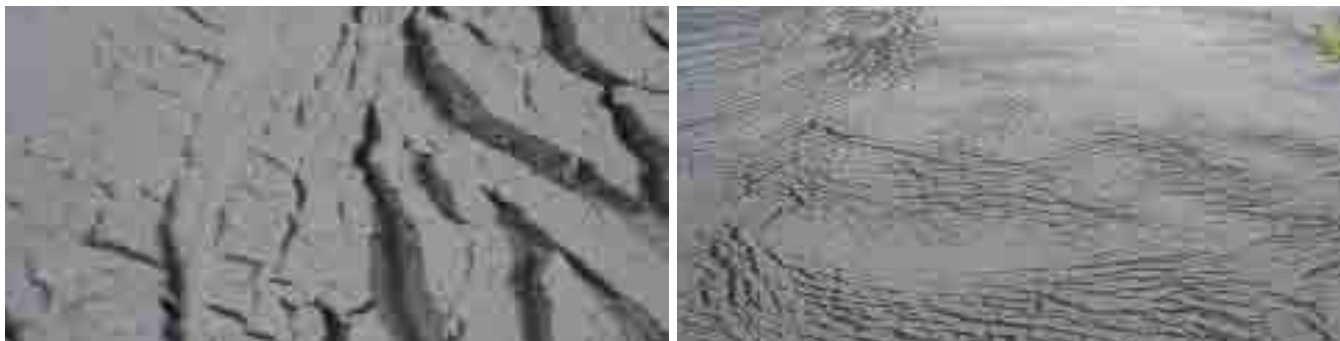


**ITT**

*Engineered for life*



# ARE YOU A VICTIM OF ANAEROBIC DIGESTER FOAMING?



CSWEA's Digester Foaming Ad Hoc Committee wants to know. Digester foaming has been identified as a major problem in facilities throughout Central States and beyond, causing operational problems, significant structural damage to facilities and major stress to operators, managers and designers alike. One operator described his experience with digester foaming this way: "It's just terrible, you can't sleep, you can't eat, it is so upsetting, and you worry about it all the time. You're trying to leave for home after many long hours at the plant, and this stuff is following you out the driveway and down the street after you. This has to stop!"

The committee has determined that the best way to proceed is to conduct a survey of facilities through the three states to determine the extent of foaming problems and to determine common traits of facilities with the hope of finding commonalities for facilities experiencing these problems. We are also seeking input from facilities not experiencing foaming problems so if a common trait is identified, we can compare that trait with non-foaming facilities to see if it is a unique factor. We anticipate that this will be a lengthy process, and that the first sets of surveys may identify some common factors, but that more in-depth analysis will be needed to determine a root cause. If this was easy, somebody would have figured it out already.

The survey will be conducted electronically and you may have already received an email invitation to complete the survey. If you have done so, thank you. If you haven't done so, please take the time to complete the survey as the information you provide may just be the

key factor needed to solve this insidious operating problem.

Knowing how much people hate completing surveys, the committee has worked to make the survey easy to complete, with the first round designed so that operators can provide information without need to complete extensive work to provide answers. Based on the results of that initial survey, follow-up information with more in-depth questions may be warranted and committee members may contact facilities directly to complete that portion. The information you provide will help determine the success of this effort and the goal is to eradicate foam from facilities everywhere. We expect this to be a difficult process, employing science, engineering, operator experience and equipment manufactures knowledge

of systems combining to develop a solution. As we have learned in the past, slogans alone, like the famous "Just say no to Nocardia" did nothing to control Nocardia. Slogans will not prevent digester foaming. Real action is needed, and you can be part of the solution.

Working with the Education Seminar Committee, with the topic of the seminar being bio-solids this year, some of the topics to be presented will include anaerobic digester foaming. Our next steps, based on the outcome of our surveys, will be to determine the format of a workshop were all interested parties can come together to discuss potential causes, operational tactics to control foam and finally achieve the ultimate goal of eliminating digester foaming everywhere. [CS](#)

Project Solutions... Since 1909.



**100**  
YEARS OF EXCELLENCE & GROWTH  
1909 - 2009

**McMAHON**  
ENGINEERS ARCHITECTS

NEENAH, WI 920.751.4200  
MACHESNEY PARK, IL 815.636.9590  
VALPARAISO, IN 219.461.7743  
[WWW.MCMGRP.COM](http://WWW.MCMGRP.COM)

Your Goals. Your Schedule. Your Budget. Your Project delivered the McMAHON way.





# SERIOUS *business*

By William J. Bertera, *Executive Director, Water Environment Federation*



The economy is striking close to home. The National Recycling Coalition filed for bankruptcy in September with \$1.5 million in debts and less than \$1,000 in the bank – not even enough money to move out of its offices and put its furniture and records into storage. Yes, not-for-profit organizations can file for bankruptcy and each year many quietly do. This year, there will be more and some may be large national organizations.

These are troubling times.

**M**anaging not-for-profit associations is not rocket science but it is not as simple as it once was. There was a time in the not-too-distant past when adherence to the mission and compliance with a few basic precepts pretty much assured the unencumbered existence of associations. That has all changed. The public interest is now more demanding, assumes more transparency and requires a comprehensive knowledge of not only the increasingly complex state and federal laws that govern and regulate not-for-profit organizations, but the psychology and politics of doing so as well.

This year, most associations with IRS tax exemptions and with incomes in excess of \$25,000 will be faced with a new federal reporting form (IRS Form 990) that will cause not-for-profit boards of directors and volunteer leaders to become, for the first time, not only more intimately involved in reporting what their organization is doing, but also encumbering them with real accountability for the manner in which the organization itself is governed.

This means that being an association board member has taken on a whole new level of seriousness that suggests a level of engagement that has not been required before. Gone are the days when simply meaning well, regardless of outcomes, constituted a free pass for volunteer leaders or their organizations. It is no longer unheard-of for exempt status to be revoked for failure to serve the public interest.

None of this suggests that volunteer organizations are not governable by volunteers or that leading cannot be fun or rewarding, but it does mean that governing associations has become a serious business with real-world consequences. It is not a lark or a place to "honor" loyal or respected members. Being a board member today requires hard work, dedication and a willingness to make difficult decisions. Some of this, as the board for the National Recycling Coalition learned, is not fun at all.

As has been true from the instance of the first not-for-profit exemption by the Internal Revenue Service, there are three basic precepts or duties to help volunteer board members and officers do a good job and to minimize their personal liability when things go wrong,

*"Gone are the days when simply meaning well, regardless of outcomes, constituted a free pass for volunteer leaders or their organizations."*

as they sometimes do. Those duties are care, obedience and loyalty.

The first (care) means you have to actually work at doing the job of being a leader. You have to know what is going on, you have to prepare for meetings, you have to actively participate in decision making and you have to vote. Boards can only exercise control by voting; conversation alone is legally meaningless. Obedience means you have to have a reasonable sense of state and federal laws as well as your organization's bylaws and diligently make sure your organization is abiding by them. The third duty of loyalty is the most difficult because it requires putting yourself in the position of the members and organization you serve, regardless of your personal feelings or interests. It requires that everything you do be in their interests.

How do volunteers with other areas of expertise become experts in association management so that they can properly

and effectively govern? They don't and are not expected to. Instead, volunteers are expected to make a good faith and reasonable effort to know as much as they can about their organization, its interests and operations and then exercise their best judgment on behalf of the organization. They ask questions, demand data and information, and then make decisions based upon that data and information. And in so doing, they do their jobs and meet their responsibilities.

Of course, it also pays to be smart. Make sure you are protected with indemnification language in your bylaws and a complete safety net of associated insurance policies which includes a good Direct and Officer Liability Policy. Safely managing not-for-profit is not so complicated that it mandates professional staff. Most of the associations in the United States today are volunteer-managed. But it does require that volunteer leaders take their responsibilities very seriously.

"Professionalizing" volunteerism to encourage those with the interest and talents to provide leadership is a full-time responsibility for boards. Associations are not clubs—they are serious institutions of the public interest and the federal government is starting to treat them and their leaders in just that way. We need to as well. **CS**

### ***Any idea who is taking care of your analytical lab work?***



**Northern Lake Service has been a Trusted name for analytical services For over 35 years.**

- Wastewater & Sludge Analysis
- Ultra-Low Level Mercury by EPA1631E
- Complete Drinking Water Analysis

**1-800-278-1254**

**www.nlslab.com**

**Call our professional staff  
Today for your next project.**



**Northern Lake Service, Inc.**



# Give Minnesota Infrastructure

# a Voice

By Patti Craddock,  
Reporting from the Yangtze River, China

**CSWEA MN Section** has joined forces with other Minnesota-based partners to produce a documentary on Minnesota's infrastructure. This activity is being directed through Blueprint Minnesota (BlueprintMN), a grassroots initiative that seeks to build awareness about the critical role that our water infrastructure plays in protecting public health and promoting economic prosperity.

History has shown us time and again that a successful city and state owe their economic prosperity, public safety, and high quality of life to the infrastructure that serves them every day. The primary

mission of Blueprint Minnesota is to develop a documentary that will introduce Minnesotans to their water infrastructure, discuss conditions of infrastructure and finally, how best to move forward. The documentary, *Liquid Assets*, produced by Penn State Public Broadcasting, with support from multiple partners, including WEF, was the impetus for this Minnesota initiative. Some state-wide broadcasts of the documentary, through Twin Cities Public Television (TPT), will be broadcast in conjunction with *Liquid Assets*.

