

CENTRAL STATES WATER

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

The AIR EMISSIONS COMPLIANCE Matrix

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



PROFILE: North Shore Sanitary District





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: Reese, Syracuse, NY



Call us today 1-800-227-8181 or visit 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 28–March 1, 2011, Virginia Beach, VA
March 21–22, 2011, Madison, WI

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

Wastewater Pumping Systems and Lift Stations

March 2–4, 2011, Virginia Beach, VA
March 23–25, 2011, Madison, WI

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

Understanding Water Chemistry for Practical Application

March 8–9, 2011, Madison, WI

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

Introduction to Environmental Engineering with Green Applications

March 10–11, 2011, Madison, WI

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

Fundamentals of Drinking Water Treatment

May 17–19, 2011, Madison, WI

- Water treatment processes and systems
- Membranes, filtration, softening, disinfection
- Lead, radium, manganese, pathogens, and more

See complete course listings at

epd.engr.wisc.edu

To enroll or find out more:

Ned W. Paschke PE

paschke@engr.wisc.edu

Toll free 800-462-0876 or

608-263-4705

Building Infrastructure. Building Trust.

Consulting & Engineering for Water and Wastewater

Today and every day, Foth is building trust by delivering personalized, client-centered service. We delve deeply into all aspects of your project so that we can ask the right questions and find the right answers. We work with you in ways that will help grow and sustain your local community. For all your wastewater and municipal engineering needs, contact Foth.



www.foth.com ♦ 1-800-236-8690

♦ Green Bay ♦ Madison ♦ Milwaukee ♦ Des Moines
♦ Cedar Rapids ♦ Champaign ♦ Minneapolis



FEATURES

Midwest Water Industry Expo	15
WEFTEC Review	20
Submit for an Award	26
Plant Profile: North Shore Sanitary District	28
The Air Emissions Compliance Matrix	34
Safety Involvement	45



DEPARTMENTS

Messages

President's Message	7
Executive Director's Message	11

CSWEA News

Digester Foam Committee	33
Education Seminar	39
Leadership Academy	42

Section News

Wisconsin Chair Message	50
Minnesota Chair Message	52
Illinois Chair Message	55

Published by:



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

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

©2010 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.org

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

President

Jim Miller
Foth I&E LLC, Eagle Point II
612-961-2505
jim.miller@foth.com

1st Vice President

Beth Vogt
Greeley and Hansen
312-578-2321
bvogt@greeley-hansen.com

2nd Vice President

Randy Wirtz
Strand Associates, Inc.
608-251-4843
randy.wirtz@strand.com

Treasurer

Douglas Henrichsen
Brown and Caldwell
651-468-2077
dhenrichsen@brwnclald.com

Immediate Past President

Ralph B. (Rusty) Schroedel
AECOM
920-912-1227
rusty.schroedel@aecom.com

WEF Director '12

Dave Raby
Howard R. Green Company
Court International Building
651-644-4389
draby@brgreen.com

WEF Director '11

Scott Trotter
Trotter & Associates
630-587-0470
s.trotter@taiengr.com

PWO Representative '11

Charlie La Rocco
City of Elmhurst
630-688-2003
charles.larocco@comcast.net

YP Representative '10

Rich Hussey
LAI Ltd.
847-392-0990
rich@leyassociates.com

Illinois State Section Trustee '12

Gary Scott
Glenbard Wastewater Authority
630-790-1901
gscott@gbww.org

Minnesota State Section Trustee '12

John Glatzmaier
CH2M HILL
651-365-8526
john.glatzmaier@ch2m.com

Wisconsin State Section Trustee '11

Tom Sigmund
Green Bay MSD
920-438-1095
tsigmund@gbmsd.org

Executive Director

Eric R. Lecuyer
CSWEA
815-954-2714
cswea@ymail.com



This magazine is printed with vegetable oil-based inks and consists of recycled paper provided by a Forest Stewardship Council (FSC) certified supplier. Please do your part for the environment by reusing and recycling.



T H I N K G R E E N



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.

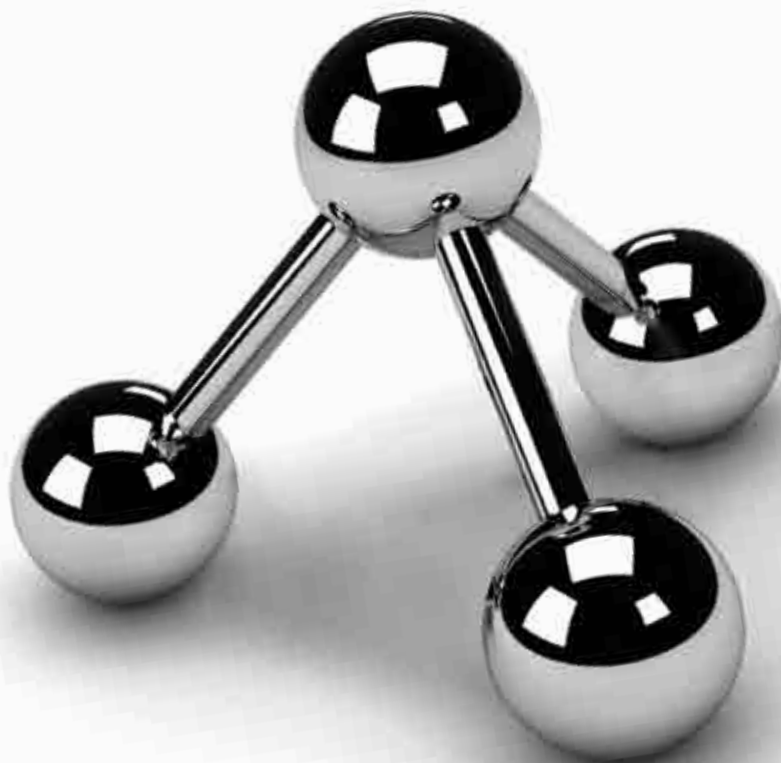
For over 50 years, Flygt Products have been acknowledged as the industry leader in America. It's no accident. The Flygt difference is this: We stand by our products and our customers.

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



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

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



Encourage Others to Get Involved

By Jim Miller



It seems that every year goes by a little bit faster and we all have a few things we want to get done before the new year. One of my goals was to work to include more topics and workshops that will bring new members or revitalize existing members into becoming more involved. I have been talking a lot about getting involved and making a difference; well, it is time to do exactly that. Before this year ends I want each member to take a moment or two and think about ways to make a difference within this organization.

These things can be as simple as registering for a conference you may not have previously attended. Try picking up the phone and talking to that person down the road (or even down the hall) to find out why they haven't submitted a paper or volunteered to join a committee or join CSWEA and WEF. If each of our members were to get just one person to consider joining or put a little more effort into pushing a certain committee a little harder to present a topic that they are interested in at one of the seminars or the annual meeting – just think how large an impact that would have!

Speaking of impacts – those in attendance at WEFTEC in New Orleans got to enjoy a very good conference and thanks to all of our supporters who made it possible enjoyed a first-class reception Sunday night to kick off the conference. Scott Trotter, Jim Huchel and the committee did a great job of coordinating this year's event.

Our Operations Challenge Teams once again beat the odds and

represented our association in a fine manner at this year's event. The goals for our teams are to beat Iowa, not come in last, and have a great time representing our association. There was a lot of interaction with other teams who found it amazing that our teams, who are made up of members from each of the State Sections and practice a few days, were able to compete at the level they do. Most if not all of the other teams are from the same area or facility and some teams are practicing the events five or more days a week for several months. The Madison folks, including Paul and Monty, have been a great help along with the coaches, PWO

representative Charlie LaRocco, and the firms that have provided monetary and other support of the teams has been greatly appreciated. This year the PWO position will be open and the nominations committee has been working on finding a candidate or two to fill Charlie's position. As many of you know, Rick Ashling and I have been the coaches for some time and each year we have a small wager on whose team will place higher in the overall standings. As tough as it is for me to part with one of the hard-earned dollars – Rick's team did

(Continued on page 8)



Oldcastle Precast®

Packaged Wastewater Treatment Systems

- Low Energy
- Low Maintenance
- Tertiary Treatment System
- Harnessing the Power of Algae

AlgaePac™

Featuring
algae wheel
Technology



Toll Free 888-965-3227

www.oldcastleprecast.com/wastewater



“The 84th Annual Meeting will be coming up fast and I personally invite each and every member to the conference next May in Brooklyn Park, MN at the Northland Inn.”

sneak away with a very nice finish and I presented Rick with one of his dollar bills that I have been keeping. That leaves me with only \$4 and a half in my running total.

The Design Team from Illinois should also be congratulated on their excellent second place in the competition. It is great to see them compete on the national level and do well.

The 84th Annual Meeting will be coming up fast and I personally invite each and every member to the conference next May in Brooklyn Park, MN at the Northland Inn. There are plenty of things to do in the area if you bring along family or guests. The Northland Inn is a great venue and is located on the northwest corner of the metropolitan area just off Interstate 694/94. Jason Benson and the committee are putting together another great technical program and the vendor show will be a great opportunity to view new and existing products and services for our industry. Be sure to let the vendors know how much you appreciate their involvement – they are an extremely important part of our association.

This time of year is also when a great number of holidays occur. Take a little time to be thankful for the opportunity to protect our environment. Reflect on the great friends and acquaintances we make through our organization. Be appreciative of family and those who support us in our profession. **CS**

BIOGAS
SHAND & JURs



Protect your Digester Gas Safety Equipment from Harsh Weather



97570/97571 Combination Conservation Vent & Flame Arrester with Insulation Jacket



Dual 97571 with 97190 Safety Selector Valve on Digester



97161 Regulator to Waste Gas Burner



97160/97161 Pressure Relief & Flame Trap Assembly with Insulation Jacket

Shand & Jurs Insulation Jackets and “All-Weather” Teflon® coating provide protection from both hot & humid and cold weather environments. All Shand & Jurs Insulation Jackets are made of a silicone-impregnated woven glass fabric with 1” thick, 6 lb density fiberglass insulation.

www.sandj.com



Manufactured right in your
backyard in Hillside, IL!

an **L&J TECHNOLOGIES**
company

Global Technologies, Local Solutions.

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



www.degremont-technologies.com

HEADWORKS | BIOLOGICAL | SEPARATIONS | MEMBRANES | OXIDATION DISINFECTION | BIOSOLIDS | INDUSTRIAL SYSTEMS

INFILCO

Represented in Illinois by Drydon Equipment Inc.
2445 Westfield Drive, Suite 100 • Elgin, IL 60124-7840
Phone: (224) 629-4060

Represented in Minnesota by Treatment Resources, Inc.
794 Spring Hill Ct. • PO Box 25846 • Woodbury, MN 55125
Phone: (651) 702-2692

Revolutionary Lamp Technology

Introducing the TrojanUV Solo Lamp™ – a no compromises advancement in UV lamp technology. It stands alone in its ability to offer both high UV output and high electrical efficiency. Now TrojanUV Systems can be designed with fewer lamps. And by reducing the total number of lamps, operators will spend less time monitoring and replacing them. High UV output and high electrical efficiency. The best of both worlds. That's Trojan's Solo Lamp™.

Find out more at trojanuv.com.

We've Got You Covered

TROJAN  UV



Transitions

Eric R. Lecuyer



Many skilled, talented, and respected authors have lamented the changing of the seasons going back to the origins of all written languages and I'm sure to plagiarize with my own lament, that "fall is the cruelest of all seasons." As the glow of a long summer and extended Indian summer fades, the prospects of a cold and bitter winter are hard to accept. Oh, there may be a few high points; that ski weekend when the weather cooperates, the tri-party rivalry of Bears/Vikings/Packers, the holidays and warmth of family and maybe a fine, sunny day here and there.

One high point not to be missed will be the 6th Annual Midwest Water Industry Expo (MWIE) at the Kalahari Resort in the Dells, smack dab in the middle of the cruelty of a seemingly endless winter. What a great opportunity to sneak away for a couple of days, take in the many educational opportunities provided during the classroom Vendor Presentations or new this year, the booth-side quick talks. One of my favorite things about the expo (besides happy hour, the chance to win major door prizes, the enjoyment of meeting old friends and making new ones, and happy hour) is having the time to really visit with the exhibitors. The MWIE format was set from the start to enhance that vendor-visitor time, without the rush of so many other competing events, like technical programs, inviting and lush golf courses, or committee meetings. Why not take advantage of the low, low overnight resort hotel room cost of only \$99 (which includes water park passes). Bring the family, and have a blast! The dates are February 8-9, 2011, a Tuesday and Wednesday and we are all looking forward to seeing you there! Why not go online right now to www.wiawwa.org and register. Then call

**"Why not go online right now
to www.wiawwa.org and register.
Then call the Kalahari at
877-253-5466 and ask for the low,
low MWIE rate of \$99 per night."**

**"We are also very proud of our
WEF award winners, Dr. Noguera
for the Fair Medal, SunOpta
for the Industrial Water Quality
Achievement Award and Patrick
McNamara for the WEF Graduate
Studies Scholarship."**

the Kalahari at 877-253-5466 and ask for the low, low MWIE rate of \$99 per night. That'll make the winter scream by and next thing you know, it'll be time for the 16th Annual Education Seminar, April 5, 2011 and the 84th Annual Meeting, May 15-19, 2011, and then summer time!


There are several WEFTEC '10 highlights reports throughout this issue of *Central States Water* and looking back it really was a great WEFTEC. The weather was fantastic and the New Orleans venue lived up to expectations. Over 250 CSWEA and IWEA members and sponsors attended our WEFTEC '10 Welcome Reception and had a wonderful time catching up with friends and planning their week. I hope you will all enjoy the photos of the event and please be sure to thank our many sponsors.

We are also very proud of our WEF award winners, Dr. Noguera for the Fair Medal, SunOpta for the Industrial Water Quality Achievement Award and Patrick McNamara for the WEF Graduate Studies Scholarship. Well done! Our Student Design Team from the University of Illinois made us proud with a second-place finish in the design competition. And our Operations Challenge teams did us proud as well, representing the association very respectably in spite of the teams being composed from members from each state. A tip of the hat to IWEA as well, receiving the Outstanding Member Association Award, an award CSWEA received a couple of years ago. Congratulations.

WEFTEC '10 in New Orleans proved to be one of the most enjoyable that I can recall, and one can only hope that the weather is repeated as we enter the Chicago-New Orleans rotation

“Finally, it was my good fortune to participate in a small luncheon with retiring WEF Executive Director Bill Bertera, who shared his thoughts on the future of WEF, and our member associations, and of the industry on a whole.”

beginning in 2012. In fact, we enjoyed WEFTEC so much I’ve decided to replace my normal grinning headshot with a nice photo of Mrs. Executive Director and me.

Finally, it was my good fortune to participate in a small luncheon with retiring WEF Executive Director Bill Bertera, who shared his thoughts on the future of WEF, and our member associations, and of the industry on a whole. The future is bright and while I will miss Bill’s thoughtful and meaningful conversations, I am pleased for Bill, stepping away from a federation he has led so skillfully and embracing personal change while he was on top rather than remain entrenched in such a critical leadership role. How does that saying go, “always leave them wanting more?” Makes one think...see you at MWIE! 



