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



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- ✓ 81st Annual Meeting Review
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# Annual Meeting Success

Tim Tack



What an honor it is to serve as President of Central States Water Environment Association (CSWEA), one of the founding member associations of WEF. It is humble to think about the distinguished professionals and wastewater pioneers who have served this association before me and I hope I will continue this great legacy.

As I write, I am reminded of the many great activities during the CSWEA 81st Annual Conference in Minnesota. The Minnesota Local Arrangement committee put together excellent programs that keep everyone extremely busy at the conference for a full three and a half days. Sincere thanks goes out to the Local Arrangements Committee chair **Doug Henrichsen** and all the members: **Kevin Regan, Patti Craddock, John Glatzmaier, Dave Raby, Rich Ashling, Phil Parsons, Kim Reynolds, Ed DeLaForest, Connie Gundlach, Eric Evans, George Sprouse, Angella Craft-Reardon, Kris Evans, and Dennis Lindeke**. Without all of their hard work, this event would

not have been a success.

The conference started with the golf outing at the Braemer Golf Course and Mother Nature treated us to a little wind, rain, and maybe some snow (at least it seemed cold enough to snow). Everyone who golfed was a trooper and stayed the course to the bitter end. There was also a morning bike ride that **Chuck Weir**, WEF Treasure and our WEF representative for the conference enjoyed. I would like to thank Chuck for attending our conference and updating us on WEF's plans. His good company and WEF insight was enjoyed by many.

The Technical Program Committee chaired by **Jason Benson** did a fantastic job selecting 37 papers for the technical sessions. Special thanks go out to him and his committee consisting of **Scott Fronek, Pavel Hajda, Steve Reusser, Beth Vogt, and Dr. William Boyle**. The highlights of the Technical Program were the papers given by the three Stockholm Junior Water Prize students and the two Student Design competition teams. Even though I served many years on the Students & Young Professional Committee, it never

ceases to amaze me how smart and talented these students are. Big thanks to **Dan Busch** and **Rich Hussey** for their work on the S&YP competitions and **Pamela Ann Kiel Massaro** for her work with Stockholm Junior Water Prize contestants. Although they only exhibited at the conference for a short time, the 67 different exhibitors offered very positive feedback on the exhibit hall attendance. The "no conflicting technical session" format, vendor talks, and giveaways seemed to keep the hall busy at all times. As always, I would like to thank the exhibitors for supporting the association.

The Annual Awards Banquet was a success. The food was good, the drinks were flowing and many of our peers were recognized for their accomplishments. I thank **Rusty Schroedel** for his work on the association awards, because it is a monumental task. Special recognition needs to go to **Steve Reusser** from the Madison Metropolitan Sewerage District for receiving the Hatfield Award and **Dan Lynch** for receiving the Bedell Award. Dan's award was well deserved

“The CSWEA-CSX Exchange is  
July 17 & 18 at the Kalahari in the Wisconsin Dells.  
I invite all State Section and CSWEA committee members to  
attend and brainstorm on how to attract more  
facility operators to our organization.”



“I plan on growing our successful Students & Young Professional Committees, partnering with other water and wastewater organizations, and supporting programs and activities for the operators.”

and a long time coming for his hard work and devotion to the association. Another notable award was the “Bill Boyle Outstanding Educator of the Year” and it went to **Dr. Bill Boyle** (Thank you Dr. Boyle for mentoring many of our association’s members). The end of the evening was capped off by a comedic performance poking good-natured fun at many of the Executive Committee members.

My final thanks go to Anne Lecuyer and her assistant Eric for their hard work behind the scenes prior to and during the conference. Without them the association would not be what it is today.

During the business meeting, the association voted and passed the proposed modifications to the Constitution and By-Laws. The purposes of these amendments are to: 1. Add a Young Professional Representative to the CSWEA Executive Committee and 2. Create an Associate Member, CSWEA only membership category. Full details on the modifications can be viewed on the website [www.CSWEA.org](http://www.CSWEA.org). During the meeting, the membership voted Jim Miller Second Vice President, Carol Strackbein Treasurer, Scott Trotter CSWEA/WEF Delegate, and Rachel Lee YP Representative. I welcome Jim and Rachel to the executive committee and

look forward to continue working with Scott and Carol.

The CSWEA-CSX Exchange is July 17 & 18 at the Kalahari in the Wisconsin Dells. I invite all State Section and CSWEA committee members to attend and brainstorm on how to attract more facility operators to our organization. This event will coincide with a new Young Professional Exchange YPX which is open

to all association members 35 years and younger. While the program for this event is still being finalized it promises to be fun filled and educational.

In closing, I plan on growing our successful Students & Young Professional Committees, partnering with other water and wastewater organizations, and supporting programs and activities for the operators. **CS**

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# WEFTEC '08 in Chicago

Eric R. Lecuyer



WEFTEC '08 will be hosted in Chicago this October 18-22, 2008 and our joint Local Arrangements Committee with IWEA has been working hard on the few details that are left to the host MA(s) to organize. Co-Chaired by Scott Trotter (CSWEA) and Brian Perkovich (IWEA), this committee has been very active in the lead-up to WEFTEC '08, including manning a booth at WEFTEC '07 in San Diego, setting up the many tours that are part of WEFTEC, soliciting and organizing the many local issues portion of the technical program. In addition, the golf outing sub-committee, headed by Tim Tack, has worked to provide a first-class golf outing at the very popular George Dunne National Golf Course in Oak Forest. The WEFTEach Subcommittee, headed by Greg Cargill and Kendra Sveum has done a tremendous amount of work in attracting high levels of sponsorship and soliciting teacher nominations. The LAC is committed to assuring that WEFTEach is an outstanding event that helps inspire area science teachers on the issues of the water environment and in turn inspire students at all levels to enter our field. We are looking forward to an outstanding event in our own backyards.

Don't forget to put the CSWEA/IWEA WEFTEC '08 welcome reception on your calendar. Once again, the reception will be hosted at the WEFTEC headquarters hotel, this year the Sheraton Chicago Hotel and Towers, on Sunday, from 6:00 p.m. to 8:00 p.m. This event has really grown over the years and has become a popular kick-off to the week's activities and we look forward to once again co-sponsoring the event with our friends from IWEA. We are always grateful to our many sponsors who defray the cost of the plentiful food and refreshments, including adult beverages.

CSWEA will again be well represented in Operations Challenge with our two teams, the Pumpers and Shovelers tuning their skills and preparing to once again compete to the best of their ability and make us all proud.

CSWEA will be sponsoring two teams at WEFTEC '08 in the Student Design Competition, one from the University of Illinois presenting their project "Retrofit of a Wastewater Plant for Biological Nutrient Removal" and a team from the University of Wisconsin, Madison that will present their project on "Sustainability Implementation at the Nine Springs Wastewater Treatment Plant". If you did not have the opportunity to see these presentations at our 81st

Annual Meeting, be sure to visit the Student Design Competition at WEFTEC '08 – you will be amazed at the level of expertise and professionalism that these students bring to the competition.

WEFTEC '08 will be a great event, with tons of events, technical sessions, social events and networking, as well as the world class exhibit floor, which will be bigger than ever in Chicago. Be sure to register early and bring along new members, young professionals or your entire plant staff for this close-to-home international event.

At CSWEA's CSX '07 this past year, a strategic initiative was developed to better partner with our regulators, including state and federal agencies. CSWEA will be hosting two major workshops with USEPA in 2008, the first on Advance Asset Management, September 9&10, 2008 at the Monona Terrace in Madison, Wisconsin. This workshop is targeted to water and wastewater facility managers and is intended to help managers develop comprehensive asset management programs as well as providing the information needed to convey this information to our elected officials. This is shaping up to be a great event and should not be missed. The second workshop is on Energy Management and this workshop will be conducted on December 4, 2008 again at the Monona Terrace in Madison. The USPEA will be presenting their comprehensive energy management workbook, a comprehensive tool for water and wastewater managers to better manage energy costs through a step by step, easy to follow process. The Energy Management workshop will be limited to the first 100 registrants, so be sure to sign up as soon as the registration materials are available later this summer. Additional information and registration details for these and all CSWEA events as always, are found at [www.CSWEA.org](http://www.CSWEA.org). Be sure to visit the website frequently.

Finally, a tip of my hat to the 81st Annual Meeting Local Arrangements Committee: you guys were awesome. What a great event, with outstanding keynote and farewell breakfast speakers, outstanding and well-received technical sessions, a great equipment exhibition and wonderful social events. As an association, we are constantly striving for continuous improvement, learning from each event in order to make the next better and the bar has been raised once again. Congratulations to all involved and for those who missed the 81st Annual Meeting, don't make that mistake again!

See you at WEFTEC '08 in Chicago! 