The partner group that has met to date includes: Team Leader Andrew Sullivan, City of Eden Prairie; Lance Bernard, American Planning Association (APA); Gene Erickson, Minnesota Pollution Control Agency; Ruth Hubbard, Minnesota Rural Water Association; Patti Craddock and Alva Rankin, CSWEA; and Lucy Swift,

TPT. Other members include Jon Eaton, American Water Works Association; Stew Thornley, Minnesota Department of Health, and Don Demers, American Society of Civil Engineers (ASCE). The APA, ASCE, Minnesota Public Works Association, and CSWEA have started the funding drive with committed donations.

The partner group identified the following **outcomes** for this initiative:

- 1.** Increase local and state leadership in infrastructure.
- 2.** Promote sustainability and resilience.
- 3.** Develop regional, state and local infrastructure plans.
- 4.** Address life cycle costs and ongoing maintenance.
- 5.** Increase and improve infrastructure investment from all stakeholders.

The initial campaign is for water infrastructure, but the outcomes apply to and will interface with all types of infrastructure. [CS](#)

## Water & Wastewater



DES MOINES, IA



LAKE CITY, MN



COLD SPRING, MN



### Bonestroo

Engineering Planning Architecture

St. Paul  
St. Cloud

Rochester  
Milwaukee

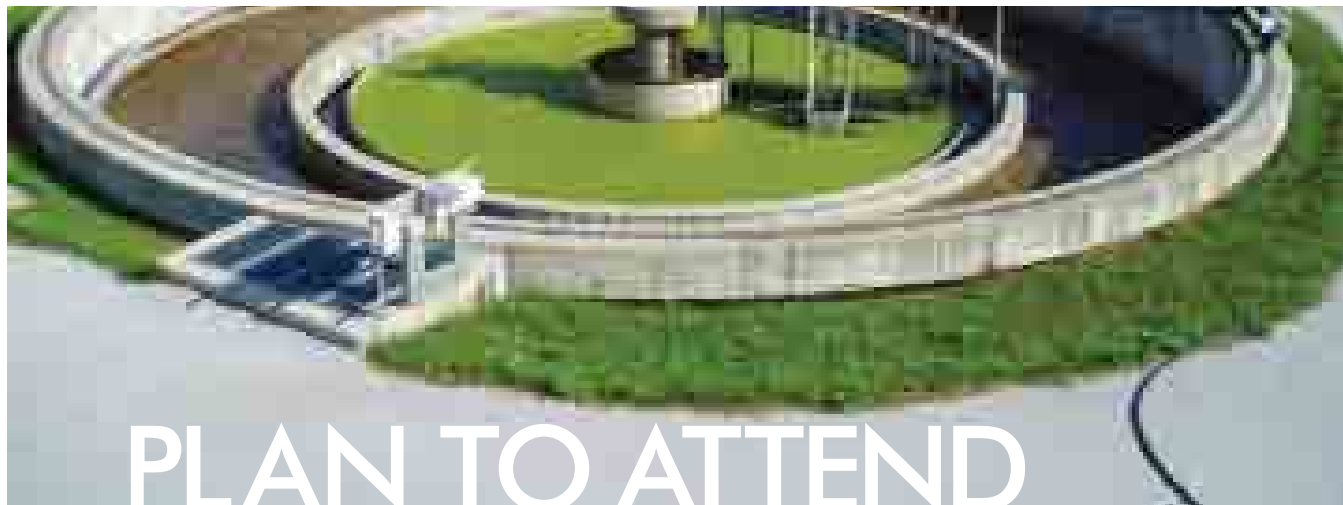
Chicago

1-800-880-4700  
[www.bonestroo.com](http://www.bonestroo.com)

Improving Places  
Improving Lives

**Your sponsorship** can make a world of difference. A simple donation from you ensures a documentary on Minnesota infrastructure reaches the homes of thousands of Minnesotans. We need \$30k minimum to make this project fly and are almost a third of the way there. Please join us and become a sponsor today. Go to [cswea.org/minnesota](http://cswea.org/minnesota) and look for the link to Blueprint Minnesota to learn more.






# PLAN TO ATTEND

## The 15th Annual CSWEA Education Seminar on Biosolids

April 6, 2010 at the Monona Terrace Conference Center, Madison WI

The 2010 Education Seminar to be held at the Monona Terrace in Madison, WI on April 6, 2010 and will focus on biosolids and feature presentations by national experts in all phases of biosolids management. Topics of discussion will range from land appli-

cation of biosolids issues, to the green aspects of biosolids. Energy recovery and biosolids minimization issues will also be discussed. Of special interest will be presentations on anaerobic digestion foaming a topic of current concern to CSWEA operators.

The Speakers Reception, where all attendees are invited to join our presenter, will be the night before on April 5, 2008. Check **www.CSWEA.org** for additional details and for registration materials. 

### PROCESS EQUIPMENT REPAIR SERVICES - Our name says it all.

Our team provides equipment repair and rebuild services to the water and wastewater treatment industry. With over 30 years of experience, our staff has installed, rebuilt and/or repaired the following equipment:

- |                                 |                             |                        |                                  |
|---------------------------------|-----------------------------|------------------------|----------------------------------|
| • <b>Mechanical Bar Screens</b> | • <b>Aeration Equipment</b> | • <b>Sand Filters</b>  | • <b>Traveling Water Screens</b> |
| • <b>Conveyors</b>              | • <b>Trickling Filters</b>  | • <b>Screw Pumps</b>   | • <b>Floatation Thickeners</b>   |
| • <b>Grit Removal Systems</b>   | • <b>Digesters</b>          | • <b>Airlift Pumps</b> |                                  |
| • <b>Clarifiers</b>             | • <b>Flocculators</b>       | • <b>Trash Rakes</b>   | • <b>..... And More.</b>         |

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

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

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

Phone 262-629-1059 • Cell 414-412-4403 • Fax 262-629-1059  
Email [PERSLaMont@aol.com](mailto:PERSLaMont@aol.com)

5991 Division Rd. • West Bend, WI 53095


**Process  
Equipment  
Repair  
Services, Inc.**



# CSWEA

## Voluntary Plant Maintenance Technologist Program


By Gary Scott, Certification Coordinator, Voluntary Plant Maintenance Technologist Certification Program



**BAXTER & WOODMAN**  
*Consulting Engineers*

**B**axter & Woodman is an industry leader in all areas of wastewater collection, treatment, and conveyance and water supply, storage, distribution, preservation, and conservation.

Offices in Illinois & Wisconsin  
815.459.1260 • [www.baxterwoodman.com](http://www.baxterwoodman.com)



The Water Environment Federation (WEF) in cooperation with the Association of Boards and Certification (ABC) has developed a Voluntary Plant Maintenance Technologist Certification Program for drinking water and wastewater plant maintenance personnel. CSWEA is excited at having been accepted as a Charter ABC member in this new program.

This new maintenance certification program was created to offer multi-level technical certification for individuals employed in the water quality field, whose work functions specialize in disciplines other than plant operations. Effective plant maintenance is a key component to every treatment facilities commitment to compliance, and this program is designed to cover all facets of treatment plant maintenance from entry-level (Class I) competence, to supervisory-level (Class IV) personnel involved in maintenance, electrical, instrumentation, and equipment system selection and design. CSWEA as an ABC member will have the opportunity to offer Voluntary Plant Maintenance Technologist certification in its WEF Member Association Sections of Illinois, Minnesota, and Wisconsin.

Participation from plant maintenance personnel is essential for CSWEA to maintain a quality, valid certification program.

CSWEA is currently seeking volunteers to participate on sub-committees which will administer the certification program, review and certify applications for testing eligibility, and will develop and administer educational seminars as a preparation for future certification testing. We hope to place volunteer nominees from Wisconsin, Illinois and Minnesota Sections into these key positions.

## FREQUENTLY ASKED QUESTIONS

### What is this program?

A voluntary certification program for drinking water and wastewater plant maintenance. It provides an additional means for professional development and staff retention.

### What happens next?

CSWEA is currently seeking volunteers for sub-committees which will administer the certification program, review and certify applications for testing eligibility, and will develop and administer educational seminars as a preparation for certification testing. We hope to place volunteer nominees from Wisconsin, Illinois and Minnesota Sections into these key positions.

### When will information be available?

CSWEA would like to start offering testing next spring at the CSWEA Annual Meeting in Madison Wisconsin, and/or as part of the 2010 Fall Maintenance Seminar

### What is still to do?

Continue working to fill the Certification and Education Sub-Committees, and develop educational instructor resource listing.

### How do I get involved?

Contact one of your State Section Officers, or give the Certification Coordinator a call. [CS](#)



For information on the Voluntary Plant Maintenance Technologist Certification Program contact me directly as listed below.