Eric Lecuyer and Bill Bertera at WEFTEC

Rotary Lobe Pumps Macerating Technology

BÖRGER
innovation

Rotary Lobe Pumps in the Wastewater Industry!

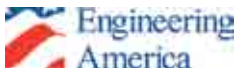
Technical Features:

- Self-Priming, Valveless, Positive Displacement
- High Capacities up to 5,000 usgpm
- Minimal Life Cycle Costs



Boerger Representatives:

Boerger, LLC | (877) 726-3743 | www.boerger.com



Matthew Fritze | 651. 777.4041
Minnesota | www.engamerica.com



Craig Soling | 847.230.0749
Illinois | cesoling@gmail.com

Mulcahy/Shaw Water, Inc.

Rich Knoelke | 262.241.1199
Wisconsin | www.mulcahyshaw.com



PRECISION ARMOR

Get state-of-the-art measurement for lasting frontline support in the war on water loss.

POSITIVE DISPLACEMENT 5/8" – 2"

- 35+ years verified sustained accuracy*
- Optimized flow dynamics for quiet, precise operation and unmatched sustained revenue capability
- Ultra-low head loss at 6.5 PSI at 20 GPM

PRESERVE & PROTECT

Master Meter gives you the latest tactical weapons aimed at stopping threats from leaks, theft and non-revenue water, before they impact your utility's bottom line.

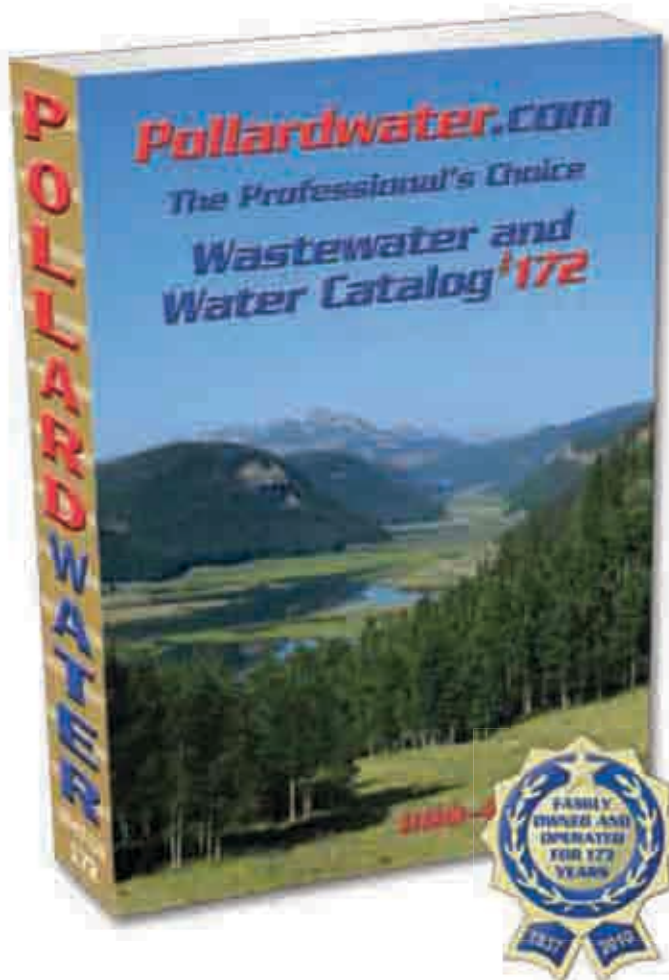
* (4,000,000 million USG) in independent tests on the 5/8" size meter by the Utah Water Research Laboratory



Neal Farmer
National Sales Manager
817-842-8106
nfarmer@mastermeter.com

Pollardwater.com

If you need it, we have it!



Best Tech Support



Let us help You **BUDGET** stretch it!

Give us a call and we will help you make the most of your budgeted dollars!

Phone 800-437-1146

**Find it all at
www.pollardwater.com**

MIDWEST WATER INDUSTRY EXPO

6TH ANNUAL

KALAHARI RESORT & CONVENTION CENTER
WISCONSIN DELLS, WI • FEBRUARY 8-9, 2011

It is time once again for the Midwest Water Industry Expo. This year's expo will prove to be an exciting, fun and interactive opportunity to meet water professionals from the three state areas: Wisconsin, Minnesota and Illinois. We are now accepting vendor registrations for the 6th Annual Midwest Water Industry Expo. Floor space is limited, so register as soon as possible.

Exhibit hours:

Tuesday, February 8
8:30 a.m. to 5:00 p.m.
(Meet & Greet 3:00 to 5:00 p.m.)
Wednesday, February 9
8:00 a.m. to 2:00 p.m.

Exhibit set-up:

Monday, February 7
8:00 p.m. to 10:00 pm OR
Tuesday, February 8
7:00 a.m. to 8:30 a.m.

Room rates: \$99.00/night
(Includes 4 water park passes)

Expo highlights

- Continental breakfast and lunch in the exhibition area on Tuesday and Wednesday.
- Exhibition area reception (Meet & Greet) on Tuesday (3:00-5:00 p.m.).
- 10-minute scheduled vendor talks at booths and 25-minute classroom sessions in designated rooms adjacent to the exhibit hall: both designed to enhance participation.
- Fun and friendly activities throughout the day in the exhibit hall designed to engage the crowd and provide quality interactions with your potential customers.
- Raffle prize drawings for participants on both Tuesday and Wednesday.

Exhibit registration

Exhibitor registration is open on line at www.wiawwa.org, early registration ends on 12.31.10. Please register early as space is limited.

Attendee Registration

Registration is open on line at www.wiawwa.org. Full expo registration is only \$40.00, \$25.00 each for either Tuesday or Wednesday. Guest expo registration is only \$15.00. Please register early!

Continuing education credits

Again for 2011, it is expected that a total of 4 water/wastewater credit hours will be available. Once again, very cost effective CEUs are being offered!

We are looking forward to seeing you at the expo. If you have any questions, please contact Jill Duchniak at 414-423-7000 or jill@wiawwa.org.

Midwest Water Industry Expo Committee:

Chair Laura Daniels, WWA and Vice Chair Tom Mulcahy, CSWEA, CSWEA: Carol Strackbein, Dean Falkner and Eric Lecuyer WWA: Ross Brzycki, Marie Klasinski, Reid Snedaker and Dave Wasserburger



Preserving our Most Valuable Resources

PVS Technologies. Delivering superior products with exceptional service, ever mindful of our shared future. As a leading iron salts manufacturer, we simply will accept nothing less.

LIQUID FERRIC CHLORIDE
LIQUID FERROUS CHLORIDE
Anhydrous Ferric Chloride / Etchant Grade Ferric Chloride

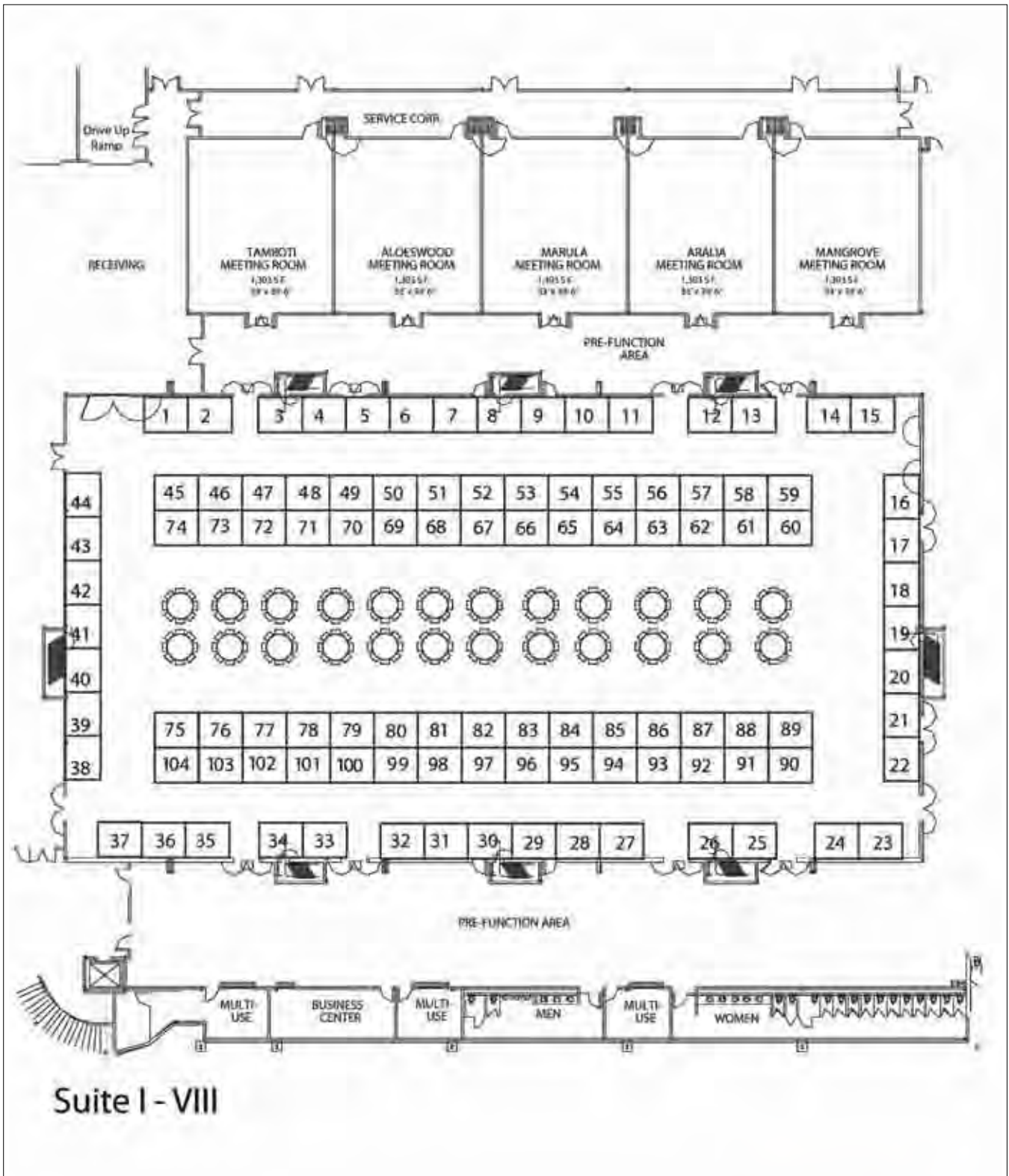
PVS TECHNOLOGIES
10900 Harper Ave. Detroit, MI 48213

toll free **800-337-7428**
dbrandt@pvschemicals.com
www.pvschemicals.com

MIDWEST WATER INDUSTRY EXPO

KALAHARI
RESORT

FLOORPLAN



MIDWEST WATER INDUSTRY EXPO EXHIBITORS

At time of
printing

Aqua Backflow, Inc.

866-777-2124
Fax: 866-777-2125
tom@AquaBackflow.com
www.AquaBackflow.com
Tom Staroske, General Manager
Cross connection control & FOG
management services.

Arteche PQ, Inc.

16964 Victor Road
New Berlin, WI 53151
262-754-3883
gary.anderson@artechepq.com
www.artechepq.com
Gary Anderson, President,
General Manager

ASA Analytics

2325 Parklawn Drive, Suite I
Waukesha, WI 53186
262-717-9500
info@chemscan.com
www.asaAnalytics.com

Ashbrook Simon-Hartley

11600 East Hardy
Houston, TX 77093
281-985-4479
Mobile: 713-816-0011
jaime.bengoechea@as-h.com
Jaime Bengoechea

Baker Water Systems – Monitor

133 Enterprise Street
Evansville, WI 53536
800-356-5130
tmoon@baker-mfg.com
www.bakermonitor.com
Tom Moon

Baxter & Woodman, Inc.

256 South Pine Street
Burlington, WI 53105
262-763-7834
Fax: 262-763-2509
sgodfrey@baxterwoodman.com
www.baxterwoodman.com
Steve Godfrey
Baxter & Woodman is an industry leader
in all areas of wastewater collection,
treatment, and conveyance and water
supply, storage, distribution, preservation
and conservation.

Cathodic Protection

Management, Inc.

39W960 Midan Drive
Elburn, IL 60119
630-313-5784
billc@corrosionspecialists.com
www.corrosionspecialists.com

Crane Engineering, Inc.



707 Ford Street
Kimberly, WI 54136
920-733-4425
Fax: 920-733-0211
m.baxter@craneengineering.net
www.craneengineering.net
Mike Baxter
Crane is a full service distributor of
process equipment, instrumentation,
controls, pumps, and valves for the water
and wastewater treatment industry.

Energenecs, Inc.

W59 N249 Cardinal Avenue
Cedarburg, WI 53012
262-377-6360
Fax: 262-377-1515
Larry@energenecs.com
www.energenecs.com
Larry Henderson, PE
Energenecs provides system integration
services, application engineering,
equipment and field services for water
and wastewater treatment, control, and
renewable energy systems.

EnviRestor, LLC

P.O. Box 590
Hartland, WI 53029
262-966-7007
pijenvir@wwdb.org

Farnsworth Group Inc.

101 N. Wilson Ave
Rice Lake, WI 54868
Trobarge@f-w.com
www.f-w.com
Integration specialist.

*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



Northern Lake Service, Inc.

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

MWIE EXHIBITORS

Hach Company

800-227-4224 ext. 2180

Cell: 414-915-6150

www.hach.com

Jim Burke, Regional Sales Manager - WI

In-Pipe Technology® Company, Inc.

100 Bridge Street

Wheaton, IL 60187

630-871-5844

sales@in-pipe.com

www.in-pipe.com

Jim Jolly Sales, Inc.

11225 Giordano Court

Huntley, IL 60142

847-669-7570

Fax: 847-669-7571

LAI, Ltd.

5400 Newport Dr., Ste. 10

Rolling Meadows, IL 60008

847-392-0990

tim@leyassociates.com

www.leyassociates.com

Manufacturer representative of water and wastewater products for Illinois and Wisconsin.

LW ALLEN, Inc.

4633 Tompkins Drive

Madison, WI 53716

608-222-8622

jcook@lwallen.com

Jim Cook

Mulcahy/Shaw Water

**MULCAHY/SHAW
WATER, INC.**

10144 N Port Washington

Mequon, WI 53092

262-241-1199

info@mulcahyshaw.com

www.mulcahyshaw.com

Tom Mulcahy

Mulcahy/Shaw Water has been in business since 1974. Representing the industry leaders in process and instrumentation equipment for the water and wastewater market.

OMI Industries, Inc.

1 Corporate Drive, Suite 100

Long Grove, IL 60047

708-308 4846

minett@omi-industries.com

Tom Minett

Peterson and Matz, Inc.