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# CSWEA's 81st Annual Meeting *Review*

The 81st Annual Meeting, held May 19-22, 2008 at the Sheraton Hotel in Minneapolis, Minnesota was an outstanding event. From the opening general session with keynote speaker Dr. James Barnard through the farewell breakfast with J. Drake Hamilton, each of the technical sessions was outstanding in content and well attended. All in attendance enjoyed a week of outstanding and fun social events, networking and education.

## *Congratulations* to the CSWEA 81st Annual Meeting Award Winners

**Quarter Century  
Operator's Club Inductees:**  
Les Lange, Randall Thater,  
and Tim Morrall

**WEF Service Awards**  
Dennis Lindeke, President, '07-'08



**Laboratory Analyst Excellence Award**  
Nora Erlandson, City of Racine, WI



**George W. Burke,  
Jr. Facility Safety Award**  
City of Crystal Lake, IL WWT Division  
Jim Huchel, Superintendent



**Arthur Sidney Bedell Award**  
Dan Lynch, Janesville, WI



**2007 WEF Student Design  
Competition Runner-up Award,**  
University of Illinois Student Chapter  
Amanda Olsen, Andy Lenkaitis,  
Dan Koch, Greg Byard, Greg Goodwin,  
Joe Good, Stephan Anderson, Jacob  
Mitchell, Milia Appleford, Brandon  
Kocher, Luke Zwilling and adviser Dr.  
Prasanta Kalita. Accepting is the father of  
the U of I Student Chapter, **Scott Trotter**

**CSWEA Service Awards**  
Scott Trotter, Treasurer, '07-'08



**Joe Slevnik, IL Trustee, '06-'08**  
**Dave Raby, MN Trustee, '06-'08**



**Operation Awards**  
Dean Nelson, City of Owatonna, MN



**Jim Thalke, Village of Sussex, WI**



**Mitch Patterson and Mark Termine,**  
Village of Addison, IL



**Collection System Award**  
Steve Woodman, City of Beloit, WI





### Industrial Environmental Achievement Award

**Armour-Eckrich Meats, LLC,**  
St. James MN Accepting: William Duffell



### CSWEA Facility Safety Award

**Paul Lange,** Watertown WI WWTF  
**David Nykiel,** City of Naperville  
Springbrook Facility

### Gus H. Radebaugh Award

**Jay Kemp, Dennis Egge and Daniel Zitomer** For their paper "Effect of Iron Addition on Thermophilic-Mesophilic Anaerobic Digestion"



### Young Professional of the Year

**Kris Evans,** Ames, IA



### Bill Boyle Educator of the Year Award

**Bill Boyle,** University of WI, Madison



### Academic Excellence Award

**Alison Ling,** University of MN, Twin Cities



**Michael Petersen,** MN State University,  
Mankato



**Carla Petrich,** University of MN, Duluth

### Student Design Competition, CSWEA Winners (Tie)

University of Illinois: **Bin Gou, Hossain Azam, James Meissen, Xiaofeng Ye, Xinyu Zhang** and advisor  
**Dr. Eberhard Morgenroth**



University of Wisconsin, Madison, **Jonas Balistreri, Tracy Cadkin, Chanel Kass, Joseph Klett** and adviser **Jae Park**



### Stockholm Junior Water Prize Winners:

**Sara Gleason and Logan Pallin,** Cloquet Senior High, Cloquet, MN for their project "An Analysis of Predator-Prey Macroinvertebrate Interactions on Scanlon Creek with the use of a Rain Garden to Diminish the Impact of Urban Road Run-Off – Phase II"

**Laura Mark Divine Savior Holy Angles School, Milwaukee, WI**

"A Study of the Potential of Quagga Mussel (*Dreissena Bugensis*) Filtration in the Removal of Aquatic Pollutants"



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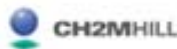
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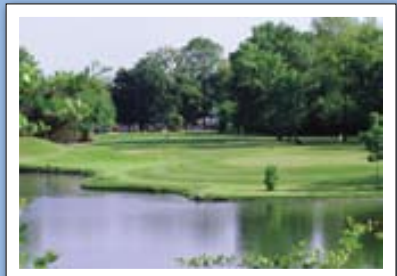
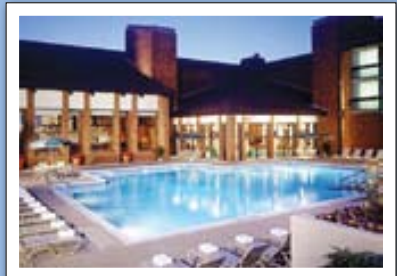


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# Constitution and Bylaws *Amendments*

## Approved by CSWEA Members at the 81st Annual Meeting

The CSWEA Constitution and Bylaws were approved at the 81st Annual Meeting providing new opportunities for members. The first added a Young Professional Representative to the CSWEA Executive Committee and the second created an Associate Member, CSWEA Only membership category. In approving the Young Professional Representative to the Executive Committee, our newer and young professionals will now have a voice at the executive committee and that committee will be better guided in serving these members. Following approval of this new position on the

executive committee, Rachel Lee was elected to serve as the association's first YP representative, which will be a two-year term.

In creating the Associate Membership category, folks interested in joining CSWEA will have a lower-cost option of becoming a member of CSWEA without being a member of WEF. While we strongly encourage all members to also be WEF members, there are some potential members who would be more interested in just being a CSWEA member and we are now in a position to recruit these potential members. CSWEA-

only membership can be offered as an option to non-members attending our seminars and events, with the "non-member" fee being credited toward that membership. The executive committee was very cautious in adopting this membership category and is confident that no harm will occur to CSWEA or WEF with this new initiative. Anyone interested becoming a CSWEA associate member can join on line or use the paper membership application found in this issue of Central States Water. Feel free to contact CSWEA Executive Director Eric Lecuyer for more information.



The full text of the amended Constitution and Bylaws are posted at [www.CSWEA.org](http://www.CSWEA.org)

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# America's Pathway to Sustainable Water & Wastewater Services

By Steve Allbee

## Background

America's water assets are critical to the country's public health and economic, environmental and cultural vitality. In the post-World War II era, water and wastewater were part of a family of modern infrastructure investments that governments undertook in order to bring about general improvements in the quality of life. To meet public health concerns in urbanizing areas, governments replaced the shallow wells, outhouses and privies with central systems. As the population shift accelerated toward suburbia, water and sewer services followed. Over time, citizens came to view these services as essential and available regardless of where they lived.

Over the last 30 years, centralized services were extended to about 50 million more households and service levels were raised, dramatically. The cooperative, intergovernmental investment in drinking water and wastewater infrastructure

facilities paid dramatic dividends. In the 1970s, many rivers and beaches were little more than open sewers. Today, many rivers, lakes, and coasts are centers of healthy communities. However, the long-term economic impacts of these systems and the encumbered revenues required for maintenance, repair, renewal and replacement are inherent, but not well understood.

Within a community, the capability and condition of the water assets is a key prospective indicator of the communities wealth and its financial as well as environmental well-being. The management of this infrastructure, in all its complexity, cannot be a hit-or-miss activity. It requires that the latest techniques, the best science, the most appropriate engineering and the most effective human and financial resource management be universally available to systems of all sizes in all communities.

Since 1970, America's public spending on wastewater systems has tripled and spending on water systems has doubled (valued in constant dollars). Public spending on water and wastewater systems continues to increase and it represents a growing share in the total spending relative to other municipal infrastructure. The predictable growth in the claim on resources is a manifestation of the extension and significant upgrade of service levels.

To protect the gains of the last 30 years, the most significant upcoming challenge is to efficiently and effectively manage an aging system. Many water and wastewater service providers are tested with renewing the aging parts of systems, upgrading the system performance to align with higher environmental objectives, expanding the service to accommodate growth, all while sustaining low fees for services. Confronting



this conundrum demands proficiency in assessing tradeoffs as disputes arise among environmental, economic and community priorities. From almost any viewpoint, for these systems the period ahead will be more demanding than what America has experienced to date. The vision, strategy, programs and partnerships that led to past achievements will fail to yield a sustainable future.

To gain a better understanding of the future challenges, the US Environmental Protection Agency (EPA) has conducted a study, *the Clean Water and Drinking Water Infrastructure Gap Analysis*. The needs are very large. Rather than repeating the numbers in this article, you can view the report: <http://www.epa.gov/owm/gapreport.pdf>

In a nutshell, utilities are faced with increasing aggregate demand for water and wastewater, diminishing available resources, a leveling off of production efficiencies, increasing output restrictions, and aging infrastructure. These organizations are faced with increasingly expensive treatment options. In addition, there is an aging customer base with more folks on fixed income, a diminishing technical labor pool and more sophisticated plants. There is an outflow of knowledge with the retiring labor base and increasing resistance to rate increases at the local level. Fundamentally, managing a utility is a much more complex undertaking than it was just a few years ago.