**Gary B. Scott**, CPMM, Sr. Plant Mechanic  
Glenbard Wastewater Authority

21W551 Bemis Road | Glen Ellyn, IL 60137

Telephone: 630-790-1901 ext.124 | Fax: 630-858-8119 | Email: [gscott@gbww.org](mailto:gscott@gbww.org)



Manufacturer representatives for Water and Wastewater Treatment Equipment. We offer sales, design assistance and troubleshooting for:

AMERICAN R/D  
BIOREM ODOR CONTROL  
CEILCOTE APC  
CENTRISYS CENTRIFUGES  
CHARTER MACHINE COMPANY  
COLUMBIA TECH TANK  
DAKOTA PUMP  
DeZURIK WATER CONTROLS  
ENTEX TECHNOLOGIES  
FENTON ENVIRONMENTAL TECH  
FLOWSERVE PUMP  
FLUID DYNAMICS  
FOXBORO  
GA INDUSTRIES VALVES  
HEADWORK'S SCREENS  
HILTON VALVE, INC.  
HSI  
HYDRO INTERNATIONAL - CSO  
JDV EQUIPMENT CORPORATION  
JOWA/ CONSILIUM  
KAESER BLOWERS  
LAKESIDE EQUIPMENT CORP.  
LATANICK EQUIPMENT  
MASS TRANSFER SYSTEMS

MFG WATER TREATMENT PROD.  
MINE SAFETY APPLIANCE (MSA)  
MOYNO PUMP  
M<sup>2</sup>T TECHNOLOGIES  
ODO WATCH  
PALL CORPORATION  
PERIFLO  
POLY PROCESSING  
PORTACEL  
PROCESS SOLUTIONS INC  
PULSAFEEDER  
PURAFIL  
RED VALVE COMPANY  
ROBERTS FILTER GROUP  
RODNEY HUNT GATES  
ROTORK ACTUATORS  
RPS ENGINEERING  
SHAND & JURS BIOGAS  
TIDEFLEX TECHNOLOGIES  
TRUMBULL INDUSTRIES  
WALKER PROCESS EQUIPMENT  
WEDECO UV & OZONE  
WEMCO PUMP

5400 Newport Drive, Rolling Meadows, IL 60008  
Phone: 847-392-0990 Fax: 847-392-1095  
Web Site: [www.LeyAssociates.com](http://www.LeyAssociates.com)

**SYMBIONT**

WASTEWATER TREATMENT/CONVEYANCE WATER RESOURCES PLANNING/DESIGN  
WATER SUPPLY & DISTRIBUTION STORM WATER MANAGEMENT  
ENVIRONMENTAL MANAGEMENT GIS SERVICES  
BROWNFIELDS DESIGN-BUILD

**WWW.SYMBIONTONLINE.COM**

Milwaukee  
6737 West Washington St.  
Suite 3440  
West Allis, WI 53214  
414.291.8840

Indianapolis  
3850 Priority Way South Dr.  
Suite 110  
Indianapolis, IN 46240  
317.573.3620





### Charles Alvin Emerson Medal

This award is presented by WEF to an individual whose contributions to the wastewater collection and treatment industry most deserve recognition. Areas of involvement include membership growth, water resource protection, improved techniques of wastewater treatment and fundamental research.

### Harry E. Schlenz Medal

This award is presented by WEF and recognizes the achievements of an individual **outside** of the water environment profession, who takes up the banner of environmental public education. This person is typically in the journalism, film or video production field.

### Richard S. Englebrecht International Activities Service Award

This award is presented by WEF and recognizes sustained and significant contributions to the furtherance and improvement of the activities of the Water Environment Federation in the **international** field.

### Outstanding Achievement in Water Quality Improvement Award

This award is presented by WEF and CSWEA to the water quality improvement program that best demonstrates significant, lasting and measurable excellence in water quality improvement or in prevention of water quality degradation in a region, basin or water body.

## Submit for a WEF Award

By Rusty Schroedel

There is still time to submit a nomination for one of the WEF awards, many of which will be awarded at WEFTEC 2010 in New Orleans. We often undervalue the important tasks we perform as part of our daily activities and I encourage you to stand up and be recognized. Below is a listing of the award opportunities. As Chairman of the national WEF Awards Committee, I can tell you that many awards have few or no nominations. It's time to brag a little bit about the accomplishments of our members. Please carefully review the various WEF awards available and nominate one of our many deserving members.

### 2009 WEF Award nominations now being accepted

Nominations are now being accepted for the following WEF awards and should you be aware of a worthy nominee we ask that you please complete and return the bottom portion of this page for consideration. Note that it is OK to self nominate. Each award is briefly described below and complete information may be found on the [www.CSWEA.org](http://www.CSWEA.org) or [www.WEF.org](http://www.WEF.org) websites.

### Gordon Maskew Fair Medal

This award is presented by WEF and recognizes worthy accomplishments in the training and development of future sanitary engineers. Nominee must be a WEF member.

### Public Education Awards

There are three categories of Public Education Awards: **Individual, Member Association and Other.** The awards are presented by WEF and recognize significant accomplishments in promoting awareness and understanding of water environment issues among the general public, through the development and implementation of public education programs.

### George Bradley Gascoigne Medal

This award is presented by WEF to the author(s) of an article, which presents the solution of an important and complicated operational problem within a full-scale, operating wastewater treatment plant, which is appropriately staffed. Article must have been published in a federation or member association magazine/newsletter during the previous year.

### Thomas R. Camp Medal

This award is presented by WEF to a member who demonstrates a unique application of basic research or fundamental principles through the design or development of a wastewater collection or treatment system.

### The Phillip F. Morgan Medal

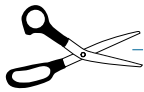
The Morgan Medal is awarded by WEF and recognizes valuable contribution to the in-plant study and solution of an operational problem. A published paper is not required.

### The George J. Schroeffer Medal

The Schroeffer Medal is awarded by WEF and recognizes a professional engineer for conceiving and directing the design of a project to achieve substantial cost savings or economic benefit over other alternatives, while achieving environmental objectives.



Further information on the above awards can be found at [www.CSWEA.org](http://www.CSWEA.org), [www.WEF.org](http://www.WEF.org), or by contacting Eric Lecuyer, 815-954-2714, [cswea@ymail.com](mailto:cswea@ymail.com)



(Cut & return)

Please complete the following information and submit to Jim Miller at [JM55313@yahoo.com](mailto:JM55313@yahoo.com)  
Nominations must be received no later than January 1, 2010 for consideration  
as the Central States WEA Nominee for each award category.

Award Name: \_\_\_\_\_ Nominee: \_\_\_\_\_

Nominee contact information: \_\_\_\_\_

Employer Name: \_\_\_\_\_ Phone #: \_\_\_\_\_

Email address: \_\_\_\_\_

WEF member ID: \_\_\_\_\_

Other: \_\_\_\_\_

Please provide a brief description of your nominee's qualifications for the award: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Please provide your name (it's OK to nominate yourself!): \_\_\_\_\_

Contact info Phone #: \_\_\_\_\_ Email address: \_\_\_\_\_

Other: \_\_\_\_\_

**Over 30 years  
of expert blower rebuilds.**



**Berryman Equipment Company** has the **experience**  
and **proven rebuild processes** that will **add years** to  
the life of your existing multistage centrifugal blower.

Hibon  
Hoffman  
Lamson  
Gardner Denver  
HSI  
Spencer  
National Turbine  
Hibon  
Hoffman  
Lamson  
Gardner Denver  
HSI  
Spencer

**Specializing in complete rebuilds of these leading brands:**

Hoffman, Lamson, Gardner Denver, HSI, Spencer, National Turbine & Hibon.

**Other services include:**

- ☐ Replacement parts
- ☐ Filters
- ☐ Problem diagnosis
- ☐ Vibrational analysis
- ☐ Infrared (IR) scans

**Call 800-605-0099**

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

E-mail: [info@berrymanequipment.com](mailto:info@berrymanequipment.com)

 **Berryman**  
Equipment Company  
Established 1978



## PHYTOESTROGEN Levels High in Some Industrial Wastewater

Submitted By Dennis Lindeke

Researching engineers from the University of Minnesota have discovered that certain industries may be a significant source of phytoestrogens in surface water. Phytoestrogens are naturally occurring, plant-derived estrogens that have been shown to mimic hormones and adversely affect the reproductive processes in many different species, including fish.

Many studies have looked at human-related chemicals such as those in birth control pills as the primary source for estrogens in the water supply. Civil engineering associate professor Paige Novak and graduate research student Mark Lundgren focused their research on finding point sources of plant-derived estrogens discharged to surface waters. They analyzed wastewater discharge from 19 different plant-processing industries and three wastewater treatment plants in Minnesota and Iowa for six phytoestrogens. Several MCES-permitted industries participated in the research.

The study found high levels of phytoestrogens – up to 250 times higher than the level at which feminization of fish has been seen in other research – in the wastewater discharged from eight industrial sites, including biodiesel plants, a soy milk factory, a dairy and a barbecue meat processing plant. While this is of concern, the study also found that more than 90 percent of the phytoestrogens were removed through standard wastewater treatment. According to Novak, because phytoestrogens have a documented ability to act additively with other estrogens and estrogen mimics, aquatic organisms may interact with not just a few, but a complex mixture of compounds. Therefore, greater removal may be needed to protect aquatic organisms in the receiving waters.

“This study provides a valuable baseline for understanding which industries are likely to discharge high concentrations of phytoestrogens;

however, more research is necessary to understand the fate and removal mechanisms of phytoestrogens during wastewater treatment,” Novak concluded. “The expansion of our plant-processing industries must occur with caution and in a manner that ensures high quality wastewater treatment to our surface water supplies.” **CS**



**KLM**  
Engineering, Inc.

Leaders in  
TANK INSPECTION  
& CLEANING  
Technology

**WATER TOWER SPECIALISTS.**  
INSPECTIONS, CLEANING,  
RECONDITIONING,  
STEEL TANK CONSTRUCTION,  
AND ANTENNAS SERVICES.