2250 Point Blvd, Suite 300

Elgin, Illinois 60123

847-844-4405

Fax: 847-844-4409

Mobile: 847-624-5226

Dean M. Wiebenga

Equipment *for* Water, Wastewater & Industry

John Szymanski Master Plumber is "The Other Guy"

35 years serving the industry

Member of: AWWA, MWOA, WWOA, MRWA, ABPA

Come see me at booth 201 at
the MRWA Technical Conference

*Get your water treatment
questions answered.*

65910 – 267th St. Alden, MN 56009-4211

800-253-7235

507-863-2367 (Fax)

507-383-1063 (The Other Guy's cell)

JohnSzymanski99@hotmail.com

The Other Guy Companies

► ALDEN POOL AND MUNICIPAL SUPPLY CO

Chemical Feed Pumps & Gas Chlorinators

Parts, repairs and accessories for most popular brands

www.aldenpool.com

► HI-E-DRYSTORE.COM

Keep your pump houses and water plants dry.

Replacement filters and repairs

www.hi-e-drystore.com

► MID-AMERICA BACKFLOW PREVENTER CO.

Cross connection programs

Backflow preventers and repair kits

Testing and repair

► MID-AMERICA ULTRAVIOLET CO.

Replacement UV lamps, quartz sleeves

UV system rebuilds

SAVE UP TO 50% over new

Engineering
Planning
Science

An aerial photograph showing a white water tower on the left and a large, multi-story industrial building with a gabled roof on the right, situated in a grassy area.

ST. PAUL 651-636-4600
ST. CLOUD 320-251-4553
ROCHESTER 507-282-2100

www.bonestroo.com

Praxair, Inc.

7000 High Grove Boulevard
Burr Ridge, IL 60527
630-320-4152
joe_shepley@praxair.com
Joe Shepley, Bus. Dev. Manager

Rain for Rent

3404 State Road
Bakersfield, CA 93308
800-742-7246
Fax: 661-393-1542
sales@rainforrent.com



www.rainforrent.com

Rain for Rent combines rental pumps, pipe, tanks and filtration systems into creative solutions. We offer engineering and on-site personnel 24/7, 365 days a year.

Swanson Flo-Systems

612-723-2098
Dan Anderson

Unison Solutions, Inc.

5451 Chavenelle Road
Dubuque, IA 52002
563-585-0967
Fax: 563-585-0970
jan.scott@unisonsolutions.com
www.unisonsolutions.com
Jan Scott

Unison Solutions, Inc. is an industry leader in biogas conditioning systems including gas compression, moisture removal, H₂S removal and siloxane removal.

USEMCO

P.O. Box 550
Tomah, WI 54660
608-372-5911
sales@usemco.com
www.usemco.com
Bill Ruhling



Package pumping systems for water boosters, and lift stations. Control systems including MCCs and PLCs.



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

WEFTEC '10 REVIEW

Central States wishes to express our sincere thank-you to our many sponsors of the CSWEA-IWEA WEFTEC 2010 Welcome Reception sponsors. **Please support our sponsors!**

AECOM
Adaptor Inc.
Alfa Laval
Ashbrook Simon-Hartley
Baxter & Woodman
Black & Veatch
Boerger, LLC
Calgon Carbon Corporation
Centrisys
CDM
Crawford, Murphy & Tilly, Inc.
DeZurik
Donohue & Associates, Inc.
Doonan Environmental, LLC
Drydon Equipment Inc.
Energenecs
Environmental Dynamics
Flow-Technics, Inc.

Flowserve
G.A. Industries, Inc.
Gasvoda & Associates, Inc.
GE Power and Water
Greeley and Hansen
HDR Engineering
Howard R. Green Company
Hydroaire, Inc.
Hydro-Thermal Corp
IHC Construction Companies, LLC
ITT Flygt
ITT Sanitaire
JDV Equipment Corporation
Johnson Controls Inc.
Jim Jolly Sales NPC
JWC Environmental
Kruger, Inc.
LAI, Ltd.
Lakeside Equipment Corp.

Malcolm Pirnie, Inc.
Natgun Corporation
OMI Industries
Peterson & Matz, Inc.
RJN Group
Rotork Controls Inc.
RPS Engineering
Siemens Jet Mix
Siemens Water Technologies
Strand Associates, Inc.
Symbiont
Tnemec Company Inc.
Trojan Technologies
Trotter and Associates, Inc.
Visu-Sewer
Walker Process
Wemco Pump
Vogelsang.U.S.A.

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:

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

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

5991 Division Rd. • West Bend, WI 53095

**Process
Equipment
Repair
Services, Inc.**

WELCOME RECEPTION



SECOND PLACE WEFTEC '10 STUDENT DESIGN COMPETITION, ENVIRONMENTAL DESIGN DIVISION



L-R: WEF Past President Jim Clark, Paul Folwarski, Alyssa Sohn, Anthony Straub and Ian Bradley

University of Illinois at Urbana-Champaign Student Design Project

Title:

Removal of Waterborne Viruses Using
Iron-Amended Biosand Filters

Presenters:

Ian Bradley, Anthony Straub, Alyssa
Sohn & Paul Folwarski

Authors:

Ian Bradley, Sheila Markazi,
Peter Maraccini, Kim Parker,
Thanh H. Nguyen; Department of Civil
and Environmental Engineering,
University of Illinois at
Urbana-Champaign

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

PISTA. 360

GRIT REMOVAL SYSTEM

New!
Cost Saving Design Features

Contact Us for Project Assistance or to
Locate One of Our Local Reps in the Central States region!
smithandloveless.com • 800-898-9122

Smith & Loveless Inc.

**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

WEFTEC

OPERATIONS

By Charlie La Rocco

CHALLENGE 2010

Congratulations to the Pumpers and Shovelers representing Central States at the 2010 WEFTEC Operations Challenge.

For the 23rd consecutive year, Central States Water Environment Association sponsored two teams, the Pumpers and Shovelers to compete in the Operations Challenge competition at the Water Environment Federation Technical Conference.

The 2010 CSWEA Operations Challenge Teams are:

Pumpers

- Coach Rick Ashling, Albert Lea, MN
- Captain Rob Barnard, Moline, IL
- Greg Guerrero, Duluth, MN
- Matt Schmidt, Green Bay, WI
- Darsey Thoen, Moorhead, MN

Shovelers

- Coach Jim Miller, Buffalo, MN
- Captain Jim Huchel, Crystal Lake, IL
- Todd Carlson, Duluth, MN
- Bryan Thomson, Green Bay, WI
- Ken Bloom, Marathon, WI

2010 CSWEA Operations Challenge Sponsors

- | | |
|--------------------------------|------------------------------|
| • Greeley-Hansen | • JM Process Systems, Inc. |
| • Schwan Inc. | • Sven |
| • ITT Flygt | • Mulcahy/Shaw Water, Inc. |
| • Boerger LLC | • Parsons Equipment Process |
| • Process Equipment And Repair | • LAI, Ltd. |
| • AE2S | • Quality Flow Systems, Inc. |



This year's event took place October 4-5, 2010 at the Morial Convention Center, New Orleans, Louisiana and consisted of 40 teams coming from across the United States, as far as Hawaii, to Argentina and Canada.

Winners were determined by a weighted point system for five events including collection systems, laboratory, process control, maintenance and safety.

Both the Pumpers and Shovelers were successful in coming together as a team and demonstrating their talents and abilities in all five events.

Todd Carlson stated, "We do have a reputation for doing well, working together and being truly a team, and that feels good."



Congratulations once again for an outstanding performance at the Operations Challenge competition. What a great job you guys did.

CSWEA WEF AWARD WEFTEC '10 REVIEW WINNERS



Graduate Studies Scholarship Award

Patrick is a graduate student at the University of Minnesota where he is advised by Dr. Paige Novak. His research interests include studying the effects that advanced anaerobic digestion processes can have on estrogenic compounds in biosolids. He has also researched how estrogenic compounds behave in septic tanks and natural waters. Currently, Patrick is interested in how contaminants of emerging concern can impact biological processes in both engineered and natural environments.

Patrick McNamara, Ph.D. Candidate, University of Minnesota, is presented with WEF's Graduate Studies Scholarship Award by WEF President Paul Freedman.

Industrial Water Quality Achievement Award

"The staff of SunOpta Ingredients Group are both thrilled and honored to be chosen for this significant award. It was a great privilege to represent the Central States Water Environment in this capacity. Our sincere appreciation must go out to the involvement of the Central States/Minnesota Section Industrial Committee, the Section Officers and the leaders of Central States for their efforts in this award process." Loren Larson, SunOpta.




Loren Larson, representing SunOpta, receives the Industrial Water Quality Achievement Award from WEF President Paul Freedman.


Fair Medal

Professor Noguera dedicates this award to all his former and current students. They are the ones who have made academic life exciting, rewarding, and a continuously evolving challenge that is truly appreciated.



ELIMINATE ODOR AND CORROSION





ECO₂

- **Advanced Pure Oxygen System**
90-95% Oxygen Transfer Efficiency
- **PREVENTS the Formation of H₂S**
- **No Hazardous Chemicals**
- **Ultra-Low O&M Costs**
- **GUARANTEED Performance**

VISIT US ON THE WEB:
WWW.ECO2TECH.COM
 OR CONTACT US AT (317) 706-6484

THE LAST ODOR CONTROL SOLUTION YOU WILL EVER NEED!

EZ²™ Insertion Valve & Line Stopping Technology

Easy, Fast & Reliable Installation with only One Excavation
and No Service Interruptions

- 1 Hour (or less) to Install (16" size installed in under 4 hours)
- Meets AWWA material specs C-515 and C-509-09

Plus...

- Standardized operation normal turns to actuate valve
- Compact design
- Pipe-line integrity maintained
- Lightweight and compact installation equipment



**Tight quarters
are no problem
for EZ Valve**

**New Pipe,
Old Pipe,
Any Pipe!**



Secure Body...



Mill Valve Slot...



Install Bonnet...



Re-use Bonnet.

16" installation shown

*Sizes: 4" through 16" plus A/C pipe sizes
Tuberculated Pipe? No Problem.*

24" Coming Soon!



Advanced Valve Technologies, Inc.

Headquarters

800 Busse Road
Elk Grove Village, IL 60007

Plant 2

12601 Homan Avenue
Blue Island, IL 60406

**Call today for complete
EZ²™ Valve information!
877.489.4909**

www.avtfittings.com

Submit for a WEF Award

By Beth Vogt

There is still time to submit a nomination for one of the many prestigious WEF awards and create the opportunity to recognize professionals for this special recognition. While often taken for granted, the work that each of you do is highly noteworthy and deserves recognition. Some of that work deserves recognition at the national level and nominating a colleague for such a prestigious award will help facilitate that recognition.

2010 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 or www.WEF.org web sites.

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.

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.

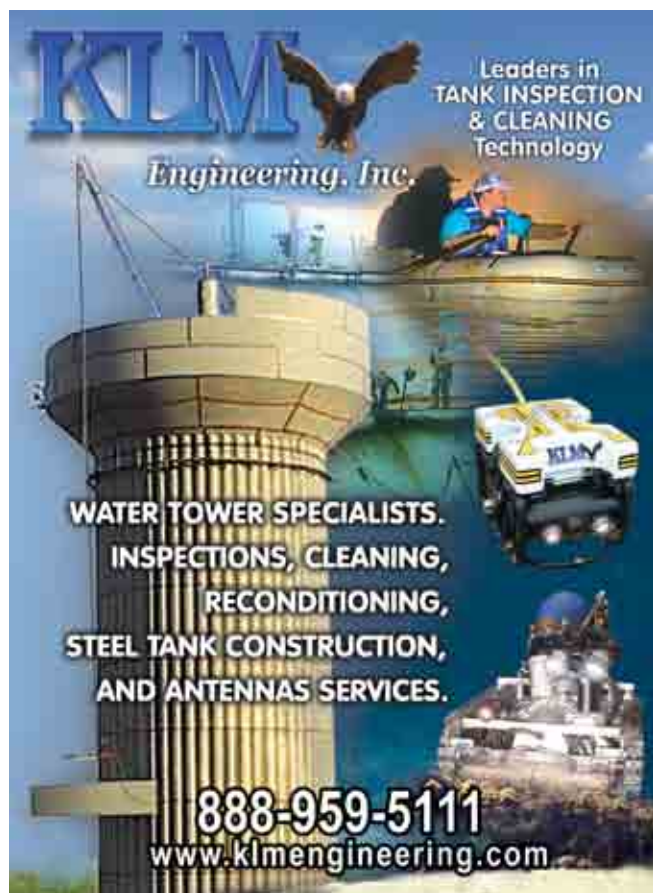
George Bradley Gascoigne Medal: This award is presented by WEF to the author(s) of an article, which presents the solution of an important and complicated operational problem within a full-scale, operating wastewater treatment plant, which is appropriately staffed. Article must have been published in 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, www.wef.org, or by contacting Eric Lecuyer, 815-954-2714, cswea@ymail.com



WEF AWARD APPLICATION

Please complete the following information and submit to Beth Vogt at bvogt@greeley-hansen.com
Nominations must be received no later than January 1, 2011 for consideration
as the Central States WEA Nominee for each award category.



(Cut and return)

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: _____

**SPECIALIZING IN
RENEWABLE ENERGY SYSTEMS**

Unison Solutions, Inc.
 5451 Chavenelle Road
 Dubuque, IA 52002
 Phone: 563-585-0967
www.unisonsolutions.com

- Biogas Conditioning Systems
- Compressor Skids
- Blower Skids
- Moisture Removal
- Hydrogen Sulfide Removal
- Siloxane Removal
- Capstone Turbine Distributor

Over 30 years of expert blower rebuilds.

Berryman Equipment Company has **over 30 years of experience** and **proven rebuild processes** that will **add years** to the life of your existing multistage centrifugal blower.

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 1-800-605-0099

www.berrymanequipment.com
 E-mail: info@berrymanequipment.com

Berryman
Equipment Company

Your Blower Rebuild Experts

Name: _____
 Hibon _____
 Hoffman _____
 Lamson _____
 Gardner Denver _____
 HSI _____
 Spencer _____
 National Turbine _____
 Hibon _____
 Hoffman _____
 Lamson _____
 Gardner Denver _____
 HSI _____
 Spencer _____
 National Turbine _____
 Hibon _____
 Hoffman _____
 Lamson _____
 Gardner Denver _____
 HSI _____
 Spencer _____
 National Turbine _____



Gurnee STP



North Shore Sanitary District

The North Shore Sanitary District (district) was established by referendum pursuant to the Sanitary District Act of 1911 and is the second-largest wastewater treatment agency in Illinois. The district works diligently to safeguard Lake Michigan and other local waterways, such as the Skokie and Des Plaines Rivers, from pollutants while providing wastewater treatment service to over 300,000 residents in 15 communities within its Service Area in the eastern part of Lake County, Illinois. The district collects wastewater from the local municipalities' sewer systems within its

service area and conveys it via 125 miles of interceptor sewers and 11 pumping stations to its three advanced sewage treatment plants (STP) located in Waukegan, Highland Park (the Clavey Road STP), and Gurnee, which have a combined average design capacity of 63.4 million gallons a day.