### **The pathway forward demands focusing on the assets**

A significant portion of these water assets are beginning to reach the end of their useful design life. For the first time, America will face the economic, institutional and managerial issues of finding optimal solutions to repair, renew and replace an aging system. Because a pipe is old does not by definition mean it is bad, but all assets deteriorate and on average as systems age, maintenance and repair costs grow and demand for renewal or replacement increases. Just 20 years ago, approximately 80% of America's pipe network was fairly new. Twenty years from now, half of the current network will be at the stage where there will be significant likelihood that the pipe will be poor, very poor or life elapsed.

There appears to be an emerging belief that the foundation for progress in water and wastewater services may be


**“Asset management is basically about doing things at the right time. If you replace an asset too early, you are wasting money and if you replace an asset too late, you are wasting money.”**

found in the transition to an asset-centric industry. Asset management as a structured body of practices first entered the US state and local government arena in the transportation sector in the late '60s and early '70s. Systematic inventory, condition assessment, service level determination and optimized renewal tech-

niques have been taught and practiced in transportation and in several private capital intensive sectors, such as oil and gas and more recently in the power industry. However, no equivalent strategies were systematically undertaken in the non-highway sectors of state and local governments, until recently.

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Asset management is basically about doing things at the right time. If you replace an asset too early, you are wasting money and if you replace an asset too late, you are wasting money. What you are looking for is the capacity to make the best decision you can make about doing this kind of work "just in time." The other thing you are trying to accomplish is look at the full range of maintenance, repair, renewal and replacement options in the same matrix so that you can compare your strategies against the alternatives.

The work of asset management encompasses the work of the utility. The

effort to improve service and control costs is an integral part of their utilities' organizational culture. These new approaches must be applied broadly to the hundreds of decisions made within a utility everyday. The new techniques must become second nature to the thousands upon thousands of people who labor in the trenches of the water and wastewater profession. Being really good demands bringing this new thinking and problem solving to the decision-making process on an hour-by-hour basis. In many cases, it requires a change in the culture of how the business is managed.

Asset management is the business lynchpin to a culture of sustainability. It is the application of business-like decision rules and processes under a well-thought-out and deliberate strategy for achieving outcomes. It is a framework to improve service and control cost. The transition is still in its early stages considering the wide range of communities involved in delivering services. The tools and techniques are evolving.

Without a doubt, the challenge of water infrastructure is pressing and it will be the subject of a significant national policy dialogue. As the dialogue proceeds, it is my view that some basic understandings are at the center of any successful long-term partnership.

1. Over the long term, meeting the environmental, public health and economic development objectives is not about investing once and being done with it. The need is recurring.
2. Even in a small rural community it is essential to know what you have, understand its condition and recognize what aspects of your system are most critical to meeting service objectives and manage accordingly your system's investment priorities.
3. By definition, physical assets will fail. How a system manages the consequences of physical failure is very critical to managing and planning for the full life cycle cost of the system.
4. If you cannot answer basic questions about your physical assets, your community may be taking a huge risk with the accompanying potential for adverse financial consequences.
5. An Asset Management Plan can be relatively simple and appropriate to the size and relative complexity of the system.
6. On a strategic level, every system should have at least a vision of the pathway to becoming financially sustainable even if the pathway is murky.

A community's infrastructure represents the joint wealth of the community. Confronting the infrastructure challenge head-on is fundamental to the public health, environmental quality and economic well-being of every community. **CS**

*Editor's note: Author Steve Albee will be the lead presenter at USEPA's Advance Asset Management Workshop hosted by CSWEA this September 9-10, 2008 at the Monona Terrace, Madison, WI. Workshop information is provided on page 23 of Central States Water and further details and registration information is posted at [www.CSWEA.org](http://www.CSWEA.org).*



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# USEPA Advanced Asset Management Training Workshop

Hosted by CSWEA, September 9-10, 2008 Monona Terrace, Madison, WI

CSWEA will be hosting USEPA's advance asset management workshop this September at the Monona Terrace in Madison, Wisconsin. Heading up an impressive list of presenters will be **Steve Albee**, USEPA's Project Director, Gap Analysis and primary author of USEPA's The Clean Water and Drinking Water Infrastructure Gap Analysis; 25 years of EPA – development of financing programs. Below is the agenda for this advance workshop. This workshop will help public sector managers focus on establishing asset management programs for their agencies. Registration information is available at [www.CSWEA.org](http://www.CSWEA.org).

## Agenda – September 9, 2008

### Introductions background and context

- The changing utility industry
- The emerging utility of tomorrow

### Introduction of storyline, overview of fundamental concepts and core practices

- Introduction of storyline
- A definition of AAM
- The AAM paradigm
- The nine building blocks of AAM
- Managing the asset base's "potential to fail"
- Payoffs and benefits, downsides

### Storyline and worksheets – Tom's Very Bad Day

#### Core Question 1:

What is the current state of my assets?

- Building a "process layout" schematic
- Creating the "asset hierarchy"
- Defining the "data standard"
- Initial condition analysis, remaining physical life
- The role of expert judgment – The "Delphi Group"
- Cost/valuation/asset consumption
- Financial disclosure from a GASB perspective

#### Core Question 2:

What is my required "sustainable" level of service (LOS)?

- What is "LOS"? Why do it?
- How it works (strategic level versus operations level)
- A "balanced scorecard" approach

#### Core Question 3:

Which assets are critical to sustained performance?

- Understanding how my assets can fail
- What the likelihood of failure is
- What the consequences are
- How to measure our agency's "business risk exposure"

Discussion, Q & A and Feedback

## September 10, 2008

### Summary of Day 1, outline of Day 2

#### Core Question 4:

What are my best minimum life-cycle-cost CIP and O&M strategies?

- What alternative "treatment" (management) options are feasible?
- Which is the best strategy – "optimal renewal decision making"?

#### Core Question 4: O&M (continued)

- Using AAM to drive operations and maintenance
- Moving systematically into reliability centered and condition-based maintenance

#### Core Question 4: CIP (continued)

- Using AAM to drive the CIP
- Strategic CIP validation
- Balancing CIP and O&M requirements
- The strategic CIP business plan

#### Core Question 5:

What is my best long-term funding strategy?

- So, valuation really does matter?
- Determining a sustainable renewal funding level
- Effectively telling the funding story
- The "whole of business" perspective – using AAM for rate setting & budgeting
- Building your first asset management plan ("AMP") for the system

#### Focus Topic 1: Deploying an AAM program

- The three fundamental deployment strategies
- "Gap analysis" benchmarking & developing the AAM improvement program
- The human side
- The political side
- Implementation work plans: lessons learned

#### Focus Topic 2: Meeting the IT challenge – toward an enterprise asset management system (EAMS)

- Defining "work processes"
- Defining "system functionality"
- Defining data needs and data flows
- Developing an EAMS work plan

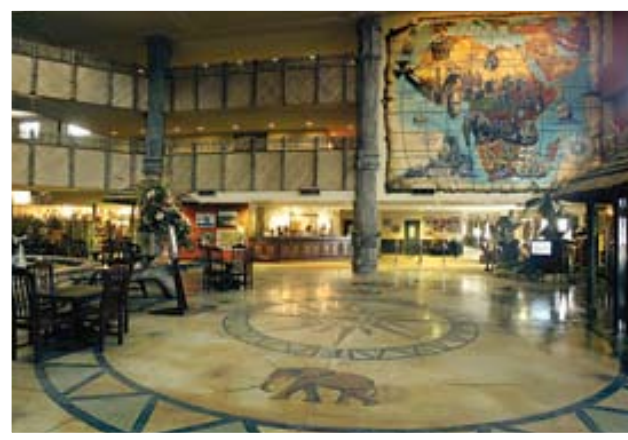
Closing summary, questions, comments, discussion of basic self-audit, evaluation.

# CSWEA CSX '08 & YPX '08 July 17-18, 2008

## (Committee & Section Exchange)

All Central States leaders, CSWEA officers, Section officers and committee chairs and members, as well as any interested or involved members should plan to attend our fourth annual Committee and Section Exchange, CSWEA CSX'08. The dates are July 17-18, 2008 and CSX '08 will once again be held at the Kalahari Resort in the Wisconsin Dells. The event is designed to provide for the informal exchange of ideas between Sections and Committees over two half-days, beginning at noon on Thursday and ending at noon on Friday. The focus of the agenda will be on attracting public sector facility operators and managers as well as issues of concern identified by those in attendance. In addition to the working sessions, ample time is set aside for networking and social time. The meeting is arranged so that family members can take advantage of the water park while mom or dad attends to CSWEA business and Central States provides a pizza party for everyone on Thursday evening. Make your plans to attend now, and feel free to contact Executive Director Eric Lecuyer for additional information.