**888-959-5111**  
[www.klmengineering.com](http://www.klmengineering.com)





# Maybe it is time

By William J. Bertera, Executive Director, Water Environment Federation

As the deadline for the United Nations' millennium development goals for water and sanitation draws closer it becomes increasingly certain that we will not achieve even the modest intent of cutting in half the number of people in the world without clean drinking water and adequate sanitation. The United Nations' Year of Sanitation passed with hardly a notice and the

Fifth World Water Forum occurred in Istanbul and barely made a ripple. And then there is global warming and climate change and the threat they pose for the very existence of everyone and everything on the planet. But the most obvious environmental threat facing us all is the absence of leadership globally and here in the United States specifically.



**W**e in the water community can do little about issues of global interest when we cannot or are unwilling to talk with one another, and then to do what is necessary to serve what is clearly in the public interest. In this instance, it is clearly in the public interest that the professional water community find a way to speak with a single, authoritative and unambiguous voice on the issues of the day as they relate to water, sanitation, public health and environmental protection. The costs of not doing so are both obvious and unacceptable.



Those costs include something worse than bad public policy decisions – they encourage making no decisions at all. Precious time is being irrevocably lost and options narrowed as a result. And while the implications for us here in North America are serious, they are not lethal as they are in much of the rest of the world, especially that part of it we refer to as “developing”. In truth, the list of countries that are not developing is not diminishing – nation states that hardly warrant the name – poverty-stricken, ungovernable tracts welcoming only to terrorists and worse.

The United States has spent much of its history attempting to separate itself from the



consequences of its good fortune, its wealth and its economic and political influence. We are doing so today with respect to water and sanitation. Unfortunately or not, the decision is not conscious. We have not decided to “not lead”. We have simply chosen not to do that which is required to make leadership possible. Making leadership possible requires a critical mass, a critical mass which is otherwise available within the water community, but is diffuse under the cloak of a score or more competing associations.

It is not just that there are too many professional water associations in the United States, there certainly are. The problem, however, is not only in their numbers, but that their very existence works against the public interest. They have become part of the problem rather than the solution. Instead of becoming clarion voices for adaptation and change, some protect the past as though it were not only today but the future as well. It is not. Drinking water and what we used to call wastewater are not separate

*“It is clearly in the public interest that the professional water community find a way to speak with a single, authoritative and unambiguous voice on the issues of the day as they relate to water, sanitation, public health and environmental protection.”*

MULCAHY/SHAW  
WATER, INC.

10144 N Port Washington Road  
 Mequon, Wisconsin 53092  
 Tel: 262.241.1199  
 Fax: 262.241.4997  
[info@mulcahyshaw.com](mailto:info@mulcahyshaw.com)  
[www.mulcahyshaw.com](http://www.mulcahyshaw.com)

PROCESS EQUIPMENT & INSTRUMENTATION

Trojan Technologies	<a href="http://www.trojanuv.com" style="color: white;">www.trojanuv.com</a>	Plasti-Fab	<a href="http://www.plasti-fab.com" style="color: white;">www.plasti-fab.com</a>
Vulcan Industries	<a href="http://www.vulcanindustries.com" style="color: white;">www.vulcanindustries.com</a>	Aeromod	<a href="http://www.aeromod.com" style="color: white;">www.aeromod.com</a>
Siemens Water	<a href="http://www.water.siemens.com" style="color: white;">www.water.siemens.com</a>	Aeration Industries	<a href="http://www.aerationindustries.com" style="color: white;">www.aerationindustries.com</a>
Walker Process Equipment	<a href="http://www.walker-process.com" style="color: white;">www.walker-process.com</a>	Boerger	<a href="http://www.boerger-pumps.com" style="color: white;">www.boerger-pumps.com</a>
Koch Membrane System	<a href="http://www.kochmembrane.com" style="color: white;">www.kochmembrane.com</a>	Whipps, Inc.	<a href="http://www.whipps.com" style="color: white;">www.whipps.com</a>
Hendrick Screen Company	<a href="http://www.waterintake.com" style="color: white;">www.waterintake.com</a>	ITT/SANITAIRE	<a href="http://www.sanitaire.com" style="color: white;">www.sanitaire.com</a>
Roberts Filter Group	<a href="http://www.robertsfiltergroup.com" style="color: white;">www.robertsfiltergroup.com</a>	Phoenix Process Co.	<a href="http://www.dewater.com" style="color: white;">www.dewater.com</a>
HSI	<a href="http://www.hsiblowers.com" style="color: white;">www.hsiblowers.com</a>	Teledyne-ISCO	<a href="http://www.isco.com" style="color: white;">www.isco.com</a>



sciences, technologies or industries. They never have been – we just did not know it until relatively recently. Now that we know it, not recognizing it is unconscionable.

It is abundantly clear that our existing institutions are not capable of adapting to the needs of the changing world of water without some help, some help from outside the confines of their corporate logos and bureaucracies. The petty disputes between the largest of our organizations at both the state and national levels indict us all and seem exacerbated rather than mitigated by the current economic crisis that has enveloped our national psyche. We need a path forward, badly.

Each year, for the past several years, under the initial leadership of the American Water Works Association, and then with the endorsement of many but not all of our leading water associations, we have held an annual “summit” in Washington. The summits are a wonderful idea, but they have been less than fully worthwhile. Little has been accomplished that really matters – no strategic understandings or decisions

reached – just conversation that is readily lost within a year as the leaders of all the organizations change yet again and a new crop of leaders takes the helm of their respective organizations. No continuity, no horsepower, no change and therefore, no progress. That itself needs to change. Here is an idea.

It is time to move the conversation “up a notch” as a famous celebrity chef often suggests. It is time not only to engage the leading organizations of the water community, but the leading leaders of the water community as well, from both the public and private sectors. Maybe what we need is a real national summit of senior public officials and CEOs. Maybe what we need is a White House Summit on Water and the Environment. Maybe this is something we could all agree upon and on which we could work together. Maybe that would be a real beginning. [CS](#)

*“Drinking water and what we used to call wastewater are not separate sciences, technologies or industries. They never have been – we just did not know it until relatively recently. Now that we know it, not recognizing it is unconscionable.”*

## PRESERVE THE PAST, MANAGE THE FUTURE.





**PROTECT**  
Your Infrastructure.

**PRIORITIZE**  
Your Spending.

**PLAN**  
Your Future.

Ruekert/Mielke knows that you need to maintain existing infrastructure while still keeping an eye on tomorrow's needs. You need a team of professionals that understand the big picture. Our firm has evolved from our civil engineering core into a team of engineers, scientists, financial analysts, planners, asset management specialists and GIS professionals. This multidisciplinary team is ready to work together with you.

Let's work together to **MEET** your **CHALLENGES**,  
**SHARE** your **CONCERNS** and **ACCOMPLISH** your **GOALS**.



**Ruekert Mielke**  
engineering solutions for a working world

**Waukesha** 262.542.5733 • **Kenosha** 262.953.2650 • **Madison** 608.819.2600  
 Visit us on the web at: [www.ruekert-mielke.com](http://www.ruekert-mielke.com)



## Van Bergen & Markson, Inc.

**Van Bergen & Markson, Inc.**  
*A Clear Solutions Technology Company*  
 8814 Seventh Ave. N.  
 Minneapolis, MN 55427  
 Phone: 763-546-4340

**Van Bergen & Markson, Inc.**  
*A Clear Solutions Technology Company*  
 1049 N. Lynndale Drive, Suite 2B  
 Appleton, WI 54914  
 Phone: 920-730-8722

**For Both:**  
 Toll Free: 800-422-0791      Email: [info@vbminc.com](mailto:info@vbminc.com)

*“Since 1929, your single source for pumping and process equipment, controls, mixers and technology.”*

**Proudly Representing:**

<ul style="list-style-type: none"> <li>• Alfa Laval/Sharples</li> <li>• Eimco Water Technologies</li> <li>• Enviroquip</li> <li>• Floway Pump</li> <li>• Fluid Dynamics</li> <li>• Hallsten Corporation</li> <li>• Hibon</li> <li>• ITT A-C, ITT Flygt</li> <li>• Komline Sanderson</li> </ul>	<ul style="list-style-type: none"> <li>• Moyno, Inc.</li> <li>• Polychem</li> <li>• Rodney Hunt</li> <li>• SP Kinney</li> <li>• Strongwell</li> <li>• Turblex</li> <li>• Vaughan Pump Co.</li> <li>• Warminster Fiberglass</li> </ul>
--	---





## Wisconsin Section Government Affairs Committee

By Jane M. Carlson, PE

# Nutrient Rulemaking Update

About a year ago the Pennsylvania WEA and others ("the Group") asked Wisconsin Section members to join them in support of a nutrient standards development issue. The Group was concerned about nutrient targets EPA developed using a new approach called "conditional probability." The EPA used this approach to develop targets for five watersheds in Pennsylvania and has been encouraging states, including Illinois, to use it to develop numeric nutrient criteria. The conditional probability approach does not directly link nutrients as a cause for excessive algae growth in streams and rivers, yet it still presumes to set numeric targets for nutrients to try to control algae growth and improve stream biology. Other potential causes such as stream habitat or land use may correlate more strongly with the biological health of the stream and yet are ignored with this approach. The Wisconsin DNR with the United States Geological Survey is using a

similar approach to develop nutrient criteria. The approach is described in an August 17, 2009 EPA guidance entitled *Empirical Approaches for Nutrient Criteria Development*.