The district's dedication to efficient treatment is evident by its continual achievement of operation and performance awards. The district's advanced STPs and highly skilled staff consistently discharge treated effluent that is of out-

standing quality. The final effluent from all three facilities has a monthly average of <1 mg/L for total suspended solids, <2 mg/L for BOD₅, and <0.05 mg/L for ammonia nitrogen. The effluent discharge during the disinfection months of May through October is also consistently <5 colonies/100mL for fecal coliform.

Advanced treatment processes

The wastewater treated at the district's three sewage treatment plants passes through a series of five major treatment processes. In addition, the solids produced by the wastewater treatment processes are treated and disposed separately. Wastewater treatment requires an intricate balance of physical, biological, and chemical processes, which are described below.

“Secondary treatment utilizes naturally occurring microorganisms which digest organic material, reduce nutrients, and eventually settle as solids.”



Gurnee STP excess flow basin

Preliminary treatment consists of mechanical screening, influent/overflow pumping, and grit removal. The grit is removed centrifugally at the Gurnee and Clavey Road STPs and via gravity at the Waukegan STP. The screened material is collected and disposed of at a municipal landfill, while the wastewater flows to primary treatment.

Primary treatment involves the removal of the settled and floating solids. Solids removed from this process are treated in the solids handling portion of the plant. The primary sedimentation tanks and Imhoff tanks (at the Waukegan STP) are designed to remove approximately 50% of the suspended solids and the BOD load.



Secondary treatment utilizes naturally occurring microorganisms which digest organic material, reduce nutrients, and eventually settle as solids. Primary effluent flow enters the first stage aeration tanks where biological treatment (activated sludge process) removes carbonaceous



Waukegan STP aerial view

BOD. Following first stage aeration, flow enters the first stage clarifiers. The clarified first stage effluent is then pumped to the second stage treatment process. Sludge that settles in the first stage clarifiers is either returned to the first stage aeration tanks or wasted from the process. The second stage biological treatment process is basically the same as the first stage process except that the removal of nitrogenous wastes (ammonia) takes place instead of carbonaceous wastes.

Tertiary (or advanced) treatment is used to further improve the quality of the water. The second stage effluent flow is pumped through deep bed sand filters which significantly reduce

engineering | planning | environmental | construction

Minneapolis 888.541.4800
St. Cloud 877.252.4900

wsbeng.com



Ultraviolet disinfection

“The solids that are removed during the wastewater treatment processes still contain a large amount of water so to reduce the volume of solids and disposal costs, the solids are thickened and then dewatered by belt filter presses.”

the suspended solids and further purify the wastewater. After tertiary treatment, over 90% of solids and BOD have been removed from the wastewater.

Disinfection is the final step in the wastewater treatment process. Following sand filtration, the flow is disinfected by ultraviolet light from May through October. The Waukegan STP and the

Gurnee STP discharge treated effluent to the Des Plaines River and the Clavey Road STP discharges treated effluent to the Skokie River.

Solids Handling involves the treatment of the biosolids removed from the wastewater treatment processes. The solids that are removed during the wastewater treatment processes still

contain a large amount of water so to reduce the volume of solids and disposal costs, the solids are thickened and then dewatered by belt filter presses. The dewatered biosolids are then loaded into trailers and transported to the Zion Sludge Recycling Facility for drying prior to disposal.

The solids at the Clavey Road STP located in Highland Park, undergo anaerobic digestion prior to dewatering by the belt filter presses.

Plant capacity

All three of the district's advanced sewage treatment plants have permitted excess flow facilities. Built in 1935, the Waukegan STP is designed to treat 22 million gallons per day (MGD) average flow and 44 MGD maximum flow. Influent flows up to 44 MGD are routed through the plant. Influent flows in excess of 44 MGD are pumped to the excess flow retention basins for storage. After the plant influent flow subsides to less than 44 MGD, the sewage in the basins is returned to the plant for treatment. Flows in excess of the storage capacity of the retention basins (38 MG) are discharged to Lake Michigan after screening, sedimentation, and disinfection.

Built in 1956, the Clavey Road STP is designed to treat 17.8 MGD average flow and 28 MGD maximum flow. Influent flows up to 28 MGD are routed through the plant while influent flows in excess of 28 MGD are diverted to the treatment facility's excess flow retention basins for storage. After the plant influent flow subsides to less than 28 MGD, the

Lake Forest PS underground basin





Waukegan STP

sewage in the basins is returned to the plant for treatment. Flows in excess of the capacity of the retention basins (20.4 MGD) are discharged to the Skokie River after screening, sedimentation, and disinfection.

The Gurnee STP, built in 1976, is designed to treat 23.6 MGD average flow and 47.2 MGD maximum flow. Influent flows up to 47.2 MGD are routed through the plant. Influent flows in excess of 47.2 MGD are diverted to the treatment facility's excess flow retention basins for storage. After the plant influent flow subsides to less than 47.2 MGD, the sewage in the basins is returned to the plant for treatment. Flows in excess of the capacity of the retention basins (50 MG) are discharged to the Des Plaines River after screening, sedimentation, and disinfection.

“To further protect the environment, the district is currently designing extensive improvements to its other lakefront pumping stations in Highland Park and Lake Bluff.”

In addition to the excess flow facilities at each STP, the district has also constructed storage basins at two of its pumping stations (PS) located along Lake Michi-



Waukegan STP


gan in North Chicago and in Lake Forest. The storage basin at the Lake Forest PS was the most recently constructed basin and is a two million underground storage basin with automatic flushing gates. To further protect the environment, the district is currently designing extensive improvements to its other lakefront pumping stations in Highland Park and Lake Bluff.

Odor control


The Clavey Road STP has unique operational challenges as it is a completely covered facility. The district covered the STP in the 1970s to control odors. To address possible future volatile organic carbon air emission requirements and to meet neighbors' expectations for odor control, the district installed advanced odor control

HYPO TRAK™

SODIUM HYPOCHLORITE MONITORING SYSTEM



IBC TOTES




BULK TANKS



DRUMS & DAY TANKS

- ▶ PUMP VAPOR LOCK ALARM WARNS OF A "NO FEED" CONDITION
- ▶ TRACKS DEGRADATION TO INDICATE TRUE CHLORINE USAGE
- ▶ AUTOMATICALLY INCREASES PUMP SPEED TO COMPENSATE FOR DECREASING HYPO STRENGTH
- ▶ USE WITH OUR SCALES AND LEVEL SENSORS



HYPO TRAK™

FORCE FLOW

www.forceflow.com/hypo

2430 Stanwell Drive, Concord, CA 94520 USA (800) 893-6723



Clavey Road STP

systems at the Clavey Road STP and the Gurnee STP in the 1990s. The installation of advanced odor control systems have led to a significant reduction in odor complaints. The district has also proactively initiated work at the Waukegan STP to install an odor control system in anticipation of the City of Waukegan's future lakefront development plan.

Process automation

Each of the three district sewage treatment plants as well as its pumping stations are fully automated and operate with only two operators in one eight hour shift, five days per week. The rest of the time the plants



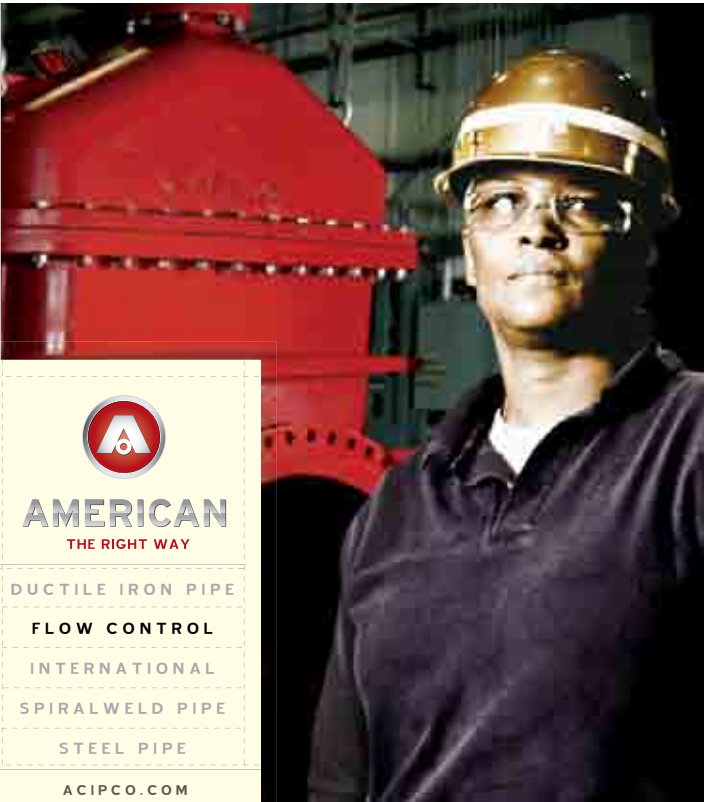
Clavey Road STP


operate unstaffed. Each process in the plants is automated using programmable logic controllers (PLCs). The PLC systems have been designed to withstand and recover from momentary power outages and equipment failures.

During the time the plants have been running with this automation, the plant effluent standards have been maintained so that all three plants have continued to meet the criteria for the National Association of Clean Water Agencies' Silver, Gold or Platinum awards each year. The automation has also been beneficial in terms of labor cost savings and in increasing the availability of operational information. [CS](#)



Gurnee STP





AMERICAN
THE RIGHT WAY

- DUCTILE IRON PIPE
- FLOW CONTROL
- INTERNATIONAL
- SPIRALWELD PIPE
- STEEL PIPE

ACIPCO.COM

**THE RIGHT WAY
MEANS
DOING WHAT
YOU SAY
YOU'LL DO.**

NOT SAYING WHAT YOU THINK YOU'LL DO.

At AMERICAN Flow Control, the proven reliability of our valves and hydrants is backed by something you can always count on — a company that believes in doing things the right way. That means being there before, during and after the sale with answers and advice, just like we've done for each and every one of our clients for more than 100 years. Because the right way is the AMERICAN way.

CSWEA COMMITTEE ON DIGESTER FOAMING REINSTITUTED

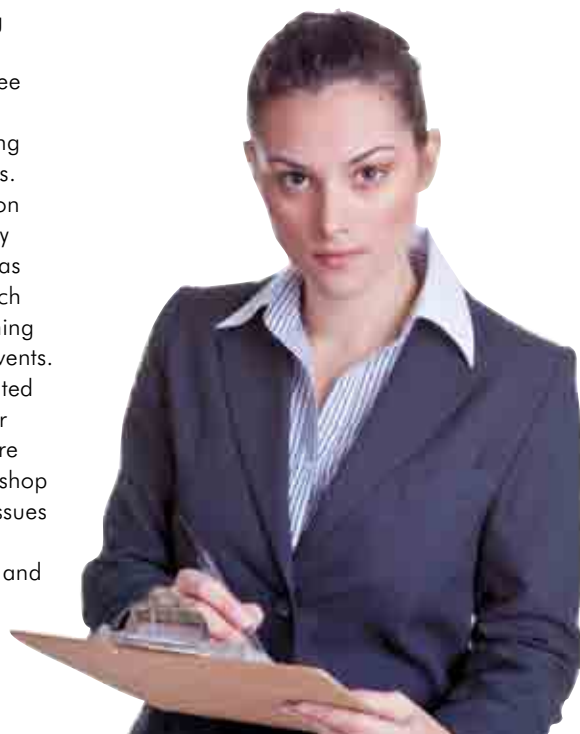
By Dan Zitomer, Chair

The CSWEA committee on anaerobic digester foaming was formed in 2009 to plan and execute activities to enhance the awareness and knowledge of foaming issues. Excess foam in anaerobic digesters can be a major problem and expense to correct. Causes of anaerobic digester foaming are not well understood. Therefore, the committee encourages exchange of information among operators, designers,

researchers and others regarding potential causes and corrective measures. Last year, the committee conducted a survey of treatment plants to identify potential foaming problems and mitigation methods. The survey results can be found on the CSWEA web page. A half-day workshop on digester foaming was held last year and generated much discussion and ideas about foaming mitigation and plans for future events. The committee has been reinstituted for this year, and met on October 28 to discuss new activities. Future events may include a 2011 workshop on anaerobic digester foaming issues and control, as well as a refined survey to pinpoint critical causes and mitigation measures related to digester foaming. [CS](#)

If you are interested in more information, please contact Dan Zitomer, chair of the digester foaming committee.

daniel.zitomer@mu.edu





DV-325c
Size 12" x 14"
9,000 GPM
240 FT Head



Manufactured in U.S.A

Powerful Pumps.

Because they were engineered that way...

Powerful Liquid Solutions

Power Prime™ Pumps.

Blue Pumps that are Green

Power Prime™ Pumps offer features to our customers that ensure a clean environment.

The Tier III Engines meet present and anticipated clean air requirements.

The available Sound Attenuation reduces noise pollution and contributes to a higher urban quality of life.

The fuel economy is up to 25% better than competitive pumps and conserves important fuel resources while delivering – **Efficiency-Reliability-Low Operating Costs.**

Engineered Liquid Pumping Solutions

800-647-7246

visit – powerprime.com



Changing national emissions standards in the U.S. demand holistic approach to emissions management strategies at sewerage treatment facilities.

The AIR EMISSIONS COMPLIANCE Matrix

M.E. SIMPSON Co., Inc.
"Water and Wastewater Operations and Maintenance Service Solutions"



The Goal is Crystal Clear

- **Wastewater Services**
Smoke Testing
Sewer Flow Monitoring
Manhole Inspection & Inventory
- **Water Loss Control Services**
- **Asset Management Services**
- **Water Quality Services**

salesinfo@mesimpson.com Phone: (800) 255-1521
www.mesimpson.com Fax: (888) 531-2444

Valparaiso, IN • Savage, MN • Dyer, IN • Waukegan, IL • Indianapolis, IN • Chicago, IL
Baltimore, MD • Gwinnett County, GA • Phoenix, AZ • San Francisco, CA

Recent emissions standard revisions from the U.S. Environmental Protection Agency (EPA) focusing on stationary reciprocating internal combustion engines (RICE) emissions impact more engines and industries than have ever been regulated by the *Clean Air Act*.



By Brian Kromer

In 2010 the EPA promulgated new amendments to the final rule on the "Subpart ZZZZ-National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines" or RICE NESHAPs. New requirements targeting compression-ignition (CI) or diesel engines were published in March 2010, while revisions for spark-ignited (SI) or natural gas and gaseous fueled engines were finalized in August 2010. These two

engine types are referred to as "CI RICE" and "SI RICE", respectively.

Both CI RICE and SI RICE emissions standards under the NESHAP (pronounced nee-shap) Subpart ZZZZ rule target HAPs or hazardous air pollutants, but ultimately cannot be separated from other EPA regulatory drivers that also impact internal combustion engines. Figure 1 illustrates the regulatory scope of the EPA with regard to total emissions of sewerage treatment facilities (to include RICE where applicable).