New this year, CSWEA will also be hosting **YPX '08**, (Young Professionals Exchange) which will run concurrently on Friday, July 18. YP leaders, including Rachel Lee and Rich Hussey, are planning a tremendous event for our YPs. Contact Rachel Lee for additional information. CS



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# New Green Tier Charter

## Encourages Mercury Reduction Efforts by Municipalities

Submitted by Tom Foltz

Municipalities are the newest group to sign a Green Tier charter with the Department of Natural Resources (DNR). Green Tier is Wisconsin's innovative program for Organizations that voluntarily pledge to go beyond regulatory environmental compliance.

DNR Secretary Matt Frank and Municipal Environmental Group (MEG) – Wastewater President Wally Thom, along with representatives from the first six participating municipalities, signed the Mercury Green Tier Charter for Environmental Performance at the annual Government Affairs Seminar in Madison.

"We're excited these communities will be leading the way to a safer environment. They've pledged to work to take mercury out of the environment by focusing on mercury reduction earlier than regulations would require," said DNR Secretary Matt Frank. "What better way to serve your residents than to help ensure the health of our lakes and streams."

The cities of Marshfield, Rice Lake, Sparta, and Superior and the villages of Jackson and Plover are the first municipalities to sign the Mercury Green Tier Charter for Environmental Performance.


Additional communities may join within the next four months by contacting MEG or DNR.

The Green Tier Charter is a partnership effort between DNR and MEG – Wastewater, an association of over 90 communities throughout Wisconsin who own and operate wastewater facilities. The charter will assist mid-sized Wisconsin municipalities in reducing the amount of mercury discharged to their wastewater treatment plants. Typical reduction activities focus on decreasing usage and increasing recycling of mercury-containing products by regular consumers such as schools, hospitals, dentists, and certain industries. Mercury reduction work done now by the municipalities will be recognized by DNR as meeting future mercury reduction obligations, if applicable.

"We are excited to be involved in

one of the first Green Tier charters for municipalities. This charter should help us achieve increased reductions of mercury in a more cost effective manner through cooperative efforts with the DNR," said Paul Kent of Anderson & Kent S.C., on behalf of MEG. "We hope that additional communities will sign on to this initiative and that this might serve as a model for additional Green Tier opportunities for municipalities in the future."

In addition to this Charter, DNR is addressing mercury through air emission rules for coal-burning utilities, mercury product legislation and work with specific mercury sources.

Anyone interested in learning more about the Charter and the opportunities available to Green Tier participants should contact MEG or visit DNR's Green Tier web page at <http://greentier.wi.gov>. 



Seated from L-R: DNR Secretary Matt Frank and Wally Thom President of MEG WWT Division. Standing from L-R: Mark McDermid, DNR, Ron Dickrell, City of Marshfield, Brian Kober, Village of Jackson, Mark Flock, City of Sparta, Rich Boden, Village of Plover and Mayor Dave Ross, City of Superior.

"Green Tier is Wisconsin's innovative program for Organizations that voluntarily pledge to go beyond regulatory environmental compliance."



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# CSWEA/IWEA to Host

## 13th Annual WEFTEC Welcome Reception at WEFTEC '08



CSWEA and IWEA members are invited to join us for this year's WEFTEC '08 CSWEA/IWEA Reception, Sunday, October 19, 2008. The reception will be held from 6:00 to 8:00 p.m. at the Sheraton Chicago Hotel and Towers. Our joint WEFTEC Welcome Reception has grown into a not-to-miss event for members and friends attending WEFTEC and offers an outstanding kick-off each year. The reception will be held in the Chicago IV room of the WEFTEC '08 headquarters hotel.



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# WERF/WEFTEC '08 Golf Tournament

Sunday, October 19, 2008 • 8:00 a.m. Shotgun Start • Ticket cost: \$130 • George Dunne National Golf Course, Oak Forest

## The course

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## The tournament

The \$130 entry fee includes a continental breakfast, range balls, golf, cart, prizes, unlimited beverages and lunch. Bus transportation will be provided from key convention hotels. All proceeds will benefit the Water Environment Research Foundation (WERF), a nonprofit organization that helps preserve the water environment and protect human health by providing science and technology research to enhance management of our water resources.



## Sponsorships

For information regarding sponsorship opportunities, please contact Tim Tack at 847-392-0990 or email [tim@leyassociates.com](mailto:tim@leyassociates.com).

## Registration

Space is limited, so please be sure to register early. There are four ways to register:

Download the registration form and fax it to 708-344-4444. Payment must accompany the registration form. (Registration form will be available soon.)

By phone with credit card payment only: (+1-708-486-0724 / (Toll free: +1-877-303-0724) (Monday- Friday, 8:30 a.m.-5:00 p.m. Central Time)

Mail registration form with payment to: WEFTEC '08, c/o CSI, PO Box 591, Brookfield, IL 60513-0591

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# WEFTeach™

14th Annual WEFTeach™ • Monday, October 20, 2008 • 8:00 a.m.-4:30 p.m.

The award-winning 14th Annual WEFTeach™ will present a full-day train-the-trainer teacher's workshop that shows innovative ways to engage youth in real life water problems and solutions. WEFTEC's economy of scale will be leveraged to bring the Chicago host community an education that will last for years to come – exposing thousands of students to water environment issues and challenges.

WEFTeach™ 2008 will invest in area schools by providing two hands-on water education programs: Sewer Science, a mobile mini-wastewater treatment plant that challenges students to treat water to the same US EPA standards expected of municipalities; and the 10-Day Water Environment Curriculum, a comprehensive curriculum on the water cycle, wastewater treatment, and the relevance of our water environment.

## The preliminary agenda is as follows:

- 7:45 a.m.** Registration opens, coffee, and rolls
- 8:15 a.m.** Welcome, Sewer Science Introduction
- 8:45 a.m.** Sewer Science Laboratory I or 10-Day Water Environment Curriculum
- 11:45 a.m.** Banquet lunch & program (Guest Speaker TBA)
- 1:15 p.m.** Sewer Science Laboratory I or 10-Day Water Environment Curriculum
- 4:15 p.m.** Evaluation

WEFTeach™ is made possible through a partnership of corporations, water agencies, engineering consultants, non-profit community organizations and caring individuals, and has received rave reviews from educators in each of the

cities where it has been offered such as Chicago, Miami, Dallas, Orlando, New Orleans, Anaheim, Atlanta, Los Angeles, Washington D.C., and San Diego.

WEFTeach™ is designed for local area teachers. Educators outside of the Chicago area will be considered on a first-come, first serve basis as seats are available. Because it is generously sponsored, WEFTeach™ is offered for a nominal fee of \$10 and includes materials and a banquet lunch.

To learn more about WEFTeach™ please contact Stevi Hunt-Cottrell, WEF Public Communications, at [shunt-cottrell@wef.org](mailto:shunt-cottrell@wef.org).

The WEFTEC '08 Local Arrangements Committee, comprised of CSWEA and IWEA members has been working to support WEFTeach in Chicago. Please contact Kendra Sveum, [sveumkd@cdm.com](mailto:sveumkd@cdm.com) or 312-780-7712 to find out how you can get involved. [CS](#)



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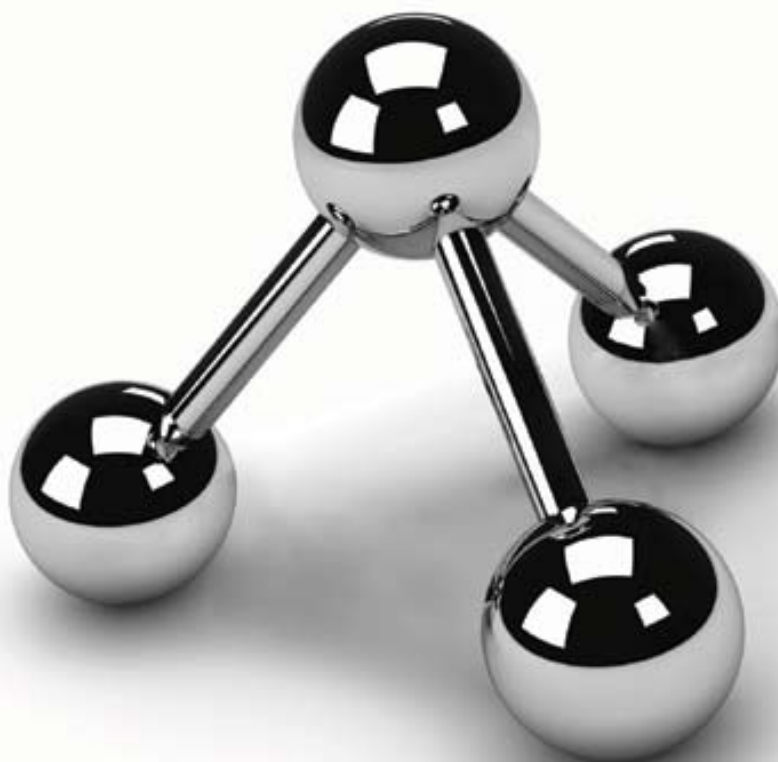


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## A Program Update

Submitted by Roger Gyger

**T**he *Water Is Life and Infrastructure Makes It Happen* program was introduced by WEF in 2006. The program was intended to raise awareness among a variety of stakeholder groups to the critical need to invest significant capital in the replacement and rehabilitation of the nation's water and wastewater infrastructure. Over the past two years a variety of materials have been developed to support the program and it has been successfully used by a number of organizations, ranging from state WEA's to individual cities and utilities.

