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**Think Big. Go Beyond.**
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)
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.

“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.”

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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 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.”
“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

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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.

**Attendee Registration**
Registration is open online 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:**
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L-R: WEF Past President Jim Clark, Paul Folwarski, Alyssa Sohn, Anthony Straub and Ian Bradley
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

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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.
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.

Loran 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.

Professor Noguera accepts his Fair Medal.
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Submit for a WEF Award

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. Schroepfer Medal: The Schroepfer 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.vWEF.org, or by contacting Eric Lecuyer, 815-954-2714, cswea@ymail.com

By Beth Vogt
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.

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:

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Please provide your name (it’s OK to nominate yourself!):

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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 outstanding 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.”
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 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
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
sewage in the basins is returned to the plant for treatment. Flows in excess of the capacity of the retention basins (20.4 MG) 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.

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.

“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-
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 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.
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.
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.

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 requirements. 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 |

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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.

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

Since CAP standards such as NSPS III and NSPS JJJ 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.}

Fig 2 Central States Summary

<table>
<thead>
<tr>
<th>County Name</th>
<th>NAAQS Pollutant</th>
<th>Area Name</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cook</td>
<td>8-Hr Ozone</td>
<td>Chicago-Gary-Lake County, IL-IN (IL portion)</td>
<td>5376741</td>
</tr>
</tbody>
</table>
| Cook         | PM-10           |-license area | 109264
| Cook         | PM-10 1997      | Southeast Chicago, IL                                 | 2226       |
| Du Page      | 8-Hr Ozone      | Chicago-Gary-Lake County, IL-IN (IL portion)           | 904161     |
| Du Page      | PM-2.5 1997     | Chicago-Gary-Lake County, IL-IN                        | 904161     |
| Grundy       | 8-Hr Ozone      | Chicago-Gary-Lake County, IL-IN (IL portion)           | 8399       |
| Grundy       | PM-2.5 1997     | Chicago-Gary-Lake County, IL-IN                        | 6309       |
| Kane         | 8-Hr Ozone      | St Louis, MO-IL                                        | 21668      |
| Kane         | PM-2.5 1997     | Chicago-Gary-Lake County, IL-IN (IL portion)           | 404119     |
| Kendall      | 8-Hr Ozone      | Chicago-Gary-Lake County, IL-IN (IL portion)           | 28147      |
| La Salle     | PM-10           | Oglesby, IL                                            | 3780       |
| Lake         | 8-Hr Ozone      | Chicago-Gary-Lake County, IL-IN (IL portion)           | 444356     |
| Lake         | PM-2.5 1997     | Chicago-Gary-Lake County, IL-IN                        | 444356     |
| 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     |
| McHenry      | 8-Hr Ozone      | Chicago-Gary-Lake County, IL-IN (IL portion)           | 260077     |
| McHenry      | PM-2.5 1997     | Chicago-Gary-Lake County, IL-IN (IL portion)           | 260077     |
| Monroe       | 8-Hr Ozone      | St Louis, MO-IL                                        | 27519      |
| Monroe       | PM-2.5 1997     | St Louis, MO-IL                                        | 27519      |
| 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     |
| Tazewell     | SO2             | Groveland Twp (Tazewell Co), IL                        | 21617      |
| 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     |

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.
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.

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.
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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 manufacturers 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.
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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.

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By: Rich Hussey, CSWEA Young Professional Representative

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1st Annual

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Keep up with the Young Professionals

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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.

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.

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.
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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.
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-
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.

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

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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!

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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
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.
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

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“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.
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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.”
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 UIUC 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.
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.
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