The Group, the Wisconsin Section, and many others wrote letters to EPA requesting a peer review of the new approach. In December 2008 the EPA agreed to a Science Advisory Board (SAB) peer review. Nominations were made for SAB committee members and the committee met. The SAB provided an oral summary of their findings on September 11, 2009. The SAB committee agreed with the Group that the empirical approach used by EPA did not clearly demonstrate a "cause-and-effect" relationship between nutrients and water quality problems and that a better understanding of this relationship was required. The SAB committee was critical of the August 2009 EPA guidance but also felt it was important to set numeric nutrient criteria. Dr. Judith Meyer, the panel's chair, stated, "We felt that the [August 2009] document in its current form was not adequate, but we see this as a viable way of setting numeric nutrient criteria and we see that it's very important that those numeric criteria be set." The SAB will meet again in early November 2009 and is scheduled to submit a final report to EPA by December 10, 2009. [CS](#)

Wastewater  
Management

Collection  
Systems

Biosolids  
Management

Construction  
Management

Operational  
Assistance

### Water/Wastewater Treatment Specialists

[www.ati-ae.com](http://www.ati-ae.com)



Brookfield, Wisconsin  
(262) 784-7690

Lake Villa, Illinois  
(847) 265-7325

 **Applied Technologies**  
Engineering & Architecture

Please contact one of the Wisconsin Section  
Government Affairs Committee members for additional  
information. Contact information can be found at  
[www.cswea.org/wisconsin/governmentaffairs/](http://www.cswea.org/wisconsin/governmentaffairs/).

## PRESERVE THE PAST, MANAGE THE FUTURE.



**PROTECT**  
Your Assets.

**PRIORITIZE**  
Your Spending.

**PLAN**  
Your Future.

Municipal Economics & Planning specializes in helping communities realize their vision for high-quality infrastructure and services by providing sound fiscal, economic, and planning advice. Whether you need specialized assistance with a particular project, support for ongoing services, or if you are faced with a new or out-of-the-ordinary issue or opportunity—we can help!

Let's work together to **MEET** your **CHALLENGES**,  
**SHARE** your **CONCERNS** and **ACCOMPLISH** your **GOALS**.



**Municipal Economics & Planning**

*A division of Ruekert/Mielke*  
Economic, Fiscal & Planning Consultants for Local Governments

**Waukesha** 262.542.5733 • **Kenosha** 262.953.2650 • **Madison** 608.819.2600

Visit us on the web at: [www.ruekert-mielke.com/MEP](http://www.ruekert-mielke.com/MEP)

Building our track record on  
**80 years of client satisfaction.**

*Providing a full range of consulting services!*  
**800.325.2055 • [www.sehinc.com](http://www.sehinc.com)**  
ARCHITECTS | ENGINEERS | PLANNERS | SCIENTISTS

**SEH**

## Water Treatment is Our Business

Hawkins Water Treatment Group has been meeting the requirements of commercial, industrial, municipal and institutional organizations in the Upper Midwest since 1938.

**Hawkins, Inc.**  
3100 East Hennepin Avenue • Minneapolis, MN 55413  
Tel 612 331 9100 • Fax 612 617 8696  
[www.hawkinsinc.com](http://www.hawkinsinc.com)

<p><b>St. Paul, MN</b> Mike Clemens, Regional Manager 1425 Red Rock Road • St. Paul, MN 55119 Tel 651 730 1115 • Fax 651 730 1124 <a href="mailto:mike.clemens@hawkinsinc.com">mike.clemens@hawkinsinc.com</a></p>	<p><b>Fond du Lac, WI</b> Mark Wolf, Branch Manager 1882 Morris Street • Fond du Lac, WI 54935 Tel 920 923 1850 • Fax 920 923 0606 <a href="mailto:mark.wolf@hawkinsinc.com">mark.wolf@hawkinsinc.com</a></p>	<p><b>Superior, WI</b> Brenda Wiisanen, Branch Manager 2026 Winter Street • Superior, WI 54880 Tel 715 392 5121 • Fax 715 392 5122 <a href="mailto:brenda.wiisanen@hawkinsinc.com">brenda.wiisanen@hawkinsinc.com</a></p>	<p><b>Joliet, IL</b> Mike Carroll, Branch Manager One Genstar Drive • Joliet, IL 60435 Tel 815 727 2750 • Fax 815 727 2755 <a href="mailto:mike.carroll@hawkinsinc.com">mike.carroll@hawkinsinc.com</a></p>
--	---	---	---



## ENGINEERED SOLUTIONS FOR SURGE CONTROL IN WATER + WASTEWATER APPLICATIONS

**PULSCO**

877.785.7262 + [www.pulSCO.com](http://www.pulSCO.com) + [sales@pulSCO.com](mailto:sales@pulSCO.com)

## Your Water & Wastewater Pumping Specialists

### Pre-Fabricated Housed Pumping Systems

- Pre-piped and wired
- Shipped fully assembled and ready to install
- Several housing options available
- Touch screen control operation
- Generator and chemical rooms available
- Custom Variable Speed Control Systems



### Below Ground Prefabricated Lift Stations

- Single-source systems complete with all equipment required for operation
- Available in stainless steel, coated steel options, high density polyethylene and fiberglass
- Simplex, duplex, triplex or larger systems available
- Outside valve box permits servicing without entering sump
- Custom Variable or Constant Speed Control Systems



### The Pumping World's One Stop Shop!™



37 Forestwood Drive  
Romeoville, IL 60446  
800-323-1665 • Fax 815-886-6932  
[www.metropolitanind.com](http://www.metropolitanind.com)

The Most Specified Name in WWTP Grit Removal...  
Just Got Even Better.

**PISTA. 360**  
GRIT REMOVAL SYSTEM

**New!**  
Cost Saving Design Features

### Introducing the PISTA 360™ with Patented V-FORCE™ Baffle

The new PISTA 360™ Grit Removal System with patented V-FORCE™ Baffle delivers practical system design and significant cost-saving considerations for municipalities prior to and after installation. The PISTA 360™ design increases velocity during low flow periods while maintaining consistent grit capture during surges. This patented hydraulic 360-degree design creates a forced vortex for efficiently capturing grit at all flows. Its ability to handle significant variances between design and peak flow conditions can eliminate the need for multiple grit chamber arrangements, which in turn, lowers initial capital and long-term operational costs. The integral V-FORCE™ Baffle design also serves as a water level control device, often eliminating the need for downstream flow control devices like weirs.

### Why Cities & Consultants Specify PISTA:

- Unparalleled Grit Removal Performance
- Available in Large Flows: 100 MGD Units / 500+ MGD Systems
- Patented & Exclusive S&L Features Like:  
Flat-Floor Vortex, V-FORCE™ Baffle, Grit Handling Components
- Vast S&L Grit Removal & Testing Experience

Contact Us for Project Assistance or to  
Locate One of Our Local Reps in the Central States region!  
[smithandloveless.com](http://smithandloveless.com) • 800-898-9122

**Smith & Loveless Inc.**





## JANUARY

### IL Section Annual Business Meeting

January 21, 2010  
Downers Grove, IL

### IL Section CSWEA/IWEA Government Affairs Seminar

January 26, 2010  
Holiday Inn, Willowbrook, IL

## FEBRUARY

### Midwest Water Industry Expo

February 9-10, 2010  
Wisconsin Dells, WI

### WI Section Government Affairs Seminar

February 23, 2010  
Madison, WI

### MN Section CSWEA/MWOA

**27th Annual Innovative Approaches**  
To Wastewater Operational Problems  
February 23, 2010  
St. Cloud MN.

## MARCH

### WI Section Spring Bio-Solids Symposium

March 9, 2010  
Stevens Point, WI

## APRIL

### 15th Annual Education Seminar

April 5-6, 2010  
Madison, WI

## MAY

### 83rd CSWEA Annual Meeting

May 11-14, 2010  
Madison, WI



**BLACK & VEATCH**  
Building a world of difference.

MILWAUKEE 414-223-0107  
CHICAGO 312-346-3775  
MINNEAPOLIS 952-545-6695  
weknowwater@bv.com www.bv.com

## JUNE

### WI Section Collection System Seminar "Classic"

June 10, 2010  
Watertown, WI

## JULY

### CSWEA-CSX 2010

July 15-16, 2010  
Kalahari Resort  
Wisconsin Dells, WI

### WI Section Collection System Seminar "Northwoods"

July 29, 2010  
Marshfield, WI

## AUGUST

### WI Section Management Seminar

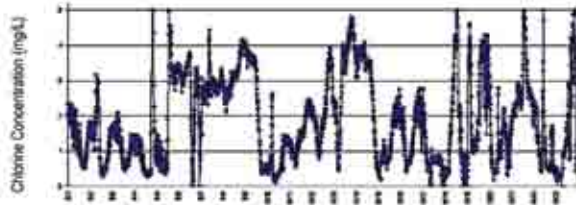
August 2010  
Madison, WI

## OCTOBER

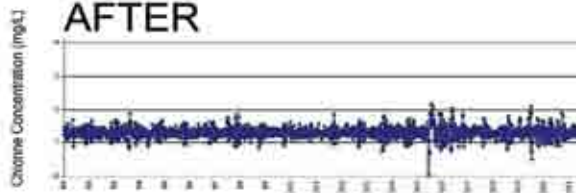
### WEFTEC 2010

October 2-6, 2010  
New Orleans, LA

**MANTRA® reduces  
chlorine variation by 70%  
BEFORE**



**AFTER**



Call today (440-443-3900) or  
visit us at [controlsoftinc.com/water](http://controlsoftinc.com/water)



**CONTROLSoft**

ADVANCED PROCESS CONTROL. MADE EASY.