### Background

The basis for much of the current US wastewater infrastructure was the *Clean Water Act* of 1972 and its subsequent re-issues. This groundbreaking legislation provided 75% federal funding for attaining national secondary treatment. As a complement to this federal program, most states provided grants of 5 to 15% of the capital cost. The good news is that these programs were dramatically successful and the secondary treatment goals were largely achieved many years ago. The bad news is that these capital funding programs are no longer available and are quite unlikely to reappear. At the same time, much of the infrastructure associated with these capital funding programs is now, on average, about 25 years old. To complicate matters even more, at the same time the infrastructure is getting older, the treatment standards are getting more stringent.

### The current infrastructure situation

The most recent EPA U.S. *Clean Water Needs Survey* indicates that the United States will require approximately \$200

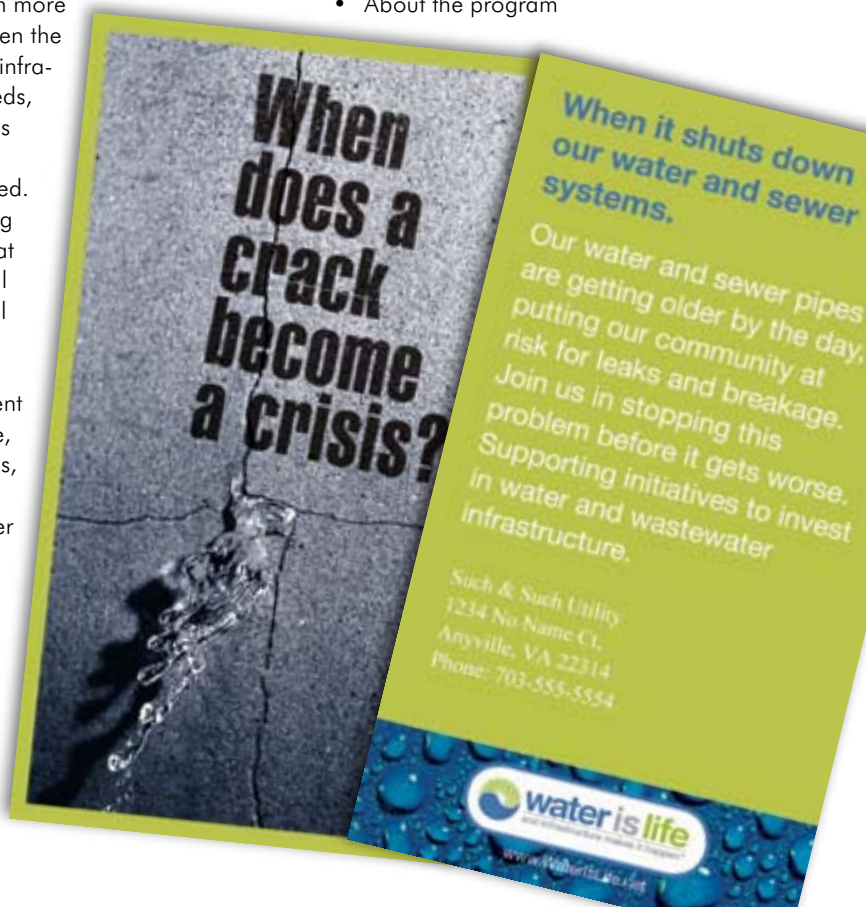
*“We need to seek out opportunities to use the **Water Is Life** tools and raise the level of both understanding and acceptance of the need for continuing wastewater infrastructure investment.”*

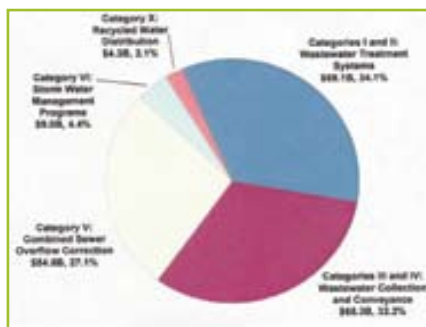
billion (2004 dollars) for “clean water” infrastructure over the next 20 years. Of this total approximately \$69 billion is for wastewater treatment facilities and \$65 billion is for wastewater collection and conveyance, for a wastewater total of \$134 billion. The Central States portion of this total is approximately \$20 to \$30 billion. These are truly daunting capital requirements. However, these numbers become even more imposing when the other public infrastructure needs, such as roads and bridges, are considered. It is becoming very clear that public capital resources will be rationed and that the more apparent infrastructure, such as roads, is likely to receive higher priority. This is precisely the dilemma that the *Water Is Life* program is intended to address.

### Useful tools

A key part of the *Water Is Life* program is the ongoing development and refinement of a number of different marketing tools. First and foremost in this impressive array of information contained on the *WEF Water Is Life* website, [waterislife.net](http://waterislife.net). This site contains specific information on the following:

- About infrastructure
- About the program





- Success stories
  - News center
  - Toolkits
- WEF has made a significant com-

mitment to the *Water Is Life* program and the tools are generally available at *no cost* to the member associations. A number of state member associations

have embraced the *Water Is Life* program and are implementing it broadly. Recently in Michigan a group of MMWEA past presidents formed the *Water Is Life* Promotion Task to assist their members in taking best advantage of the *Water Is Life* tools. This group felt that "the *Water Is Life* program is one of the best collections of support materials that WEF has ever developed for its members."

Most of the information in the toolkits section is designed to be easily customized for use by an individual member association or utility (city). As an example, several types of bill stuffers are available which could be incorporated into a relatively low cost initial customer awareness campaign. From a political perspective, different presentations are available which can be readily delivered at council meetings, board meetings, etc. Once again, the objective is to raise awareness to the significance and importance of investments in the wastewater infrastructure. WEF has created several portable displays which are available for use at trade shows, public meetings or industry events. In addition, CSWEA is creating a series of customized table top exhibits which can be used at smaller venues.

### Action

The wastewater infrastructure investment challenge has become quite clear, in terms of both its magnitude and its relative public sector position. We need to seek out opportunities to use the *Water Is Life* tools and raise the level of both understanding and acceptance of the need for continuing wastewater infrastructure investment. One of the key issues associated with raising awareness is establishing a value proposition with which customers can relate. When a typical monthly cable bill of more than \$100 is compared to a typical wastewater bill of \$25 or \$30, the value difference should be striking, but probably isn't to most consumers. That's where increased awareness comes in. Within CSWEA we have formed a task group within the Public Education & Awareness Committee to provide support and encouragement for the *Water Is Life* program. However, as a first step, it is up to each CSWEA member to become familiar with the program and its objectives.