Visit www.CSWEA.org for updates on all CSWEA events.
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</tr>
<tr>
<td>PVS Technologies Inc</td>
<td><a href="http://www.pvsengineering.com">www.pvsengineering.com</a></td>
<td>313-903-3397</td>
<td>15</td>
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<tr>
<td>Ramin for Rent</td>
<td><a href="http://www.raminforrent.com">www.raminforrent.com</a></td>
<td>800-742-7246</td>
<td>33</td>
</tr>
<tr>
<td>Ruebert-Mielke</td>
<td><a href="http://www.ruebert-mielke.com">www.ruebert-mielke.com</a></td>
<td>262-542-5733</td>
<td>48, 58</td>
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<tr>
<td>Severn Trent Services</td>
<td><a href="http://www.severntrentservices.com">www.severntrentservices.com</a></td>
<td>866-646-9201</td>
<td>49</td>
</tr>
<tr>
<td>Short Elliott Handrlickson (SEH)</td>
<td><a href="http://www.sehinc.com">www.sehinc.com</a></td>
<td>800-325-2055</td>
<td>58</td>
</tr>
<tr>
<td>Smith &amp; Lovelace Inc.</td>
<td><a href="http://www.smithandlovelace.com">www.smithandlovelace.com</a></td>
<td>800-898-9122</td>
<td>22</td>
</tr>
<tr>
<td>Symbiont</td>
<td><a href="http://www.symbiontonline.com">www.symbiontonline.com</a></td>
<td>414-291-8840</td>
<td>57</td>
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<tr>
<td>TKDA</td>
<td><a href="http://www.tkdad.com">www.tkdad.com</a></td>
<td>651-292-4400</td>
<td>50</td>
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<tr>
<td>Trotter &amp; Associates Inc.</td>
<td><a href="http://www.taengr.com">www.taengr.com</a></td>
<td>630-587-0470</td>
<td>19</td>
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<tr>
<td>Trojan Technologies</td>
<td><a href="http://www.trojanv.com">www.trojanv.com</a></td>
<td>704-542-2444</td>
<td>10</td>
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<tr>
<td>Unison Solutions, Inc.</td>
<td><a href="http://www.unisoncom">www.unisoncom</a></td>
<td>563-585-0967</td>
<td>27</td>
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<tr>
<td>University of Wisconsin-Madison</td>
<td><a href="http://www.epd.engr.wisc.edu">www.epd.engr.wisc.edu</a></td>
<td>800-783-6526</td>
<td>3</td>
</tr>
<tr>
<td>USEMCO</td>
<td><a href="http://www.usemcog.com">www.usemcog.com</a></td>
<td>608-372-5911</td>
<td>47</td>
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<tr>
<td>Van Bergen &amp; Markson, Inc.</td>
<td><a href="http://www.vanbergenmarkson.com">www.vanbergenmarkson.com</a></td>
<td>800-422-0791</td>
<td>57</td>
</tr>
</tbody>
</table>

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 endeavoured 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

<table>
<thead>
<tr>
<th>Last Name</th>
<th>MI</th>
<th>First Name</th>
<th>(Jr., Sr., etc.)</th>
</tr>
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<tbody>
<tr>
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</table>

**Business Name (if applicable)**

- [ ] Business Address
- [ ] Home Address
- Street or PO Box

<table>
<thead>
<tr>
<th>City</th>
<th>State</th>
<th>Zip</th>
<th>Country</th>
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</thead>
<tbody>
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</tbody>
</table>

**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.**

<table>
<thead>
<tr>
<th><strong>RENEWAL NOTICE</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>* I am a Young Professional (35 yrs or younger, less than 10 work experience)</td>
</tr>
</tbody>
</table>

**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

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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  
awhelen@kelman.ca

---

**Al Whalen**  
**Sales Manager**
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

☐ Please send me information on special offers, discounts, training, and educational events, and new product information to enhance my career. ☐ by email / ☐ by fax

Member Association (MA) Choice: Central States Water Environment Association

Employment Information

Employer Code Other (please specify) Job Title Code Other (please specify)

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 Select one only

Member Benefit Subscription Select one only

DUES

☐ ACTIVE

Individuals involved in or interested in water quality. Young Professional

☐ OPERATIONS

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.

☐ STUDENT

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.

☐ CORPORATE

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.

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!

☐ WE&T (including Operations Forum)

☐ Water Environment Research (Print)

☐ Water Environment Research (Online) (Call for print pricing details)

☐ Water Environment Laboratory Solutions

☐ Water Environment Regulation Watch

☐ Industrial Wastewater Technical Bulletin

☐ Biosolids Technical Bulletin

☐ Watershed & Wet Weather Technical Bulletin

☐ Utility Executive

Payment

☐ Check/Money Order enclosed ☐ Charge

(Made payable to WEF in US funds)

VISA Exp. Date

American Express Signature

MasterCard Daytime Phone

TOTAL DUE $
SANITAIRE
Total Process Treatment Solutions

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

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

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

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

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

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Fax: 414.365.2210
Email info@sanitaire.itt.com
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.