# Improving Infrastructure

By Jim Beier

Fall is here and in our state that usually means hunting, planning for the holidays and using up those extra vacation days before the first of the year. For those of you anxious for winter – and we have lots of those in the state – you won't be disappointed if my almanac is correct. Looking back for just a bit, the months of August, September and October were probably as busy in the water and wastewater market as they have ever been. I submit to you that we haven't seen a flurry of design and bidding activity like that since the early 1970s when the *Clean Water Act* energized the public to begin to preserve and protect their water resources.

As I ponder that activity, there are also many water- and wastewater-related issues making the headlines today. The City of Waukesha is preparing to take the next step in their quest to drink Great Lakes water; they anticipate that their application will be ready for the WDNR by early 2010. Statewide, the amount of water sold per residential customer is continuing to decline while the average cost of water is increasing at a rate that exceeds the rate of inflation. This divergence will probably continue to widen and is due to better conservation practices and system water losses as water infrastructure continues to receive a near-failing grade. At the "dirty" end, the desire for improved tertiary wastewater treatment technologies and regulations regarding nutrient restrictions on effluent seem to be more and more relevant.

Here, we are already preparing for the 83rd CSWEA Annual Conference in Madison's Monona Terrace May 11-14, 2010. Mark your calendars. Jay Kemp is leading the Local Arrangements Committee and if you have any suggestions, please feel free to contact Jay. The call for papers is already out and Steve Reusser and the Technical Program Committee are particularly interested in operations-oriented papers and case studies this year. Papers on other subjects are, of course, also welcome. To receive consideration, please submit an electronic copy by December 7, 2009. An electronic version of the instructions for submission of abstracts can be downloaded from the CSWEA website.



Before the Annual Conference, don't forget about the 5th Annual Midwest Water Industry Expo February 9-10 in the Wisconsin Dells at the Kalahari Resort and Convention Center. This event is sponsored annually with the Wisconsin Water Association. Bring your swimming suit and your family. Please refer to the CSWEA website for the brochure and more information.

Water and wastewater professionals (that's you, if you are reading this) working in the water quality industry are often overlooked for the critical role they play in protecting public health and the environment. I hope that our Awards Committee received more nominations than they could handle this year, because often times the committee receives none. As stated in the committee's request earlier this year: "Whether in design, academia, equipment manufacture and supply, management, or operations, many of us know individuals who have successfully addressed unique and challenging issues. All of us know someone we believe to be deserving of recognition." If you missed the November 1 deadline, please make a note for next year.

Finally, let me leave you with this interesting tidbit (that may only interest me): Beer brewers from around the country gathered in Milwaukee recently to learn how to use less of beer's main ingredient – water. At every brewery, water is not only the basis of beer, but much more of it is used to cool ingredients and to clean tanks, kegs and brewing equipment and floors. The Jacob Leinenkugel Brewing Co. has reduced the amount of water it uses to make a barrel of beer over 50% since implementing conservation and re-use practices. In New Glarus, the Hilltop Brewery has reduced water and other utility costs by 25%. Madison's Capitol Brewery invested heavily in upgrades that included boiler and water-cooled refrigeration systems improvements: all to prevent water going down the drain unnecessarily. Other sites are using treatment technologies and reclamation to make an impact on their bottom line. These new management practices are reducing the waste, reclaiming water and energy, and keeping these unique businesses in operation. I don't know about you, but I'd like to learn more from this industry! Field trip, anyone? [CS](#)



**CRAWFORD, MURPHY & TILLY, INC.**  
**CONSULTING ENGINEERS**

Springfield, IL  
Aurora, IL  
Chicago, IL  
Columbus, OH  
Edwardsville, IL  
Indianapolis, IN  
Peoria, IL  
Rockford, IL  
St. Louis, MO

*Superior wastewater engineering services  
responsive to our clients needs*



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

# New Faces, New Roles

By Jason Benson

**T**he holiday season is fast approaching. September didn't look too promising but October and November have been a pleasant surprise hanging on to that last bit of warmer weather. Here is what is happening in the Minnesota Section.

The Conference on the Environment was held Thursday, November 12 in Brooklyn Park, MN. A big thanks to all on the planning committee, especially the co-chairs, Doug Henrichsen/MN-CSWEA and Clay Raasch/A&WMA-UMS. Close to 200 environmental professionals attended the one-day event. We had a full day of exhibits and presentations. Minnesota Senator Ellen Anderson gave the keynote address on legislative updates and Jonathan Foley, Director of Institute on Environment, University of Minnesota spoke during the luncheon about challenges and opportunities for a sustainable future. The newly formed Institute on the Environment is reaching across traditional disciplines to develop bold new strategies that address environmental, social and economic challenges of global sustainability. The focus is not just about climate change but rather on real world outcomes addressing the challenges associated with energy, freshwater, food, land and ecosystems. There were many excellent presentations and the program included a wide range of topics such as regulatory updates, energy, carbon technology/policy, wastewater, stormwater and conveyance, and permit risk management. For the first time we also included an Environmental Challenge competition for students with both organizations contributing prize money to the competition in an



effort to reach out to the student participants.

We held one of our annual business meetings for the Minnesota Section and were able to fill several roles within the organization with both new and familiar faces. The following people were voted for section officer positions:

- **Immediate Vice Chair:** *Ted Field, TKDA*
- **Incoming Vice Chair:**  
*John Friel, Barr Engineering*
- **Secretary/Treasurer:**  
*Alison Sumption, HR Green*
- **MN Section Trustee:**  
*John Glatzmaier, CH2M Hill*


## UPCOMING EVENTS IN THE MN SECTION AND CENTRAL STATES INCLUDE:


- 5th Annual Midwest Water Industry Expo – CSWEA/WWA  
February 9-10, 2010  
Kalahari Resort, Wisconsin Dells
- 27th Innovative Approaches to Operational Problems Seminar – MN-CSWEA/MWOA  
February 23, 2010  
St. Cloud, MN
- CSWEA 83rd Annual Meeting  
May 11-14, 2010  
Monona Terrace, Madison, WI

Please save these dates on your calendar for these important events. [CS](#)


## WATER/WASTEWATER EXPERTS

**Nancy Zeigler, PE - 763.287.8316**





**wsbeng.com**



**WSB**  
& Associates, Inc.

**ENGINEERING • PLANNING**  
**ENVIRONMENTAL • CONSTRUCTION**

**Minneapolis - 763.541.4800**  
**St. Cloud - 320.252.4900**  
**Toll Free - 888.541.4800**



# Our Legacy

By Gary B. Scott, Chair CSWEA Illinois Section

**D**o you ever look at photos of relatives or friends from generations past and wish you could sit down with them and have a meaningful conversation? Who were the people behind those solemn faces of your past? What was life like for them? What did they set out to accomplish? Was their life's work complete?

It makes me realize that each of us is part of a continuum that stretches back centuries and, hopefully, many generations into the future. The desire to leave something behind for the future inspires many people as a kind of legacy.

Many of us in the environmental industry have had experiences in our careers which have had a great impact, or at the very least have provided satisfaction in the knowledge that we made a difference in some small way. Many of us share these stories of our involvement in these episodes. We all have a different role to play in the success of our industry. This participation involves the many aspects of this important industry from the individual work performed to the highest legislative action which keeps the water flowing. With this dialogue we are building a legacy with every accomplishment, effort, and even those occasional failures.

My point is that it takes the views and actions of many to get us where we want to go. CSWEA has a long history of achievement, and many individuals who have continued our legacy as an organization and a vital part of the Water Environment Association. We as the Illinois Section must continue to achieve that which we have set out to do, but also that which we must as yet determine is necessary for us to complete our work. This is for me somewhat of a challenge similar to my opening comments. I have only a short relationship with CSWEA, just a bit more than five years. But when I



look at the history of our association, and the great strides it has taken, I am humbled and strive to excel for the meaning of this legacy. I strive to give of myself for the success of this group, its group of contemporaries, and those yet to come.

Your State Section is working to continually improve with your input. Vice-Chair Eddie McCall is working to finalize initiatives in support of organizational scheduling and membership opportunities. Congratulations to our newest Section 2nd Vice Chair, Dean

Wiebenga. CSWEA approved the addition of this new position, and will give our organization more continuity from year to year. Dean provides a wealth of experience to our group, and we know he will serve all of us well into the future.

In preparation for the third quarter of the Section year, and as we have completed several of our annual events with several more well into the planning stages, it is also the time to update the Illinois Section Calendar of Events. You will find updated information at <http://www.cswea.org/illinois/events/>. I would be pleased if each of you would review this list, and provide any ideas for topics or events which you have interest or concepts for which will enhance our interesting schedule of topics.