All of the constituencies (owners, operators, engineers, equipment suppliers) within the Central States WEA have a vested stake in assuring that adequate capital resources are available for the expansion, upgrade and rehabilitation of the wastewater infrastructure. In that regard, we all need to be representatives of the *Water is Life and Infrastructure Makes It Happen* program. **CS**

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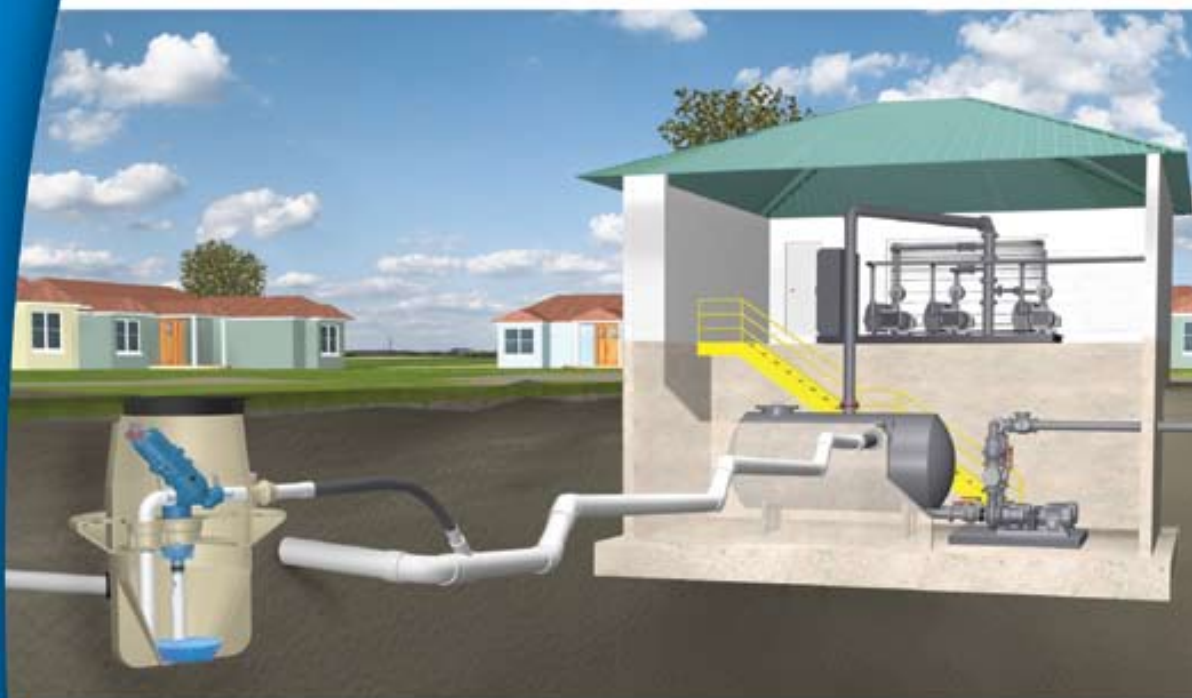
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# CSWEA Becomes a WWMD™ Partner



By Patti Craddock, Public Education Committee

Join the thousands across the world to reach the 2012 goal of one million people in 100 countries participating in World Water Monitoring Day (WWMD™).

Many of you are already involved in community and youth education programs centered on water quality – here is a chance to enhance this experience. For those who have wanted to be more involved in community outreach or a CSWEA activity, WWMD™ is a wonderful opportunity which requires very little preparation. CSWEA has committed to being a partner with this program and we encourage our members to learn about it and be a part of it.

**What is WWMD™?** It is “an international education and outreach program that builds public awareness and involvement in protecting water resources around the world by engaging citizens to conduct basic monitoring of their local water bodies.”

An easy-to-use test kit enables everyone from children to adults to sample local water bodies for a core set of water quality parameters including temperature, acidity (pH), clarity (turbidity) and dissolved oxygen (DO). Results are shared with participating communities around the globe through the WWMD™ website.

World Water Monitoring Day is celebrated on September 18. It was initially chosen to be a month later (October 18) to recognize the anniversary of the US Clean Water Act, which was enacted by the US Congress in 1972 to restore and protect the country's water resources. In 2007, the date was changed to facilitate participation in parts of the world where temperatures reach freezing at that time.

**What can you do?** CSWEA would like a coordinator for each state that can spread the word and monitor program activity. You can use existing channels or develop new ones to encourage participation. Refer to [www.WorldWaterMonitoringDay.org](http://www.WorldWaterMonitoringDay.org) to learn more. Specific activities that WWMD™ partners have performed include:

**Promotion, communication and advocacy:** Preparation of articles, newsletter blurbs, press releases, e-mails, dissemination

of materials at events, list sharing, etc., all to boost the program's visibility and encourage participation.

**Kit sponsorship:** Many partner organizations purchase bulk quantities of kits that are then provided to groups and individuals who wish to carry out WWMD™ activities.

**Event hosting:** Organization and sponsorship of local WWMD™ events brings the program directly to the public and provides a structured, educational experience.

**Connections and networking:** Partners can play an important role as contact points for individuals who are interested in teaming up with a local WWMD™ effort; who are seeking local resources; or who wish to share experience with other like-minded water quality monitoring initiatives. [CS](#)

## About WWMD

The primary goal of WWMD is to build public awareness and involvement in protecting water resources around the world by engaging citizens to conduct basic monitoring of their local water bodies. Many people are unaware of the impact their behaviors have on the quality of their water resources. Conducting simple monitoring tests teaches participants about some of the most common indicators of water health gets them more personally connected to their water resources.

## How is the data collected used?


Water quality scientists use data from more sophisticated monitoring programs to make decision on the health and management of water resources. The monitoring tests performed by WWMD participants are designed to bring communities together to learn about the importance of monitoring their local water resources and what they can do to help protect them.

## Supporters

The Water Environment Federation and International Water Association coordinate WWMD internationally. WEF and IWA receive assistance with planning and promotion of WWMD from many sponsors and partners. Primary sponsors include the US Geological Survey, the US Environmental Protection Agency, PerkinElmer, ITT Corporation, CH2M Hill and Smithfield Foods.








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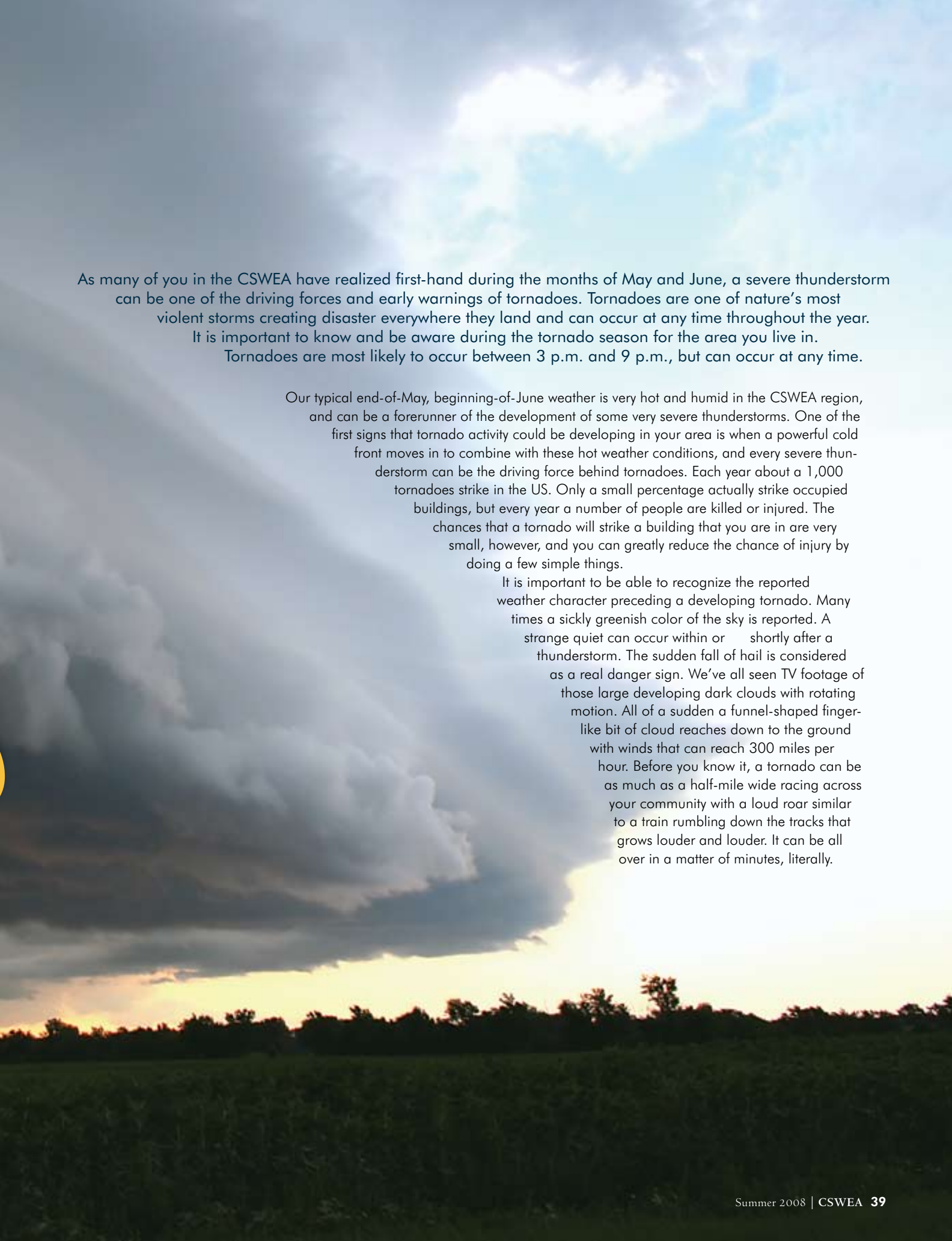


# **Tornado Season is Here**

# **ARE YOU READY?**

By Gary B. Scott, CPMM, Glenbard Wastewater Authority,  
Illinois Section Safety Chair, WEF Safety & Occupational Health Committee Liaison





As many of you in the CSWEA have realized first-hand during the months of May and June, a severe thunderstorm can be one of the driving forces and early warnings of tornadoes. Tornadoes are one of nature's most violent storms creating disaster everywhere they land and can occur at any time throughout the year.