This high-level overview of EPA's regulatory framework can be likened to a three-legged stool, where Criteria Air Pollutants (CAPs), Hazardous Air Pollutants (HAPs) and Greenhouse Gases (GHGs) represent the legs. Together, these distinct aspects of environmental air quality programs impact RICE in stationary applications such as gas compression, power generation, irrigation or other stationary engine installations. However, sewerage treatment facilities also face emissions constraints and mandates for fugitive emissions even if engines are not present because of the treatment process.

The ramifications of this recent EPA final ruling reinforces the need for a more holistic view when considering emissions mandates and requirements for reporting the compliance status on a single engine, fleet of engines or other fugitive or process related activity a facility may produce in total. This is because the same engine that might now be subject to new RICE NESHAP provisions must also be evaluated against other CAP-based requirements, which stem from the movement toward National Ambient Air Quality Standards or NAAQS attainment and compliance with the recently promulgated GHG reporting and permitting rules. Facilities also face air quality mandates that can vary on a state and/or county level. NAAQS attainment status by county for Illinois, Minnesota and Wisconsin is presented at the end of this article in table form. These summary tables will help in determining if a given sewerage treatment facility falls under any NAAQS-driven requirements.

2009 and 2010 have ushered in changes to NESHAP standards and the introduction of GHG reporting requirements, with more to follow yet this year possibly on the eight-hour ozone NAAQS. In 2011 we may expect to see proposed NSPS JJJJ revisions finalized which will impact stationary engines. Given

all these acronyms, one might need that three-legged stool for a seat on which to weather the onslaught of increasingly stringent legislation that washes over the industry. CAPs and HAPs account for two legs of the regulatory stool. The third leg, despite the current lawsuit initiated by Texas and several other states against the EPA, consists of amendments to major source permitting rules that for the first time address the incorporation of GHG emission limits.

The recently promulgated Mandatory Reporting Rule (MRR) impacts sewerage

treatment facilities as well as other stationary sources of GHGs. The portion of the 40 CFR part 98 MRR which addresses sewerage treatment facilities was published as a final rule this past July. Fugitive emissions from the sewage treatment process are now not only evaluated against the criteria and hazardous pollutant trigger, but now greenhouse gases as well. Since methane is classified as a regulated GHG and also happens to be a by-product of sewerage, fugitive emissions and venting in the sewerage treatment process will in many cases trigger new environmental

Fig 1 The Compliance Matrix



E N G I N E E R I N G

**Multi disciplined
Nationally recognized
Locally dedicated**

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

STRAND
SEWERAGE & WATER ENGINEERS

Fig 2 Central States Summary



FOR SEWERAGE TREATMENT FACILITY OPERATORS, THE REAL CHALLENGE IS SUCCESSFULLY NAVIGATING THE TANGLED BUREAUCRATIC POLICY THAT HAS RESULTED FROM OVER 40 YEARS OF LEGISLATION.

compliance requirements. The need is clear for an all-encompassing analysis of CAPs, HAPs and GHGs from the perspective of risk management when considering sewerage treatment, and/or internal combustion engines operating

as part of any critical infrastructure. Maintaining an operations and dependability profile of equipment may soon be superseded, at least temporarily, by regulatory mandates and reporting requirements evaluation.

Since CAP standards such as NSPS IIII and NSPS JJJJ already exist, an engine's compliance obligation is known. However, for the final NESHAP rule on HAPs that was just published, a three-year compliance window exists for RICE owners and operators. This means sewerage treatment facilities with internal combustion engines have 36 months to address any criteria or hazardous pollution mandates that may now apply despite the operator's knowledge of the EPA ruling. Figure 2 summarizes almost 3,000 facilities in the Central States area that may trigger new mandates if they operate internal combustion engines.

Part of the August 2010 NESHAP Subpart ZZZZ final rule includes a provision for an engine to fulfill its NESHAP obligation by meeting current requirements that the same engine might already be meeting under CAP-driven rules, or specifically the New Source Prevention Standards (NSPS). NSPS rules established as mandates by the *Clean Air Act* legislation include Subpart IIII for CI RICE or Subpart JJJJ for SI RICE. Those factors demand a holistic view when evaluating a given fleet or even a single engine.

For sewerage treatment facility operators, the real challenge is successfully navigating the tangled bureaucratic policy that has resulted from over 40 years of legislation. The only thing about the described process that seems simple is the original goal of the describing the term "holistic" as Figure 1 suggested.

An understanding of all prior legislation targeting not only RICE, but sewerage treatment as a whole is essential to an accurate analysis. The project quickly expands far beyond the final rulings delivered in 2010, but the task is not impossible. This is why some companies have internal departments dedicated to managing compliance while others outsource air quality compliance work to independent environmental consulting firms.

This added analysis and compliance assurance exercise will carry an added cost in substantiating regulatory applicability if an engine or fleet of engines is determined to trigger the recently finalized RICE NESHAP. If the engine was already subject to the prior RICE NESHAP and was reporting under those provisions, this ruling may further expand the reporting requirements even if lower emissions are not mandated.

Illinois NAAQS Summary

NAAQS Pollutant by County	County Name	NAAQS Pollutant	Area Name	Population
8-Hr Ozone	Cook	8-Hr Ozone	Chicago-Gary-Lake County, IL-IN (IL portion)	5376741
CO	Cook	PM-10	Lyons Twsp, IL	109264
Lead	Cook	PM-10	Southeast Chicago, IL	3226
PM-10	Cook	PM-2.5 1997	Chicago-Gary-Lake County, IL-IN	5376741
PM-2.5 1997	Du Page	8-Hr Ozone	Chicago-Gary-Lake County, IL-IN (IL portion)	904161
PM-2.5 2006	Du Page	PM-2.5 1997	Chicago-Gary-Lake County, IL-IN	904161
SO2	Grundy	8-Hr Ozone	Chicago-Gary-Lake County, IL-IN (IL portion)	6309
	Grundy	PM-2.5 1997	Chicago-Gary-Lake County, IL-IN	6309
	Jersey	8-Hr Ozone	St Louis, MO-IL	21668
	Kane	8-Hr Ozone	Chicago-Gary-Lake County, IL-IN (IL portion)	404119
	Kane	PM-2.5 1997	Chicago-Gary-Lake County, IL-IN	404119
	Kendall	8-Hr Ozone	Chicago-Gary-Lake County, IL-IN (IL portion)	28417
	Kendall	PM-2.5 1997	Chicago-Gary-Lake County, IL-IN	28417
	La Salle	PM-10	Oglesby, IL	3780
	Lake	8-Hr Ozone	Chicago-Gary-Lake County, IL-IN (IL portion)	644356
	Lake	PM-2.5 1997	Chicago-Gary-Lake County, IL-IN	644356
	Madison	8-Hr Ozone	St Louis, MO-IL	258941
	Madison	PM-10	Granite City, Nameoki Twsp, IL	34284
	Madison	PM-2.5 1997	St Louis, MO-IL	258941
	Mc Henry	8-Hr Ozone	Chicago-Gary-Lake County, IL-IN (IL portion)	260077
	Mc Henry	PM-2.5 1997	Chicago-Gary-Lake County, IL-IN	260077
	Monroe	8-Hr Ozone	St Louis, MO-IL	27619
	Monroe	PM-2.5 1997	St Louis, MO-IL	27619
	Peoria	SO2	Hollis Twsp, IL	1999
	Peoria	SO2	Peoria, IL	125413
	Randolph	PM-2.5 1997	St Louis, MO-IL	3627
	St Clair	8-Hr Ozone	St Louis, MO-IL	256082
	St Clair	PM-2.5 1997	St Louis, MO-IL	256082
	Tazewell	SO2	Groveland Twsp (Tazewell Co), IL	21817
	Will	8-Hr Ozone	Chicago-Gary-Lake County, IL-IN (IL portion)	502266
	Will	PM-2.5 1997	Chicago-Gary-Lake County, IL-IN	502266

Minnesota NAAQS Summary

NAAQS Pollutant by County	County Name	NAAQS Pollutant	Area Name	Population
8-Hr Ozone	Anoka	CO	Minneapolis-St Paul	298084
CO	Anoka	SO2	Minneapolis-St Paul	298084
Lead	Carver	CO	Minneapolis-St Paul	60124
PM-10	Carver	SO2	Minneapolis-St Paul	70205
PM-2.5 1997	Dakota	CO	Minneapolis-St Paul	339627
PM-2.5 2006	Dakota	Lead	Dakota Co	284723
SO2	Dakota	SO2	Minneapolis-St Paul	355904
Central States Water Region	Hennepin	CO	Minneapolis-St Paul	1116200
Minnesota	Hennepin	SO2	Minneapolis-St Paul	1116200
	Olmstead	PM-10	Olmstead Co	82880
	Olmstead	SO2	Rochester (Olmstead Co)	85806
	Ramsey	CO	Minneapolis-St Paul	511035
	Ramsey	PM-10	Ramsey Co	286128
	Ramsey	SO2	Minneapolis-St Paul	511035
	Scott	CO	Minneapolis-St Paul	78703
	Scott	SO2	Minneapolis-St Paul	89498
	St Louis	CO	Duluth	85986
	Washington	CO	Minneapolis-St Paul	199782
	Washington	SO2	Minneapolis-St Paul	201130
	Wright	CO	Minneapolis-St Paul	81869

Wisconsin NAAQS Summary

NAAQS Pollutant by County	County Name	NAAQS Pollutant	Area Name	Population
8-Hr Ozone	Brown	SO2	Green Bay	226778
CO	Dane	SO2	Madison	426526
Lead	Door	8-Hr Ozone	Door Co	27961
PM-10	Kenosha	8-Hr Ozone	Milwaukee-Racine	149577
PM-2.5 1997	Kewaunee	8-Hr Ozone	Kewaunee Co	20187
PM-2.5 2006	Manitowoc	8-Hr Ozone	Manitowoc Co	82887
SO2	Marathon	SO2	Rothschild, Rib Mtn, Weston (Marathon Co)	125384
Central States Water Region	Milwaukee	8-Hr Ozone	Milwaukee-Racine	940164
Wisconsin	Milwaukee	PM-2.5 2006	Milwaukee-Racine	940164
	Milwaukee	SO2	Milwaukee	940164
	Oneida	SO2	Rhineland (Oneida Co)	36776
	Ozaukee	8-Hr Ozone	Milwaukee-Racine	82317
	Racine	8-Hr Ozone	Milwaukee-Racine	188831
	Racine	PM-2.5 2006	Milwaukee-Racine	188831
	Sheboygan	8-Hr Ozone	Sheboygan	112646
	Washington	8-Hr Ozone	Milwaukee-Racine	117493
	Waukesha	8-Hr Ozone	Milwaukee-Racine	360767
	Waukesha	PM-2.5 2006	Milwaukee-Racine	360767

MOVING EQUIPMENT TO A LOCATION WITH TOTALLY DIFFERENT REGULATORY CONSTRAINTS ALTOGETHER MAKES THE COLLECTIVE IMPACT ALL THE MORE CHALLENGING BECAUSE OF THE DYNAMIC NATURE OF THE ANALYSIS AND THE ASSURED FACT THAT THE ANALYSIS WILL NEED TO BE REVISITED PERIODICALLY.

When equipment is relocated (such as the case with portable equipment) or a new engine is constructed at an existing facility, new emission thresholds may be triggered. Moving equipment to a location with totally different regulatory constraints altogether makes the collective impact all the more challenging because of the dynamic nature of the analysis and the assured fact that the analysis will need to be revisited periodically.

Determining the compliance obligation for any industrial process or activity just got a significantly more complicated, and the regulatory air quality compliance landscape continues to change. Compliance is

becoming a dynamic matrix that is specific to each facility with less and less generality that can be carried from one facility to the other because of the categories of compliance and the amount of legislation now in final form. However, the complexity or the lack of being informed will not relieve an owner/operator's obligation as changes in legislation continue. [CS](#)

Brian Kromer is Managing Director of *step2compliance*, an environmental consulting firm focused on stationary markets and engine-centric industries. More information on *step2compliance* can be found at www.step2compliance.com.



Control System Integrators aren't all the same.

Discover the difference.

Visit us at the Midwest Water Industry Expo, Feb. 8-9
Kalahari Resort

Energeneics

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



Well Water Treatment Solutions

- **Radium** - High efficiency IX, Adsorptive, HMO CF
- **Arsenic** - High Efficiency IX, Adsorptive, CF
- **Nitrate** - High Efficiency IX
- **Fe, MN** - CF



High Efficiency IX



Adsorptive



Coagulation Filtration (CF)

Customized solutions based on:

- Treatment requirements
- Flow rate
- Space constraints

- Performance guarantees
- Low waste rates
- NSF approved
- Prolonged media life
- Residuals management
- On-site/Off-Site regeneration

Distributed by:



Jim Beier, P.E.
920.257.0113

envirogen.com
craneengineering.net

Plan to attend the **16th** Annual CSWEA

Education Seminar on Activated Sludge



April 5, 2011 at the Monona Terrace Conference Center, Madison WI

The 2011 Education Seminar will be held at the Monona Terrace in Madison, WI on April 5, 2011, and will primarily focus on the central topic of activated sludge in our wastewater industry.

The seminar will feature national and regional experts from various universities, wastewater utilities, and consulting

engineers. The keynote message will deal with the future of activated sludge, as it relates to energy efficiency and effluent quality. Other main topics will focus on ways to enhance the activated sludge process through new technologies such as integrated fixed film systems and membrane bioreactors. The topic of emerging contaminants and their fate

through the activated sludge system will also be discussed.

Facility operators, managers, consulting engineers and manufactures are urged to attend this exciting seminar focused on emerging issues related to activated sludge. Please also consider attending a meet-and-greet at the speaker's reception on the night before, April 4, 2011.



Check www.cswea.org for additional details and for registration information.

Wastewater Systems

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



Kenosha - Wausau - Champaign - Chicago - Indianapolis - Evansville

Meet Phosphorus Limits with Kruger Technologies

REDUCE PHOSPHORUS NOW



Hydrotech
Discfilter



ACTIFLO®

Let Kruger assist your plant in reducing your current phosphorus discharge limit. Kruger's Hydrotech Discfilter and ACTIFLO® processes 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

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

\$500

SCHOLARSHIP

FUNDED BY YOUR ADVERTISING PARTICIPATION

As the publisher of *Central States Water* magazine, we at Craig Kelman & Associates have a deep appreciation for our readers and members of CSWEA whose task it is to ensure that water taken from and put back into the earth is clean and safe for the people, animals and plants whose very existence depends upon it.

To demonstrate our admiration and respect for the association, its members and the water industry as a whole, we have established a yearly educational scholarship of \$500 to be funded through a percentage of advertising sales generated in *Central States Water*.

On behalf of the publishing professionals who form part of our team, as well as our advertisers who use the pages of *Central States Water* to convey their important messages, we look forward to helping a worthy individual further their education in the water industry.

Visit www.cswea.org to learn more.

MULCAHY/SHAW WATER, INC.