The Illinois Section continues to provide quality seminars for our membership, and with our outreach to IAWPCO member organizations with each of our seminars, we have garnered positive interest. These gestures should prove fruitful in future cooperative endeavors. At the October Section Meeting Rich Hussey reported on the successful August 29 YP Event at Top Golf co-sponsored with IWEA, which included a golf instructor for 90 minutes with range balls, pop, and

## Wastewater Systems

- ✓ Facility Plans
- ✓ Sewer Planning/Models/Design
- ✓ Pump Station Design
- ✓ I&I/SSES/CSO/SSO Analysis
- ✓ Biosolids Management
- ✓ SCADA/Automation
- ✓ Energy Studies
- ✓ Funding Assistance
- ✓ Treatment Facilities
- ✓ Electrical/Mechanical/Security



Kenosha - Wausau - Champaign - Chicago - Indianapolis - Evansville

“Not the maker of plans and promises, but rather the one who offers faithful service in a cause. This is the person who is most likely to achieve what is good and lasting.”  
— Abraham Lincoln

appetizers. Several ideas for enhancing YP participation are in the works. Please contact him with your YP ideas or concepts. We hope to expand on our support for this group. Laboratory Chair Mary Dressel reported on involvement in the September World Water Monitoring Day program. This program continues to be a big success, and we look forward to increasing next year's program scope. Operations Vice-Chair Steve Bollweg reported that the Operations Seminar September 17 was its usual success. The Safety and Maintenance Seminar at the Naperville Safety Training Facility should have been completed as you read this. Thanks to “Doc” Burke for his hard work on this increasingly popular seminar.

The official notice for nominations for WEF, CSWEA and IL Section Awards was e-blasted in late October, and all nominations should be submitted as quickly as possible. Nominations

are due to CSWEA December 30, 2009. Please take a look back at the awards e-blast and let's find worthy individuals for nomination.

The Illinois Section Annual Business Meeting is now scheduled for January 21, 2010 11:00 a.m. hosted by Mary Dressel at the Downers Grove Sanitary District. One of the important aspects of this upcoming meeting is that we are scheduled to elect 2010 Officers and approve a 2010 budget. To accomplish this, the Section needs to hear from you with your opinions and needs. Nomination of potential officers must be reported to the Section in November, but at some early date in December latest.

Finally, I am proud to report that the Illinois Section has enlisted 17 associate members through our discounted offers with seminar enrollment since we began this initiative in August 2008. In the first half of this year we have six of these enrollments, and the Maintenance Seminar will likely yield a few more. We are reaching out individually to these associate members, and several are interested in full membership.

The Illinois Section is unique in Central States due to the many local organization affiliations, and competition for membership and involvement is fierce. We rely on you to keep the ideas flowing, membership growing, and the forward movement continuing. As we move into the new year give thought as to how you can be a part of this movement. Remember, as with our own past, who are the people behind the accomplishments? What was CSWEA like for them? What did they set out to accomplish in our organization? Is your CSWEA life's work yet complete? CS



## Addressing the World's Need for Water

AECOM is providing our clients expertise and in-depth experience in safe and reliable water supplies to communities across the country. Our team of scientists, technical experts and engineers are experienced in the fields of water systems, wastewater systems, water resources, water reuse, wet weather controls, floodplain mapping and a variety of support services. We go the extra mile to provide superior services and develop lasting relationships based on integrity, trust and commitment.

Offices in Sheboygan, Milwaukee, Madison, Green Bay and Stevens Point

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

## ADVERTISER INFORMATION CENTER

Company	Page	Website	Phone
Advanced Engineering and Environmental Services (AE2S)	6	<a href="http://www.ae2s.com">www.ae2s.com</a>	763-463-5036
AECOM	25, 51	<a href="http://www.aecom.com">www.aecom.com</a>	
Applied Technologies, Inc.	44	<a href="http://www.ati-ae.com">www.ati-ae.com</a>	262-784-7690
Baxter & Woodman, Inc	36	<a href="http://www.baxterwoodman.com">www.baxterwoodman.com</a>	815-459-1260
Berryman Equipment Company	39	<a href="http://www.berrymanequipment.com">www.berrymanequipment.com</a>	800-605-0099
Black & Veatch	47	<a href="http://www.bv.com">www.bv.com</a>	IL 312-346-3775 Min 952-545-6695
Boerger, LLC	8	<a href="http://www.boerger-pumps.com">www.boerger-pumps.com</a>	877-726-3743
Bolton & Menk, Inc.	24	<a href="http://www.bolton-menk.com">www.bolton-menk.com</a>	507-625-4171
Bonestroo	34	<a href="http://www.bonestroo.com">www.bonestroo.com</a>	651-636-6400
CDM	23	<a href="http://www.cdm.com">www.cdm.com</a>	312-780-7786
Clark Dietz, Inc.	50	<a href="http://www.clark-dietz.com">www.clark-dietz.com</a>	262-657-1550
ControlSoft, Inc.	47	<a href="http://www.controlsoftinc.com">www.controlsoftinc.com</a>	440-443-3900
Crawford, Murphy & Tilly, Inc.	48	<a href="http://www.cmtengr.com">www.cmtengr.com</a>	217-787-8050
Crispell-Snyder, Inc.	22	<a href="http://www.crispell-snyder.com">www.crispell-snyder.com</a>	800-203-7700
Degremont Technologies	11	<a href="http://www.degremont-technologies.com">www.degremont-technologies.com</a>	804-756-7600
Donohue & Associates, Inc.	OBC	<a href="http://www.donohue-associates.com">www.donohue-associates.com</a>	920-208-0296
DYK Incorporated	IFC	<a href="http://www.dyk.com">www.dyk.com</a>	800-227-8181
Energenecs	15	<a href="http://www.energenecs.com">www.energenecs.com</a>	800-343-6337
Force Flow	28	<a href="http://www.forceflow.com">www.forceflow.com</a>	800-893-6723
Foth	3	<a href="http://www.foth.com">www.foth.com</a>	800-236-8690
Greeley and Hansen	10	<a href="http://www.greeley-hansen.com">www.greeley-hansen.com</a>	800-837-9779
Hawkins, Inc. (Water Treatment Group)	45	<a href="http://www.hawkinsinc.com">www.hawkinsinc.com</a>	612-331-9100
Howard R Green Company	20	<a href="http://www.hrgreen.com">www.hrgreen.com</a>	888-368-4389
ITT Flygt Corporation	5	<a href="http://www.flygtus.com">www.flygtus.com</a>	IL 800-661-9944 Wis 800-232-1417
ITT Sanitaire	IBC	<a href="http://www.sanitaire.com">www.sanitaire.com</a>	414-365-2200
ITT WEDECO	30	<a href="http://www.us.ittwww.com">www.us.ittwww.com</a>	704-716-7600
J & S Valve and Manufacturing	9	<a href="http://www.JandSValve.com">www.JandSValve.com</a>	866-498-4283
KLM Engineering, Inc.	40	<a href="http://www.klmengineering.com">www.klmengineering.com</a>	888-959-5111
I.Kruger, Inc.	26	<a href="http://www.krugerusa.com">www.krugerusa.com</a>	919-677-8310
LAI, Ltd.	37	<a href="http://www.LeyAssociates.com">www.LeyAssociates.com</a>	847-392-0990
McMahon Associates, Inc.	31	<a href="http://www.mcmgrp.com">www.mcmgrp.com</a>	920-751-4200
Metropolitan Industries, Inc.	46	<a href="http://www.metropolitanind.com">www.metropolitanind.com</a>	800-323-1665
M.E. Simpson Co. Inc.	14	<a href="http://www.mesimpson.com">www.mesimpson.com</a>	800-255-1521
Mulcahy/Shaw Water, Inc.	42	<a href="http://www.mulcahyshaw.com">www.mulcahyshaw.com</a>	262-241-1199
Noren Products	21	<a href="http://www.norenproducts.com">www.norenproducts.com</a>	866-936-6736
Northern Lake Service Inc.	33	<a href="http://www.nlslab.com">www.nlslab.com</a>	800-278-1254
Pollardwater.com	21	<a href="http://www.pollardwater.com">www.pollardwater.com</a>	800-437-1146
Process Equipment Repair Services, Inc.	35		262-629-1059
Pro-Dive, Inc.	25	<a href="http://www.pro-dive.net">www.pro-dive.net</a>	815-433-5228
Pulsco	46	<a href="http://www.pulsco.com">www.pulsco.com</a>	877-785-7262
Ruekert-Mielke	43, 45	<a href="http://www.ruekert-mielke.com">www.ruekert-mielke.com</a>	262-542-5733
Schwing Bioset, Inc.	12	<a href="http://www.schwingbiosetcs.com">www.schwingbiosetcs.com</a>	
Severn Trent Services	29	<a href="http://www.severntrentservices.com">www.severntrentservices.com</a>	866-646-9201
Short Elliott Hendrickson (SEH)	45	<a href="http://www.sehinc.com">www.sehinc.com</a>	800-325-2055
Smith & Loveless Inc.	46	<a href="http://www.smithandloveless.com">www.smithandloveless.com</a>	800-898-9122
Strand Associates, Inc.	8	<a href="http://www.strand.com">www.strand.com</a>	608-251-4843
Swanson Flo Systems Co.	13	<a href="http://www.swanflo.com">www.swanflo.com</a>	763-389-4700
Symbiont	37	<a href="http://www.symbiontonline.com">www.symbiontonline.com</a>	414-291-8840
TKDA	53	<a href="http://www.tkda.com">www.tkda.com</a>	651-292-4400
Trojan	18	<a href="http://www.trojanuv.com">www.trojanuv.com</a>	
Trotter & Associates Inc.	17	<a href="http://www.taiengr.com">www.taiengr.com</a>	630-587-0470
Unison Solutions, Inc.	7	<a href="http://www.unisonsolutions.com">www.unisonsolutions.com</a>	563-585-0967
University of Wisconsin-Madison	3	<a href="http://www.epd.engr.wisc.edu">www.epd.engr.wisc.edu</a>	800-783-6526
Van Bergen & Markson, Inc.	43		800-422-0791
WSB & Associates, Inc.	49	<a href="http://www.ws beng.com">www.ws beng.com</a>	763-541-4800

**Central States Water** would not be possible without the advertising support of these companies and organizations. Please think of them when you require a product or service. We have endeavored to make it easier for you to contact these suppliers by including their telephone numbers and, where applicable, their websites. You can also go to the electronic version of **Central States Water** at [www.cswea.org](http://www.cswea.org) and access direct links to any of these companies.