It is important to know and be aware during the tornado season for the area you live in.

Tornadoes are most likely to occur between 3 p.m. and 9 p.m., but can occur at any time.

Our typical end-of-May, beginning-of-June weather is very hot and humid in the CSWEA region, and can be a forerunner of the development of some very severe thunderstorms. One of the first signs that tornado activity could be developing in your area is when a powerful cold front moves in to combine with these hot weather conditions, and every severe thunderstorm can be the driving force behind tornadoes. Each year about a 1,000 tornadoes strike in the US. Only a small percentage actually strike occupied buildings, but every year a number of people are killed or injured. The chances that a tornado will strike a building that you are in are very small, however, and you can greatly reduce the chance of injury by doing a few simple things.

It is important to be able to recognize the reported weather character preceding a developing tornado. Many times a sickly greenish color of the sky is reported. A strange quiet can occur within or shortly after a thunderstorm. The sudden fall of hail is considered as a real danger sign. We've all seen TV footage of those large developing dark clouds with rotating motion. All of a sudden a funnel-shaped finger-like bit of cloud reaches down to the ground with winds that can reach 300 miles per hour. Before you know it, a tornado can be as much as a half-mile wide racing across your community with a loud roar similar to a train rumbling down the tracks that grows louder and louder. It can be all over in a matter of minutes, literally.

The Storm Prediction Center (SPC) was formed to give timely, accurate forecasts and watch/warning information for severe thunderstorms and tornadoes over the contiguous United States. Tornado watches and warnings are issued by the National Weather Service (NWS). During an emergency, NWS forecasters will interrupt routine weather programming and a warning alarm tone will be heard, followed by an emergency broadcast message. It is always important to stay tuned to your local television or radio station for the current weather conditions, especially when weather conditions are right for severe thunderstorms and developing tornadoes. For many of us our first warning may be the muffled sound of our locally activated emergency sirens blasting out a constant tone from as much as a mile away.

Equally important is being able to identify the difference between a tornado watch and a tornado warning. A **tornado watch** means weather conditions are favorable for the development of a tornado and you should keep an eye to the sky. A **tornado warning** means a tornado has actually been sighted or spotted by radar. The warning will provide the location of the tornado and the affected area. An emergency siren may sound with a shrill tone to warn of the dangerous conditions. You should take shelter **IMMEDIATELY**. Most importantly – **don't panic!**

Whether at work or home, it is important to be prepared for any tornado emergency. You should always have a plan and know where to seek shelter. At work, take shelter in an inner hallway,

basement or designated shelter. Keep as many walls between you and the approaching storm as possible. You can also take shelter under a piece of sturdy furniture such as a heavy workbench or desk and hold on to it. Use your hands and arms to protect your head.

If at home, get to the basement or take shelter in a small interior ground floor room such as a bathroom or closet. In either place, stay away from windows and exterior walls and doors. Families should practice tornado drills so everyone knows what to do and where to go in the event of a tornado. Be prepared by having a disaster supply kit which contains first aid items, necessary medications, food, water, flashlights, battery-powered radio with extra batteries, a cell phone, and other emergency goods for the entire family. A good source of information on tornado safety and planning can be found at <http://www.tornadoproject.com/safety/safety.htm>.

If you live in a mobile home, are in a vehicle traveling down the highway, are on foot or riding a bike, it is doubly important that you move quickly. If caught in the open, you should seek a safe place immediately. The chances of encountering falling trees, power lines, and lightning is much greater and more dangerous than encountering the tornado itself. Seek shelter by lying flat in a ditch or low-lying area or ravine away from the vehicle or mobile home. A ditch MAY be a good choice if there is no rain, but if there IS heavy rain, flash flooding may be more dangerous and likely than the tornado. An underpass may seem like a safe place, but it may not be. While videos show

people huddled under an underpass, no one knows how survivable an underpass is in a strong or violent tornado. The debris flying under the underpass could be very deadly – head for the ditch. It is best to stay as close to the ground as possible to avoid flying objects.

In the unfortunate event a tornado does strike, there are things that can be done to help yourself after the storm. Choose a friend or family member in another part of town or elsewhere to be a contact person who will be called by everyone should disaster strike your area. Stay tuned into local radio stations to see where assistance is available. Keep your family together and wait for emergency personnel to arrive. Carefully render aid to those who are injured if you are able. Stay away from power lines and puddles with wires in them; they may still be carrying electricity. Watch your step to avoid broken glass, nails, and other sharp objects. Stay out of any heavily damaged houses or buildings; they could collapse at any time. Do not use matches or lighters, there may be leaking natural gas pipes nearby. Remain calm and alert, and listen for information and instructions from emergency crews or local officials.

Remember, one of the most important things you can do to prevent being injured in a tornado is to **BE ALERT** to the onset of severe weather. Most deaths and injuries happen to people who are unaware and uninformed. Those who ignore the weather because of indifference or overconfidence may not recognize the danger. Stay ready, and you could stay alive. CS

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# WisWARN Wants You

By Dan Lynch, Janesville Utility Director and WisWARN Committee Chair

**Wisconsin** is forming a statewide mutual aid response and assistance network. The Wisconsin Water/Wastewater/Public Works Agency Response Network, known as WisWARN, is being created to provide a statewide network to allow public agencies from one community to help public agencies in

another community with personnel and resources following natural and manmade disasters. This network will extend across the entire state allowing any participating Wisconsin community to receive aid or respond to a disaster in any other Wisconsin community.

**Do you want to become a part of this network?** We aren't quite ready to start signing up members because we are still finishing the mutual aid agreement. The mutual aid agreement is currently being reviewed by a number of attorneys



Jefferson County, WI, June 14, 2008 – A road is washed out from the flooding of the Crawfish River. Many roads have been washed out or are under water in Iowa, Wisconsin and Indiana. Barry Bahler/FEMA

Inset: Siren, WI, June 19, 2001 – Trees were uprooted and houses were severely damaged in the June 18 tornado. Photo by Dana Trytten/ FEMA News Photo

and it will be ready when they all agree on the final language. We hope that occurs shortly, but for now we want to find out who may be interested in joining WisWARN (about 40 utilities have already expressed an interest). You can join in a number of different ways, which will be explained later, but to be part of WisWARN all you need is to be part of a municipal entity. Just fill out a form to let us know you are interested. **This is not a commitment to join.** The commitment, if you decide to pursue membership, will occur when your governing board or council adopts a resolution to officially join. For now, we are just trying to develop a preliminary list of those interested.

The establishment of a mutual assistance agreement network of Wisconsin water and wastewater agencies will help ensure that necessary local community services remain operational following a disaster. Using WisWARN, a community is able to directly contact other communities to get the needed assistance on its way immediately. There are no administrative delays, no bureaucratic obstacles, no red tape. The process is simple. A community requesting assistance will simply go to the WisWARN website, choose from a pre-existing inventory of available resources and then call or email the communities having those resources. The contacted community will then determine if it can respond. (No WisWARN member is required to respond.) Not only is there a quick response, but the local community stays in charge and gets what it asks for. Visit WisWARN at [www.WisWARN.org](http://www.WisWARN.org). The website is still being developed, but we want you to look at it because it will help explain how this program will work.

### Some of the benefits of joining WisWARN

- WisWARN will use a single statewide mutual aid agreement which will help reduce administrative conflict over such things as: insurance, workers compensation, equipment rental rates, and other cost related issues.
- The statewide agreement does not conflict or supersede existing mutual aid agreements; rather it complements them by providing a community with a variety of response options.
- There is no cost to join or annual cost to belong to WisWARN.
- There is no commitment or obligation to respond if your community receives a request.
- It allows the local community to remain in control of all response activities.
- Specialized operations, such as water and wastewater utilities, are assisted by other specialized operations until the disaster is over or other aid is provided by the state or federal governments.
- You can use WisWARN simply for finding parts or equipment to make repairs; there doesn't have to be a full-scale emergency.

WisWARN has been endorsed by: Wisconsin Water Association, Wisconsin Wastewater Operator's Association, Wisconsin Rural Water Association, Municipal Environmental Group –Water and Wastewater Divisions, Wisconsin Section of the Central States Water Environment Association, Wisconsin Alliance of Cities, Wisconsin Department of Natural Resources, and Wisconsin Department of Emergency Management.