10144 N Port Washington Road
Mequon, Wisconsin 53092
Tel: 262.241.1199
Fax: 262.241.4997
info@mulcahyshaw.com
www.mulcahyshaw.com

PROCESS EQUIPMENT & INSTRUMENTATION

Trojan Technologies	www.trojanuv.com	Plasti-Fab	www.plasti-fab.com
Vulcan Industries	www.vulcanindustries.com	Aeromod	www.aeromod.com
Siemens Water	www.water.siemens.com	Aeration Industries	www.aerationindustries.com
Walker Process Equipment	www.walker-process.com	Boerger	www.boerger-pumps.com.com
Koch Membrane System	www.kochmembrane.com	Whipps, Inc.	www.whipps.com
Hendrick Screen Company	www.waterintake.com	ITT/SANITAIRE	www.sanitaire.com
Roberts Filter Group	www.robertsfiltergroup.com	Phoenix Process Co.	www.dewater.com
HSI	www.hsi blowers.com	Teledyne-ISCO	www.isco.com



BOLTON & MENK, INC.
Consulting Engineers & Surveyors



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

607-625-4171 www.bolton-menk.com
Ten offices serving the upper midwest

DESIGNING FOR A BETTER TOMORROW

Keep up
with the
Young
Professionals

www.cswea.org/syp/

CSWEA's 1st Annual Leadership Academy has been set for Monday April 4, 2011 at the Monona Terrace in Madison, WI. It will be held in conjunction with the Education Seminar, which occurs on the following day, April 5. We are excited to start a new opportunity and believe it will add great value to our members. Currently, we are in the process of establishing the program speakers and presentations. Potential topics will include keys to employee development, how to successfully communicate with others, building team cohesiveness, building an excellent team, how to avoid giving the worst presentations, and some presentations that will relate to Education Seminar topic on the following day but have a twist for the Leadership Academy.

We envision each year the program will contain new topics as the Education Seminar has been successfully demonstrating. As such, we believe we are going to create a graduation certificate after a member has attended the program on three different occasions. We are also interested to see if it is worthwhile to have the program submitted to suggested agencies to gain professional development hours or CEUs. If you have an opinion relative to this matter, we would be open for suggestions.

"I would strongly encourage our senior members to push for your younger staff to attend this event and I would strongly encourage the young professionals to push their managers to allow them to attend this event."

We anticipate the early registration fee for this seminar will be near \$75 and late registration to be near \$95. We are also working with the Education Seminar Committee to offer a discount for both events, which we believe will serve our members well by allowing some of their younger staff to attend both this program and one of the best technical one-day seminars in the country at a reasonable rate. I would strongly encourage our senior members to push for your younger staff to attend this event and I would strongly encourage the young professionals to push their managers to allow

them to attend this event. We do need both sets of members to show an initiative for this program, otherwise it will not be a continued success.

If you wish to suggest a topic or presentation and/or would like to suggest a speaker for the Leadership Academy, please contact me via email: rich@leyassociates.com. We are actively seeking presenters and suggestions to make this program valuable for our members. We hope to see a great turnout on April 4 and if we do I will buy the first round at the Great Dane as we are watching the NCAA Basketball Championship. **CS**

Save the Date
CSWEA
1st
Annual
LEADERSHIP
ACADEMY
Monday, April 4, 2011
Monona Terrace
Madison, WI

CONSERVING MORE INTELLIGENTLY



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

www.aecom.com

AECOM

IMPROVING THE INDUSTRY STANDARD!



RESILIENT SEATED GATE VALVES

Sizes 2" - 72"

- All Ductile - C509 Thick Wall (Not Thin Reduced Wall)
- Extra Strong SS Stem, Standard
- ANSI/NSF 61 Certified
- Extra Thick Epoxy Coated 12+Mils
- EPDM Rubber Seat and Seals
- Flange Classes: 125 or 250
- Flange, MJ, Push-On
- NRS & OS&Y

METAL SEATED GATE VALVES

Sizes 2" - 48"

- IBBM AWWA C500 - Solid Wedge
- Flange Classes: 125 or 250
- NRS & OS&Y
- Rollers, Tracks & Scrapers, Standard

DUCKBILL CHECK VALVES

Sizes 2" - 96"

J&S HedFlex Duckbill Check Valve
Flange & Slip-on



J&S HedFlex Duckbill
Inline Check Valve
Flange & Slip-In



LUG & WAFER BUTTERFLY VALVES

Sizes 2" - 24"



Lug Butterfly Valve
Shown w/Gear & Handwheel



Wafer Butterfly Valve
Shown w/Gear & Handwheel

Ph: 281-324-3990
sales@JandSValve.com
JandSValve.com

J & S Valve



What if there
were safety values
and opportunities
that management
and employees
genuinely shared?

Safety Involvement = *Safety Culture*

By Gary Scott, CPMM

Back in the early nineteenth century there were no such things as corporations or big business in America. When the corporations ran their businesses, their few employees did what they were told, and hoped to go home to their family every day. When the manager made decisions, the ramifications of those decisions played out before his control, and maybe it all happened safely.

Safety Involvement = Safety Culture

With industrialism, though, came larger employee numbers and sometimes multiple locations. Big business and corporations were born and the directors of these businesses became further and further removed from the employee and safety.

You know what they say: "Out of sight, out of mind." The further removed directors became, the less they saw the effects of their decisions. The less they saw the effects of their decisions, the less concerned they were about those effects, and the more cavalier they became about the decisions they made. The spreadsheet was directly in front of them – people were not.

Indeed, as organizations grew, the more their safety morality dissolved too. Now when one made an immoral safety decision, it was easier to hide, and the burden easier to bear. The immorality then rested on many shoulders – it was not "I" who did it, it was "we" who did it, and it was easier to justify.

So these times bred leaders who did not see, and often did not care to

see, the ramifications of their decisions, and they had safety immorality. This can be a lethal combination. A good work ethic could be a dangerous

thing in those times. Good people died in the effort to carry out this safety immorality.

Enter OSHA: the

Occupational Safety and Health Administration. Specifically, enforcement of the protection of an employee's right to a safe workplace. Where there was not enough power in a few voices to get the attention of management, there was power in the government and these regulations.

Here is a novel question, however: What if there had been no immoral business leaders? I know you say, "Stop living in a dream world!" But indulge me for a moment and imagine. What if each industry at the turn of the 20th century was run with a safety first mentality? What if the business leaders had dealt with employees fairly and empathetically – the big businesses, the corporations, even the communities?

What if there was clear leadership for a safe work culture? What if the leaders were more concerned for the employees' safety and well-being than stuffing their own pockets with cash? What if there were safety values and opportunities that management and employees genuinely shared? What if employees knew that if they did their jobs well and safely they would be rewarded in their job and ensured to be able to go home safely to their families every day?

The answer is as obvious as an ambulance arriving at your front door. If the advent of a safety culture was not a response to abuse – and there was abuse – then there would have been no OSHA to protect your rights as employees.

Well, maybe that goes too far. Culture by its very definition is derived from behavioral patterns, development of social acceptance, and the product of communities. So we can assume that through cultural evolution leaders of organizations would have believed in the development, and eventual implemen-



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 ■ 800-837-9779



NEENAH, WI
920.751.4200

MACHESNEY PARK, IL
815.636.9590

VALPARAISO, IN
219.462.7743

Innovation & Trust

McMAHON
ENGINEERS ARCHITECTS

SINCE 1909

WWW.MCMGRP.COM

tation, of rules and regulation for safe work practices.

Most safety leaders today view injury avoidance or prevention as a responsibility that goes beyond the bottom line. A safety first culture is the only sure injury avoidance and prevention strategy that will win the day. This can only be assured, though, when the collective values and norms of an organization regarding safety are believed and acted on by everyone in the same way. Remember, it doesn't matter what only management thinks of an organization's safety culture, it matters what the entire organization thinks.

While each organization has its own unique structure and individual strengths and weaknesses, defining your goals and the means by which you

accomplish them is a hands-on experience.

Your organization makes a safe culture through its own efforts.

As with evolution, organizations must learn by their safety mistakes and poor behavior. Though injuries may make your organization question the effectiveness of

your safety culture. These incidents must be seen by leadership as a catalyst for positive change. We must strive to lead in a way that benefits both employers and employees.

So how vulnerable is your organization to injury or death? These may not be at your door now, but they may be there soon. How is your safety culture perceived by your employees? What kind of communication lines have been established between employees and management? Do people believe they have a platform in which they will be genuinely heard? Do they feel they are safe in their

workplace? Do they perceive your safety culture as affirming, appreciative and rewarding?

The question then becomes where do you want to spend your money? Do you want to spend it on the miserable and expensive task of

recovering from disaster? Or do you want to invest in a safety culture that will keep your employees productive and going home every day?

A fair, safety first culture is the only effective, long-term defense against the intrusion of debilitating injury to workers, and continued organization effectiveness. Create this culture now, for a pinch of prevention is worth a pound of cure. **CS**



Eliminate Valve Pits



Submersible Pump, Valve & Control Stations

No More Wet Valve Pits!

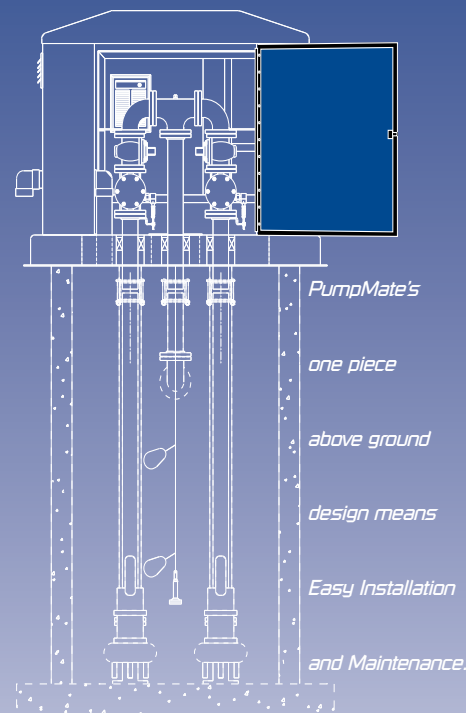
Optional By-Pass Piping

Controls and Valves Protected and Dry

- Controls In Enclosure
- Concrete and Fiberglass-Base
- Textured Enclosure
- Encapsulated Insulation
- Pumps from Major Manufacturers
- Transducer, Floats or Bubbler
- Available in 4 in. and 6 in. piping
- Sentry Controller
- Immediate Delivery



Box 550, 1602 Rezin Road,
Tomah, Wisconsin 54660
Phone: 608-372-5911
Fax: 608-372-5016
Visit us at: www.usemco.com



Please contact USEMCO
for your local representative:
608-372-5911

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

From *Water Wells* to *Pumping Stations*...

We've Come A Long Way to Keep the Water Flowing
so your Community has Fresh Drinking Water!



Celebrating 65 Years of Service

Visit us on the web at:
www.ruekert-mielke.com



Ruekert-Mielke
engineering solutions for a working world

Water Treatment is our Business



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

Hawkins, Inc.
3100 East Hennepin Avenue
Minneapolis, MN 55413
Tel 612 331 9100
Fax 612 617 8601
www.hawkinsinc.com

St. Paul, MN
Mike Clemens, Regional Manager
1425 Red Rock Road • St. Paul, MN 55119
Tel 651 730 1115 • Fax 651 730 1124
mike.clemens@hawkinsinc.com

Fond du Lac, WI
Mark Wolf, Branch Manager
1882 Morris Street • Fond du Lac, WI 54935
Tel 920 923 1850 • Fax 920 923 0606
mark.wolf@hawkinsinc.com

Superior, WI
Marc Franta, Branch Manager
2026 Winter Street • Superior, WI 54880
Tel 715 392 5121 • Fax 715 392 5122
marc.franta@hawkinsinc.com

Peotone, IL
Mike Carroll, Branch Manager
32040 South Route 45 • Peotone, IL 60468
Tel 708 258 3797 • Fax 708 258 3789
mike.carroll@hawkinsinc.com

LIQUID ASSETS



A simple donation from you ensures this documentary on Minnesota infrastructure reaches the living rooms of thousands of Minnesota households.

We need 30K minimum to make this project fly and with your help we will make and maybe even surpass that number, which would only mean higher levels of quality and reach!

100% of your donation is applied to the documentary.

Please join us and become a sponsor today!

Here are five things you can do to ensure this important documentary on Minnesota infrastructure hits the airwaves:

1. JOIN US: Sponsorship of BlueprintMN is the best way to help out.

2. SIGN UP FOR THE NEWSLETTER:

The second best way to help is to sign up for our email newsletter. Then we can let you know when it airs (the more viewers we have the better) and you can follow us as we fundraise and produce this important documentary. All you need to do is enter your email in the space provided located in the upper left hand column of every BlueprintMN page. And don't forget Facebook and Twitter.

3. TELL A FRIEND: Word of mouth (you) is our primary method of spread-

ing the news about this long-overdue documentary. Copy this link: www.BlueprintMN.com and email it to friends and family of infrastructure.

4. SUBMIT A BLOG ENTRY: Have a story about infrastructure, maybe a picture or film clip, an opinion or an intro to an informative article? Submit it to the website.

5. SEND US PICTURES, GRAPHICS, STORIES OR FACTS: We are on the hunt for anything that will help us clearly communicate the importance of Minnesota's critical water infrastructure. Send to: info@blueprintMN.com

Please join our campaign to reacquaint Minnesotans with their critical water infrastructure: Choose one of the actions above and DO NOT delay!

www.BlueprintMN.com

**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® Chloromatic™ 3000
Intelligent Gas Flow Control Valves

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
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
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
www.engamerica.com

www.severntrentservices.com

A New Year is Upon Us

By Keith Haas

With the November elections now over, the citizens of our state have spoken. For those of us in leadership roles it means that we will have to educate our newly elected officials at the local, state and federal level about our wastewater industry. A new governor in Wisconsin will bring about change to the leadership at the Department of Natural Resources. WPDES permit challenges will continue with thermal standards, ammonia, phosphorus, sanitary sewer overflows (SSOs) and blending issues to name a few. Interest rates are low, which should help wastewater plants and collection system managers fund improvements, however, money still seems tight. It seems that revenues are down throughout the state and that is affecting wastewater rates for all. The stimulus plan of a year ago did not seem to have a great impact on our industry as a whole. Many of us are still waiting for that spark to ignite the economy to stimulate sales of equipment and services.

It was just a few years ago that concerns about the retiring baby boomers was of great concern in our industry. Now employees are staying longer and employment openings and opportunities for upcoming wastewater engineers and operators are hard to find.

In spite of the slow-moving economy, attendance at our professional seminars remains strong. Committees within the Wisconsin Section of CSWEA have done a great job this past year providing quality programs for our members to expand their knowledge base. The watershed committee held their first webinar in November at Cabela's that was well attended both in person and at remote plant locations. This method of providing training over the Internet will be important as travel budgets suffer



in years to come. In our Wisconsin Section, we enjoy a strong fraternity of vendors, consultants, academic professionals and operators of our wastewater plants that work together to provide a clean environment for all citizens to enjoy. Most citizens take us for granted and we are OK with that. At the end of the day we are proud of the work we do and that is what really matters.