# CSWEA Associate Membership Application

## Contact Information

Last Name	MI	First Name	(Jr., Sr., etc.)
Business Name (if applicable)			
* Business Address * Home Address Street or PO Box			
City	State	Zip	Country
Home Phone Number	Business Phone Number		FAX Number
E-mail Address			

## Employment Information

Employer	Job Title
Environmental Focus	Other focus or interest (please specify)
Signature (required for all new memberships)	Date

## Associate Membership in Central States Water Environment Association

CSWEA Associate Membership Benefits include: Central States Water Magazine and Member price for CSWEA and Section Events	Dues cover a one year period, and must be renewed annually.	DUES
* I am a Young Professional (35 yrs or younger, less than 10 work experience) <input type="checkbox"/> Please send me info on YP Events	Renewal notices will be sent one month prior to anniversary date.	\$ 20.00

## Payment Information

* Check/Money Order enclosed. Make check payable to Central States Water Environment Association.
OR Visit <a href="http://www.CSWEA.org">www.CSWEA.org</a> to join on-line and pay by credit card. Visa, Master Card & American Express Accepted.

## Mailing Information

Send Form & Payment to: Central States Water Environment Association, 3809 Shenandoah Drive, Crystal Lake, IL 60012 Call 815-954-2714 for additional information or visit <a href="http://www.CSWEA.org">www.CSWEA.org</a>
---



Your wastewater system is a vital part of your infrastructure. TKDA can help you optimize it.

# TKDA

ENGINEERING • ARCHITECTURE • PLANNING

The right time. The right people. The right company.

## Complete Water and Wastewater Services

FACILITY PLANNING • RATE STUDIES • DESIGN • CONSTRUCTION ADMINISTRATION • OPERATIONS

444 Cedar Street, Suite 1500 | Saint Paul, MN 55101-2140 | (651) 292-4400 | [www.tkda.com](http://www.tkda.com)



# Join CSWEA & WEF Now! Membership Application

Last Name		MI	First Name		(Jr., Sr., etc.)
Business Name (if applicable) <input type="checkbox"/> Business Address <input type="checkbox"/> Home Address					
Street or PO Box					
City		State		Zip	Country
Home Phone Number		Business Phone Number		FAX Number	
E-mail Address					
<input type="checkbox"/> Please send me information on special offers, discounts, training, and educational events, and new product information to enhance my career. <input type="checkbox"/> by email / <input type="checkbox"/> by fax Member Association (MA) Choice: Central States Water Environment Association					
<b>Employment Information</b>					
Employer Code		Other (please specify)		Job Title Code	
Environmental Focus		Other (please specify)			
Signature (required for all new memberships)					Date
<b>Sponsorship Information</b>					
WEF Sponsor Name & Sponsor ID Number:				ACQ.Code for WEF use Only GENI	
<b>Membership Information</b>					
<b>Membership Categories</b> <i>Select one only</i>		<b>Member Benefit Subscription</b> <i>Select one only</i>			DUES
<input type="checkbox"/> <b>ACTIVE</b>					\$ 102.00
Individuals involved in or interested in water quality. <b>Young Professional</b>		<input type="checkbox"/> WE&T (including Operations Forum) <input type="checkbox"/> WEF Highlights Online <input type="checkbox"/> Central States Water Magazine YP=<35 yrs of age, < 10 yrs work experience can receive 50% discount for 1 <sup>st</sup> three years of membership			\$ 51.00
<input type="checkbox"/> <b>OPERATIONS</b>					\$ 64.00
Individuals involved in the day-to-day operation of wastewater collection, treatment or laboratory facility, or for facilities with a daily flow of < 1 mgd or 40 L/sec.		<input type="checkbox"/> WE&T (including Operations Forum) <input type="checkbox"/> Water Environment Laboratory Solutions <input type="checkbox"/> WEF Highlights Online <input type="checkbox"/> Central States Water Magazine			
<input type="checkbox"/> <b>STUDENT</b>					\$ 30.00
Students enroll for a minimum of six credit hours in an accredited college or university. Must provide written documentation on school letterhead verifying status, signed by an advisor or faculty member.		<input type="checkbox"/> WE&T (including Operations Forum) <input type="checkbox"/> WEF Highlights Online <input type="checkbox"/> Central States Water Magazine			
<input checked="" type="checkbox"/> <b>CORPORATE</b>					\$ 270.00
One person is entitled to receive member benefits. Companies engaged in the design, construction, operation or management of water quality systems. Designate one membership contact.		<input type="checkbox"/> WE&T (including Operations Forum) <input type="checkbox"/> Water Environment Research (Print) <input type="checkbox"/> Water Environment Regulation Watch <input type="checkbox"/> WEF Highlights Online <input type="checkbox"/> Central States Water Magazine			
Dual Member Association Memberships Please indicate additional WEF MA(s) you would like to join and include the MA's Dual Membership dues. WEF can track up to three additional associations.		MA 1 MA 2 MA 3			\$ \$ \$
<b>Additional Subscriptions</b>					
Consider including additional WEF resources in your membership package! Check the appropriate subscription and include the subscription cost in your payment. NOTE: Prices listed reflect a substantial member discount!		<input type="checkbox"/> WE&T (including Operations Forum)		\$55.00	\$
		<input type="checkbox"/> Water Environment Research (Online) (Call for print pricing details)		\$75.00	\$
		<input type="checkbox"/> Water Environment Laboratory Solutions		\$50.00	\$
		<input type="checkbox"/> Water Environment Regulation Watch		\$50.00	\$
		<input type="checkbox"/> Industrial Wastewater Technical Bulletin		\$89.00	\$
		<input type="checkbox"/> Biosolids Technical Bulletin		\$89.00	\$
		<input type="checkbox"/> Watershed & Wet Weather Technical Bulletin		\$89.00	\$
		<input type="checkbox"/> Utility Executive		\$89.00	\$
<b>Payment</b>					
<input type="checkbox"/> Check/Money Order enclosed		<input type="checkbox"/> Charge		Credit Card Number	
(Made payable to WEF in US funds)		<input type="checkbox"/> VISA		Exp. Date	
		<input type="checkbox"/> American Express		Signature	
		<input type="checkbox"/> MasterCard		Daytime Phone	
				TOTAL DUE	\$
<b>Mailing Information</b>					
<b>Send Form &amp; Payment to:</b> Water Environment Federation • Member Service Center • PO Box 18044, Merrifield, VA 22118-0045 For more information, call 1-800-666-0206 (U.S. and Canada) or + 1-703-684-2452 (all other countries) • Fax + 1-703-684-2428 • www.wef.org					

# SANITAIRE

## Total Process Treatment Solutions

**SANITAIRE®** and **ABJ** are the world leaders and industry standard in wastewater treatment plants throughout the world with equipment operating in thousands of facilities. Years of dedicated and knowledgeable engineering have led to the development of our various process treatment solutions. They include in part.....



- **Fine Bubble Aeration Equipment**

- ◆ High oxygen transfer capabilities and low operating costs
- ◆ Proven piping and support system for long-term reliability
- ◆ Ceramic disc and membrane disc configurations available
- ◆ Minimal maintenance requirements

- **Sequencing Batch Reactors (SBRs)**

- ◆ Continuous flow operation yields smaller basin volumes, equal loading between basins and allows for single basin operation
- ◆ Enhanced biological nutrient removal with the use of pre-react selector zone
- ◆ Low cost operations with high-efficiency SANITAIRE® fine bubble diffusers
- ◆ Easily expandable to account for increasing future plant flows



- **MIZAIRE Oxidation Ditch**

- ◆ Excellent effluent quality including biological nutrient removal
- ◆ No submerged mechanical aerator devices.
- ◆ Lower maintenance costs than comparable technologies
- ◆ Low cost operations with high-efficiency SANITAIRE® fine bubble diffusers

- **DrumFilters**

- ◆ Low energy consumption - power only required during backwash cycle
- ◆ Wide range of capacity: 100 - 2,500 gpm per unit
- ◆ All corrosion resistant components for long term reliability
- ◆ Minimal maintenance requirements



Sanitaire  
9333 N. 49th Street  
Brown Deer, WI 53223  
Tel: 414.365.2200  
Fax: 414.365.2210  
Email [info@sanitaire.itt.com](mailto:info@sanitaire.itt.com)

Sanitaire



ITT

*Engineered for life*

WASTEWATER  
TREATMENT

BIOLOGICAL  
TREATMENT

TRAINING  
SERVICES

COMPLETE  
SOLUTIONS

GUARANTEED  
FIELD PERFORMANCE





# ***DONOHUE***

**WASTEWATER ENGINEERS & TROUBLESHOOTERS**



[www.donohue-associates.com](http://www.donohue-associates.com)  
1-888-736-6648

Champaign, IL • Chicago, IL • Moline, IL • St. Louis Park, MN • Willmar, MN  
Madison, WI • Milwaukee, WI • Sheboygan, WI • Fort Wayne, IN • Indianapolis, IN • Chesterfield, MO

*CREATIVE AWARD-WINNING SOLUTIONS*