Looking forward to 2011, we have the Water Industry Expo in the Wisconsin Dells, February 8-9, the Government Affairs Seminar in Middleton February 24 and the Spring Biosolids symposium March 22 in Stevens Point. It is hard to believe that another year has gone by. Opportunities exist throughout Central States and WEF to become involved in committees that expand our knowledge. So as you are setting goals for the coming year, make one of your goals that of getting more involved in your section activities. It seems that by the time we gather all the knowledge we need, it is time to retire. In speaking recently with a seasoned operator and plant manager, he said he didn't know why he waited so long to get involved. In most cases with our profession it's about the journey and not the destination. The journey affords us the opportunity to mingle and meet other people in our profession that think the way we do. Don't miss out on the journey and the friends you make along the way. You only go around once so make the most of it.

And remember to drag someone along. After all, that is how most of us got active and involved in this great Central States organization. I hope to see many of you at the upcoming CSWEA events in 2011 as we negotiate the snow banks and cold temperatures. [CS](#)

> 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

Spring Biosolids Symposium

2011 SPRING BIOSOLIDS SYMPOSIUM

- Phosphorus 101
- Phosphorus regulation changes
- Nutrient management plans
- Requirements of haulers
- Future of biosolids
- DNR update
- Lunch with speaker from Wisconsin Valley Improvement Corporation
- Co-digestion for energy
- UW extension update
- Green Bay MSD planning experience

Tuesday, March 22, 2011 Stevens Point Holiday Inn

Mark your calendars to attend the 2011 Spring Biosolids Symposium. The Symposium will be held on Tuesday March 22, 2011. The Symposium will be held at the Stevens Point Holiday Inn.

Another excellent program is in store with speakers on national, state, and local biosolids issues. Regulars Fred Hegeman, DNR, and Dick Wolkowski, UWEX are back again, along with the popular panel discussion.

Phosphorus, changing phosphorus regulations, and a review of the requirements of septage haulers are key topics in the upcoming Symposium. Big picture topics such as the future of biosolids, waste to energy, and long-range biosolids planning are also covered.

Make your plans now to attend the nationally acclaimed Spring Biosolids Symposium, March 22, at the Stevens Point Holiday Inn.



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

Illinois
Bloomington
Normal
Peoria
Pontiac
Champaign
Effingham
Shorewood
Chicago



Farnsworth
GROUP

Water treatment, storage & distribution
Wastewater collection & treatment
Stormwater management
Integrated controls systems
Funding assistance

www.f-w.com

Membership Growth and Participation

By Ted Field

The Minnesota Section recently hosted its Conference on the Environment, a one-day event we organize each year in conjunction with the Air & Waste Management Association, an event that not only features a variety of relevant technical presentations, vendor displays, a student competition, and opportunities for social networking and fellowship amongst our peers, but also reminds us each year what an important and vital organization CSWEA can be. The conference is typically held in the first or second week of November, in the middle of what is potentially a transitional season with respect to winter's impending arrival and elections that can change political winds, but our organization remains steadfast in its mission, continuing to plow ahead regardless of the weather or politics. Close to 200 attended this year.

At this year's conference we tended to our mission at our section's business meeting. Among many other matters we addressed, we discussed membership and the need to involve more members in the work of our section. We welcomed new leadership for our Student and Young Professionals Committee: Rachel Radloff as the section committee chair, Dave Johnson as the section's student coordinator, Susan Danzl as the section's young professionals' coordinator, and Dustin Maas as CSWEA S&YP committee representative. The work of these individuals to engage and energize students and young professionals just beginning their careers in our industry will be important in our efforts to increase membership. I like to think of it as developing the talent of our industry from within, like the Minnesota Twins, as opposed to bringing it in from the outside, like the Yankees, but that's all I'll say about that; the wounds from this year's playoffs haven't healed yet.



But membership growth and participation should never be understated. In her report at the business meeting Tracy Ekola, Membership Committee Chair, spoke of her committee's intention to connect with all new members right away and ask them to apply their dedication and talents by serving on one of our many committees.

The conference began this year with a keynote address by Dick Hemmingsen, the Director of the University of Minnesota's Initiative for Renewable Energy and the Environment (IREE). Dick spoke to how current trends in energy, land, and water use are interconnected and collide with other economic trends such as population growth and food production. He followed up this message with a presentation of various technical topics that demonstrated IREE's ability to bridge the gap between pure research and commercial deployment. Dick's address was preceded by a video welcome from Senator Al Franken, who expressed his support and commended the work of our industry.

A particularly noteworthy event of the conference was the Student Environmental Challenge. This is an annual competition offering monetary prizes to student teams for creating sound solutions to true-to-life environmental problems. In this year's challenge, three student teams – all from University of Minnesota-Duluth – were asked to imagine themselves in the role of an executive of a power utility required to produce 25 percent of its energy from renewable sources. The broad technical knowledge and creativity of the students was demonstrated in the projects they developed; their solutions were based on combinations of wind, biomass, and hydro energy sources. The projects of two teams included wind farms on the Great Lakes to take advantage of the high energy potential far from shore while avoiding strong

The power of integration

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



CDM
www.cdm.com

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





“Students had to defend their projects from environmental, financial, regulatory, and public acceptance perspectives. It was inspiring to see how well bright and ambitious students can apply their academic learning to potential real-life applications.”

public opposition. Wind energy captured at night when demand is low would be used to pump water to on-land reservoirs from where it is withdrawn during the day for hydropower. Students had to defend their projects from environmental, financial, regulatory, and public acceptance perspectives. It was inspiring to see how well bright and ambitious students can apply their academic learning to potential real-life applications.

Kim Reynolds, Operations Committee Chair, presented at the business meeting an update on preparations for our 2011 Innovative Conference (Innovative Approaches to Wastewater Operational Problems), to be held at the Holiday Inn in St. Cloud on February 15, 2011. This will be the 28th year for this conference. Among the presentations to be made at the conference will be a keynote address by Arthur Harkins, University of Minnesota Associate Professor, who will speak to organizational leadership, policy, and development in our industry. Mark your calendars and plan on attending this conference. As the Conference on the Environment proved, many positive things happen when we gather to promote and celebrate the common causes of our industry.

One last item to raise – to repeat, actually – is the progress being made on *Liquid Assets*, the documentary co-produced by the Minnesota Section of CSWEA to address the importance and condition of our water and wastewater infrastructure, particularly in Minnesota. Patti Craddock gave a presentation about the documentary at the Conference on the Environment and will provide us with another progress report at the Innovative Conference in February. As preparations of the documentary proceed, financial support continues to grow, but the project still needs additional funding. Check out www.blueprintMN.com for more information on how you can offer your support. [CS](#)

SAVE THE DATE

Innovative Conference

(Innovative Approaches to Wastewater
Operational Problems)

February 15, 2011
Holiday Inn - St. Cloud, MN

COMBACT **cabinetcooler**
Heat Exchangers by Noren Products
for **sealed electrical enclosures**

remove waste heat while
keeping contaminants out

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

ISO 9001:2008

norenproducts.com/ck
650.322.9500

NOREN
Manufactured in the USA



BAXTER & WOODMAN Consulting Engineers

Baxter & 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



**Backflow Preventer Tracking Compliance for only
\$30 per month, \$360 annually!**

Is your Cross Connection Control Program suffering due to the lack of funding?
Is your staff already over-worked because of a manpower freeze or reduction?
Have you always known the requirements for a CCC program but never had \$?

CAN YOU AFFORD \$1 A DAY?



Aqua Advantage

www.AquaBackflow.com 866-777-2124 Aqua Backflow, Inc



Howard R. Green Company

Water/Wastewater Services

- Preserving our natural water resources with **state-of-the-art** solutions
- Bringing **experience** and **innovation** to public and private projects
- Striving for a **cleaner, safer** future

Court International Building | 2550 University Ave W, Suite 400N | St. Paul, MN 55114
651.644.4389 | 888.368.4389

For a complete listing of HR Green locations, please visit www.hrgreen.com

TRANSPORTATION • COMMUNITY RESOURCES • WATER/WASTEWATER • CONSTRUCTION
ENVIRONMENTAL RESOURCES • BUILDINGS • TECHNOLOGY • RENEWABLE ENERGY

Building Our Successful Organization

By Eddie McCall

With the November elections behind us, we now begin the preparation for the holidays. To all of you reading this article, I would like to wish you and your family a happy and safe holiday season.

In early November, we held the quarterly Section meeting at the Glenbard Wastewater Authority. We owe many thanks to the folks at Glenbard for allowing us to host the IL Section meeting at their facility. The meeting highlights were as follows (full meeting minutes will be posted on the CSWEA website at a later date):

Shelly Cumbow provided the treasurer's report. The good news is the Illinois Section continues to show financial strength and should be able to maintain this strength going forward.

Roger Gyger provided the public education report and as always, continues to show his commitment to the WEF initiatives. Roger provided a mindful update on the Public Educational Resources freely available from WEF including *World Water Monitoring Day*, *Liquid Assets* – a 90-minute documentary produced by Penn State Public Broadcasting that discusses America's distressed essential drinking water, wastewater, and stormwater infrastructure systems; *Be in the Know...Go with the Flow* – an easy-to-understand interactive program explaining the wastewater treatment process; *Water... the Amazing Journey* – a fun educational book for kids ages 6-14 on the journey of "Wasu" the Wandering Water Droplet; *Water Source Book* – a comprehensive guide for use by teachers and water quality professionals to teach youth the importance of preserving and enhancing water resources; and finally, *Water is Life: Infrastructure makes it happen* – a program developed by WEF to help educate ratepayers, local leaders and the media on the value of water infrastructure and the importance of investing in its long-term stability.



As we continue our outreach to young professionals in the college environment we are working to develop a program to encourage and support the college student chapter educate at the high school level in their respective communities, through use of the World Water Monitoring Day kits.

Roger is also looking for nominations to consider for Public Education Awards. If you wish to nominate an individual please contact Roger.

Mary Dressel provided the laboratory report. On October 19, the Laboratory Committee hosted their annual seminar. The seminar was

at the DuPage County Public Works facility and was very well attended. The key topics for discussion were related to Pretreatment Practices and Audits/Compliance in the morning session and Laboratory Analysis in the afternoon. We would like to take this opportunity to thank the folks at DuPage County Public Works for allowing the Section the use of their facilities.

As we continue to grow and build on the success of this year's seminar, we are already beginning to pull together ideas for the 2011 program. If you have ideas, please send

"We are piloting a new initiative at the University of Illinois to increase student involvement in the organization. This program is to provide seed money to the student chapter to help the chapter get off the ground."

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

*Superior wastewater engineering
services responsive to our clients needs*

www.cmtengr.com

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



“As always, we are looking for new members to join our organization and the various committees of Central States WEA. If you have not considered joining Central States, I would like to extend an invitation for you to do so.”

them to Mary Dressel at the Downers Grove Sanitary District or Joe Robinson at the North Shore Sanitary District.

Mark Eddington provided the collection system report. As the conference was held in the previous quarter, the committee is currently focused on selecting candidates to receive awards related to collection.

Steve Bollweg provided the operations report. On September 22, the Operations Committee held their annual seminar at the Wheaton Sanitary District. Steve reported that the seminar was very well attended. The key topics for discussion included Dissolved Oxygen (DO) Control and the use of High Speed Bowers in the Aeration Process. We would like to take this opportunity to thank Steve and his staff for hosting the event.

Scott Trotter provided an update on student activities. We are piloting a new initiative at the University of Illinois to increase student involvement in the organization. This program is to provide seed money to the student chapter to help the chapter get off the ground. The money can be spent by the student chapter on any events or projects of its own choosing but the chapter use of the funds must be reported back to the Illinois Section. Some suggestions include conference travel or food and drink for young professional (YP) events hosted by the Student Chapter. We are also encouraging the UIC student chapters to seek matching funds from their respective departments at the university. Based on the success of this program this seed money may be available for other colleges or universities that wish to begin a student chapter.

Garry Scott and Doc Burke provided an update on the Maintenance and Safety Seminar. The seminar was held at the Naperville Safety Center and was very well attended. The key topics for discussion were Pump Efficiency, Digester Gas Monitoring and Valve Operator Selection. We would like to take this opportunity to thank the folks at the Naperville Center for allowing the Section use of their facilities.

As always, we are looking for new members to join our organization and the various committees of Central States WEA. If you have not considered joining Central States, I would like to extend an invitation for you to do so. There are so many dynamic people in the organization waiting to meet you. Until next time, many thanks to all of you for taking the time to build our successful organization, The Central States Water Environment Association. **CS**



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

AMERICAN R/D
BIOREM ODOR CONTROL
CENTRISYS CENTRIFUGES
CHARTER MACHINE COMPANY
COLUMBIA TECH TANK
DAKOTA PUMP
DEZURIK WATER CONTROLS
ENTEX TECHNOLOGIES
FENTON ENVIRONMENTAL TECH
FLOWSERVE PUMP
FLUID DYNAMICS
FONTAINE
FOXBORO
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
M²T TECHNOLOGIES
OCV CONTROL VALVES
ODO WATCH
PALL CORPORATION
PERIFLO
POLY PROCESSING
PROCESS SOLUTIONS INC
PULSAFEEDER
PURAFIL
RED VALVE COMPANY
ROBERTS FILTER GROUP
RODNEY HUNT GATES
ROTORK ACTUATORS
RPS ENGINEERING
SANITAIRE/ITT
SHAND & JURS BIOGAS
TIDEFLEX TECHNOLOGIES
TRUMBULL INDUSTRIES
WALKER PROCESS EQUIPMENT
WEDECO UV & OZONE/ITT
WEMCO PUMP


5400 Newport Drive, Rolling Meadows, IL 60008
Phone: 847-392-0990 Fax: 847-392-1095
Web Site: www.LeyAssociates.com



SAVE *the* DATE

CSWEA's 84th Annual Meeting May 15-19, 2011 The Northland Inn - Brooklyn Park, MN

Plans are under way for our 84th Annual Meeting this May 15-19 at the Northland Inn, in Brooklyn Park, MN. The Local Arrangements Committee, under the leadership of Chair Sandy Mass, is making plans for an outstanding annual meeting, chock-full of fun, networking opportunities, and socializing to go along with an outstanding technical program. Our Technical Program Committee, under the leadership of Chair Jason Benson, is working to provide an excellent program of relevant technical sessions sure to capture your interest.

The Northland Inn is very close to several shopping areas, golf course, parks, and there are over 100 restaurants within a few miles for those wishing to go off site for dinner. We look forward to hosting the many events you have traditionally enjoyed and some new approaches intended to make your visit to the annual meeting even more enjoyable. Be sure to mark your calendar and visit www.CSWEA.org to get the latest 84th Annual Meeting news. 



Van Bergen & Markson, Inc.

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

For Both:
Toll Free: 800-422-0791

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

Email: info@vbminc.com

"Since 1929, your single source for pumping and process equipment, controls, mixers and technology."

Proudly Representing:

- Alfa Laval/Sharples
- Eimco Water Technologies
- Enviroquip
- Floway Pump
- Fluid Dynamics
- Hallsten Corporation
- Hibon
- ITT A-C, ITT Flygt
- Komline Sanderson
- Moyno, Inc.
- Polychem
- Rodney Hunt
- SP Kinney
- Strongwell
- Turblex
- Vaughan Pump Co.
- Warminster Fiberglass



WWW.SYMBIONTONLINE.COM



Sustainable Water Solutions

SYMBIONT

Science Engineering Construction

JANUARY**IL Section CSWEA Annual Business Meeting**

January 2011

Location TBA

FEBRUARY**6th Annual Midwest Water Industry Expo**

February 8-9, 2011

Kalahari Resort and Convention Center

Wisconsin Dells, WI

MN Section CSWEA/MWOA Annual Innovative Conference

February 15, 2011

St. Cloud, MN

WI Section CSWEA Government Affairs Seminar

February 24, 2011

Middleton, WI

MARCH**WI Section Spring Bio-Solids Symposium**

March 22, 2011

Stevens Point, WI

APRIL**CSWEA Leadership Academy**

April 4, 2011

Monona Terrace

Madison, WI

16th Annual Education Seminar

April 5, 2011

Monona Terrace

Madison, WI

MAY**84th CSWEA Annual Meeting**

May 15-19, 2011

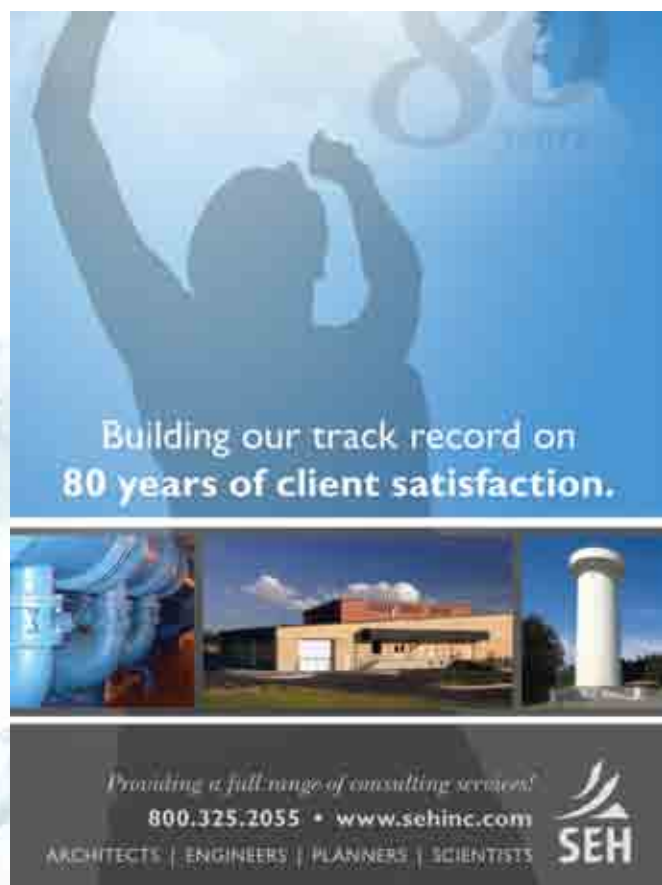
The Northland Inn

Brooklyn Park, MN

JUNE**MN CSWEA/MWOA Lab Training Seminar**

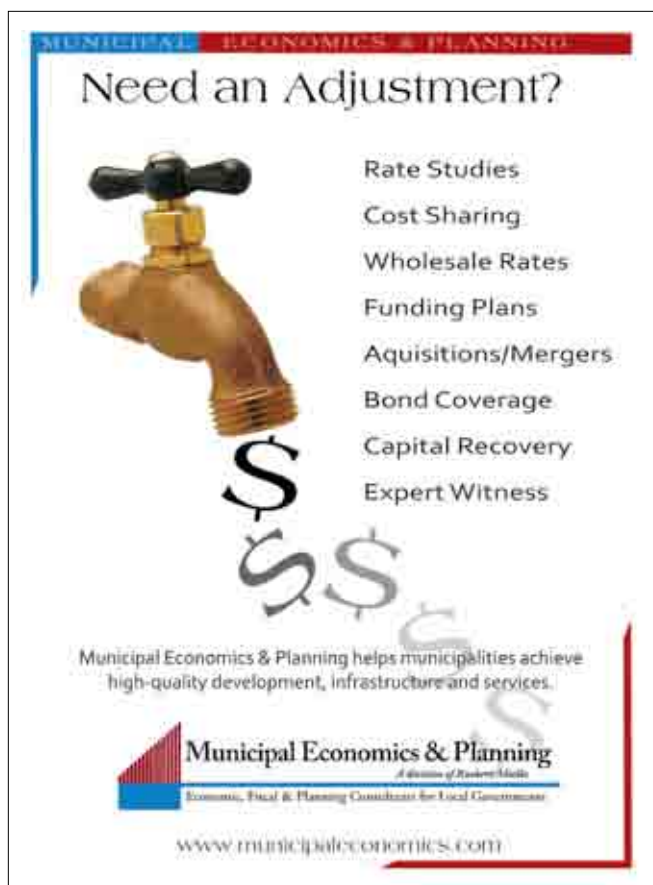
June 2011

Location TBA



Building our track record on
80 years of client satisfaction.

Providing a full range of consulting services
800.325.2055 • www.sehinc.com
ARCHITECTS | ENGINEERS | PLANNERS | SCIENTISTS **SEH**



MUNICIPAL ECONOMICS & PLANNING

Need an Adjustment?

- Rate Studies
- Cost Sharing
- Wholesale Rates
- Funding Plans
- Aquisitions/Mergers
- Bond Coverage
- Capital Recovery
- Expert Witness

Municipal Economics & Planning helps municipalities achieve high-quality development, infrastructure and services.

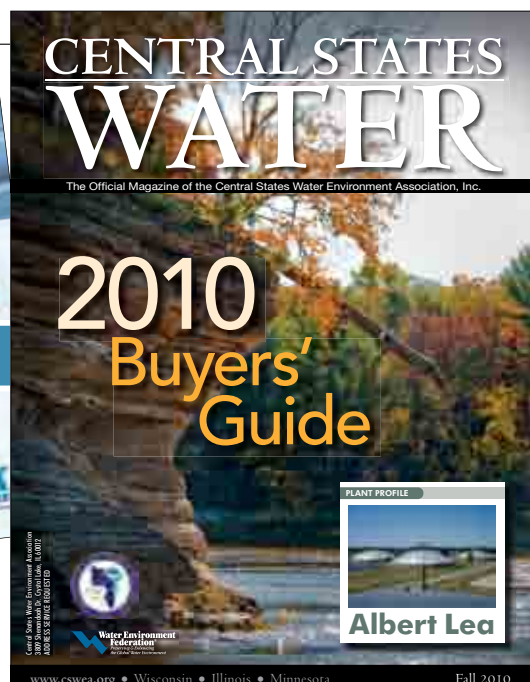
Municipal Economics & Planning
A Division of Ramsey-Martin
Economic, Fiscal & Planning Consultants for Local Governments
www.municipaleconomics.com

CENTRAL STATES WATER

INTERACTIVE EDITION **FREE** TO PRINT ADVERTISERS



Central States Water
available online



With print and electronic communication operating hand-in-hand, you can take advantage of the fact that *Central States Water* is available online in a highly interactive format.

A user-friendly, interactive Media Rich PDF format that includes:

1. Active hyper-links to all websites and e-mails contained in the publication
2. Active links to the specific stories from the front cover and contents page
3. Active links to advertiser websites from their ads

Visit us online, www.cswea.org

COMPANY	WEBSITE	TELEPHONE	PAGE
Advanced Engineering and Environmental Services (AE2S)	www.ae2s.com	763-463-5036	6
Advanced Valve Technologies	www.avtfittings.com	877-489-4909	25
AECOM	www.aecom.com		43
Alden Pool & Municipal Supply Co.	www.aldenpool.com	800-253-7235	18
American Flow Control	www.acipco.com		32
Aqua Backflow	www.aquabackflow.com	866-777-2124	54
Baxter & Woodman, Inc.	www.baxterwoodman.com	815-459-1260	54
Berryman Equipment Company	www.berrymanequipment.com	800-605-0099	27
Black & Veatch	www.bv.com	IL 312-346-3775 Min 952-545-6695	51
Boerger, LLC	www.boerger-pumps.com	877-726-3743	12
Bolton & Menk, Inc.	www.bolton-menk.com	507-625-4171	42
Bonestroo	www.bonestroo.com	651-636-6400	18
CDM	www.cdm.com		52
Clark Dietz, Inc.	www.clark-dietz.com	262-657-1550	39
Crane Engineering	www.craneengineering.net	920-733-4425	38
Crawford, Murphy & Tilly, Inc.	www.cmtengr.com	217-787-8050	55
Degremont Technologies	www.degremont-technologies.com	804-756-7600	9
Donohue & Associates, Inc.	www.donohue-associates.com	920-208-0296	OBC
DYK Incorporated	www.dyk.com	800-227-8181	IFC
ECO2	www.eco2tech.com	317-706-6484	24
Energenecs	www.energenecs.com	800-343-6337	37
Farnsworth Group	www.f-w.com	309-663-8435	51
Force Flow	www.forceflow.com	800-893-6723	31
Foth	www.foth.com	800-236-8690	3
Greeley and Hansen	www.greeley-hansen.com	800-837-9779	46
Hawkins, Inc. (Water Treatment Group)	www.hawkinsinc.com	612-331-9100	48
Howard R Green Company	www.hrgreen.com	888-368-4389	54
ITT Water & Wastewater USA Inc. - Flygt Products	www.flygtus.com	IL 800-661-9944 WI 800-232-1417	5
ITT Water & Wastewater USA Inc. - Sanitaire Products	www.sanitaire.com	414-365-2200	IBC
J & S Valve and Manufacturing	www.JandSValve.com	866-498-4283	44
KLM Engineering, Inc.	www.klmengineering.com	888-959-5111	26
I. Kruger, Inc.	www.krugersusa.com	919-677-8310	40
L&J Technologies Company	www.shandandjurs.com	708-236-6000	8
LAI, Ltd.	www.LeyAssociates.com	847-392-0990	56
Master Meter	www.mastermeter.com	817-842-8000	13
McMahon Associates, Inc.	www.mcmgrp.com	920-751-4200	46
Metropolitan Industries, Inc.	www.metropolitanind.com	800-323-1665	48
M.E. Simpson Co. Inc.	www.mesimpson.com	800-255-1521	34
Mulcahy/Shaw Water, Inc.	www.mulcahyshaw.com	262-241-1199	41
Noren Products	www.norenproducts.com	866-936-6736	53
Northern Lake Service Inc.	www.nlslab.com	800-278-1254	17
Oldcastle Precast	www.oldcastleprecast.com/wastewater	888-965-3227	7
Pollardwater.com	www.pollardwater.com	800-437-1146	14
Process Equipment Repair Services, Inc.		262-629-1059	20
PVS Technologies Inc	www.pvstechnologies.com	313-903-3397	15
Rain for Rent	www.rainforrent.com	800-742-7246	33
Ruekert-Mielke	www.ruekert-mielke.com	262-542-5733	48, 58
Severn Trent Services	www.severntrentservices.com	866-646-9201	49
Short Elliott Hendrickson (SEH)	www.sehinc.com	800-325-2055	58
Smith & Loveless Inc.	www.smithandloveless.com	800-898-9122	22
Strand Associates, Inc.	www.strand.com	608-251-4843	35
Symbiont	www.symbiontonline.com	414-291-8840	57
TKDA	www.tkda.com	651-292-4400	50
Trotter & Associates Inc.	www.taiengr.com	630-587-0470	19
Trojan Technologies	www.trojanuv.com	704-542-2444	10
Unison Solutions, Inc.	www.unisonsolutions.com	563-585-0967	27
University of Wisconsin-Madison	www.epd.engr.wisc.edu	800-783-6526	3
USEMCO	www.usemco.com	608-372-5911	47
Van Bergen & Markson, Inc.		800-422-0791	57
WSB & Associates, Inc.	www.wsbeng.com	763-541-4800	29

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 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

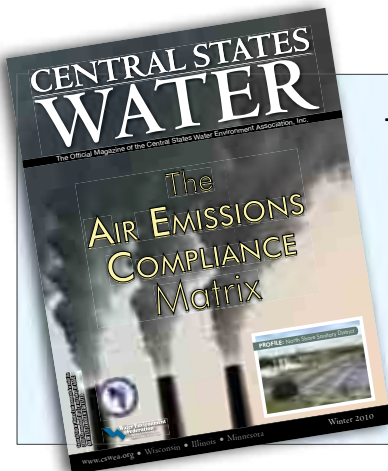
CSWEA Associate Membership Benefits include: Central States Water Magazine and Member price for CSWEA and Section Events	Dues cover a one year period, and must be renewed annually.	DUES
* I am a Young Professional (35 yrs or younger, less than 10 work experience) <input type="checkbox"/> Please send 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 www.CSWEA.org 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 www.CSWEA.org



To reach water industry professionals in Minnesota, Illinois and Wisconsin through **Central States Water** magazine and its targeted readership, please contact me at

1-866-985-9782
awhalen@kelman.ca



Al Whalen
Sales Manager

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					
Employment Information					
Employer Code		Other (please specify)		Job Title Code	
Environmental Focus		Other (please specify)			
Signature (required for all new memberships)					Date
Sponsorship Information					
WEF Sponsor Name & Sponsor ID Number:				ACQ.Code for WEF use Only GENI	
Membership Information					
Membership Categories <i>Select one only</i>		Member Benefit Subscription <i>Select one only</i>			DUES
<input type="checkbox"/> ACTIVE					\$ 102.00
Individuals involved in or interested in water quality. Young Professional		<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 st three years of membership			\$ 51.00
<input type="checkbox"/> OPERATIONS					\$ 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"/> STUDENT					\$ 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"/> CORPORATE					\$ 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			\$ \$ \$
Additional Subscriptions					
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	\$
Payment					
<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	\$
Mailing Information					
Send Form & Payment to: 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 **ABI** 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



• MIZAIR 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

Sanitaire

WASTEWATER
TREATMENT

BIOLOGICAL
TREATMENT

TRAINING
SERVICES

COMPLETE
SOLUTIONS

GUARANTEED
FIELD PERFORMANCE



ITT

Engineered for life

Covering the Spectrum



Donohue & Associates' team of experienced engineers and operations specialists cover the full wastewater spectrum: from the laterals to the treatment facility outfall, from the smallest systems to the largest, from planning to system optimization and troubleshooting, from design to start-up, from municipal to industrial, from dry weather to wet weather, and everything in between.



www.donohue-associates.com
1-888-736-6648

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

Creative Award-Winning Solutions