WisWARN will be a very good thing for all of Wisconsin, so complete the interest form and be ready to get on board. Contact Dan Lynch at [lynchd@ci.janesville.wi.us](mailto:lynchd@ci.janesville.wi.us) for more information. [CS](#)

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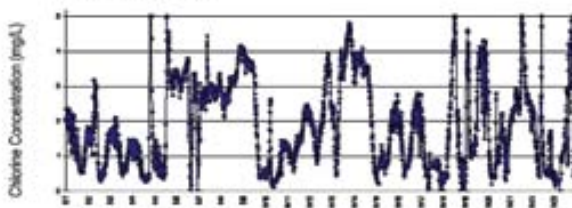
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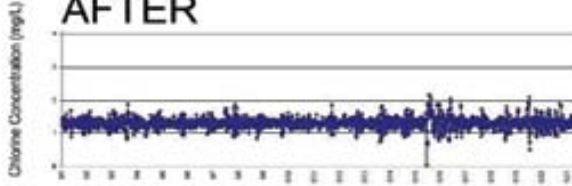
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# Meeting Goals

Steve Godfrey

It has been two weeks (at time of writing) since Bill Martin passed the gavel to me at the annual conference in Bloomington, MN, and I am looking forward to taking my turn as the Wisconsin Section chair. The conference was a great success with technical presentations, vendor displays and social events that were all top notch. Many kudos to the Minnesota Section for hosting the conference. As I write my first chair's message it is 80 degrees, the birds are singing and it looks like the cool, wet spring is finally giving way to summer. My dust-covered fishing boat is waiting for me to finish this article and see some action for the first time this season.

As Section vice chair last year I had the opportunity to head up the strategic planning committee for our triennial update. Our committee found that the strategic plan, first adopted six years ago, contained many goals, strategies and action steps that have successfully helped our section to stay on course. Using the basic outline of the plan we reviewed, revised, deleted and added to mold the plan to fit today's needs. The most significant changes to the plan include more emphasis and activities with our student chapters and the young professionals group, more educational outreach to K-12 students and the general public, and a focus on increasing member involvement and committee effectiveness.


Over the past few years we have helped to initiate and strengthen several student chapters in our Wisconsin engineering and technical schools. This is a result of the hard



work and donated time of several members, and some financial assistance from the section. The newly formed Young Professionals group has been very active in providing leadership, organizing educational and social activities, and encouraging and mentoring our student chapters. The younger members represent the future of any organization, and it is very encouraging to have such a fine, active YP group in our Wisconsin Section.

In the area of education, we continue to provide our members with quality technical seminars, and this year will mark our first northern Wisconsin collection system conference in Marshfield and first industrial pretreatment conference in Oshkosh. Our strategic plan continues to include these professional educational goals and also includes a focus on education of and promotion of our industry to K-12 students and the general public.

Perhaps the most important goal in our strategic plan deals with member involvement and committee effectiveness. As the old adage says, to get something done you must "plan your work then work your plan." We have a lot of talented people in our organization and we should applaud all who contribute their time and efforts. As we move ahead, I hope that more and more members can step forward to get involved with our many committees and activities and make this a banner year for the Wisconsin Section.

That's all for now, and I'm going fishing! Have a great summer. 

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# Section Initiatives

Roger Gyger

One of the major Illinois Section themes for the next year will be developing and strengthening collaborative relationships within the broad wastewater and water community. This approach will include actively sharing ideas for seminars and program implementation with both the other CSWEA State Sections, as well as with neighboring WEA organizations. It certainly appears that we all face very similar issues in our respective states. We will also continue to interface with the Illinois WEA in several specific areas, including the very successful Government Affairs Seminar. For the implementation of specific programs, such as *Water Is Life*, we will collaborate with local environmental and community organizations, such as the *Conservation Foundation*.

At the Section meeting during the Annual Conference a number of key Illinois Section initiatives for the next year were reviewed. These initiatives include broader implementation of the *Water Is Life* program at the local level, further development of the Illinois Section technical seminars, solicitation of new operator members with the recently enacted WEA membership category and increased participation on the various committees,



including the appointment of vice-chairs.

The *Water Is Life* program has begun to take shape in Illinois and we now have a number of useful tools for spreading and cultivating this message at the regional and local levels. We will be actively seeking specific avenues for implementing these tools. The expanded Illinois Section Seminar Series has proven to be a success and we plan to further enhance the scope and content of these seminars over the next year. A complement to the Seminar Series will be the solicitation of new operator members through

the new CSWEA membership category. This is an important wastewater constituency which we hope to expand. We also plan to expand the number of participants on each of the Section committees, which in some cases have one member (the chairperson).

Significant thanks go to Sue Baert, Shelly Cumbow and the Committee Chairs for leaving the Illinois Section in terrific shape as we begin the next year. I look forward to working with the Section Committee Chairs and the CSWEA Executive Committee to further strengthen the role of the Illinois Section in the stewardship of our water resources. [CS](#)



|  |  |
|--|--|
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# Hello from Minnesota

Doug Henrichsen

"Developing Great Infrastructure to Enhance our Water Environment" was the theme for our 81st CSWEA Annual Meeting recently held in Bloomington, Minnesota. We had a great technical, exhibitor, student, entertainment, spouse, and special team meeting program the week of May 19-22, 2008. Dr. James Barnard was our keynote speaker and he gave a terrific presentation on the future of nutrient removal and the concept of nutrients as a diminishing resource. The opening session was well attended. Mr. Chuck Weir, Treasurer for the Water Environment Federation (WEF), was the guest speaker for the CSWEA Awards Luncheon. Mr. Weir gave a presentation on the future of the WEF organization, which was also well attended. Ms. J. Drake Hamilton, Science Policy Director with Fresh Energy, gave the Farewell Breakfast presentation on clean energy solutions to climate change that will maximize economic opportunities for the Midwest. The technical program for the conference this year was outstanding. Abstracts for the technical program can be found on the internet at [www.cswea.org](http://www.cswea.org).

The exhibitor's showcase format was new this year. Over 68 companies, with over 150 representatives, showed up to present their firms and products during a concentrated timeframe. Exhibitor booths were set up to operate Tuesday, May 20 in the afternoon without competition from technical papers. The goal was to focus more attention on the exhibitors and products without competition from other venues. Prizes and vendor talks were given following a set timeline in an attempt to keep people in the exhibit hall. The exhibitor's session ended with the Exhibitor's Reception, which turned out to be a good time for all. While this format was new, we would



appreciate hearing from you about your thoughts on this pilot format.

Several upcoming events for the MN Section are currently in the planning stages, including:

- July 22-25, 2008: MWOA 32nd Annual Conference, Mankato, MN
- October 2008: CSWEA/MWOA Collection System Workshop, Duluth, MN
- November 6, 2008: MN Section CSWEA/A&WMA Conference on the Environment, Earle Brown Center, Brooklyn Center, MN
- February 2009: MN Section CSWEA/MWOA

25th Annual Innovative Approaches to WW Operational Problems Seminar, St. Cloud, MN

Please save these dates on your calendar for these important events.

Several professionals also recently stepped forward to accept new positions with the MN Section. As professionals in the wastewater industry we have many opportunities to learn, grow, and give back to our communities, and CSWEA can help you attain your goals. Positions recently filled include:

- Trustee to CSWEA: Patti Craddock, Craddock Consulting
- Immediate Past Chair: John Glatzmaier, CH2M HILL
- Vice Chair: Jason Benson, AE2S
- Secretary/Treasurer: George Sprouse, MCES
- Student & Young Professionals (S&YP) Committee Chair: Alison Sumption, Howard R. Green

Chair positions still needing to be filled include the Biosolids and Government Affairs committees. To learn more about these opportunities or to join a committee, please visit our website: [www.cswea.org/minnesota](http://www.cswea.org/minnesota). This site also includes a listing of all current committees and chairs. [CS](#)

"As professionals in the wastewater industry we have many opportunities to learn, grow, and give back to our communities."

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## JULY

- 17-18** CSWEA Committee and Section Exchange, CSX'08 Kalahari Resort and Conference Center, Wisconsin Dells, WI
- 18** CSWEA's 1st Annual Young Professionals Exchange, YPX '08, Kalahari Resort and Conference Center, Wisconsin Dells, WI
- 31** IL Section CSWEA Operations Seminar, Elgin, IL

## AUGUST

- 6** WI Section CSWEA Management Seminar, Richfield, WI
- 14** WI Section CSWEA Northern Wisconsin Collection System Seminar, Holiday Inn Convention Center, Marshfield, WI

## SEPTEMBER

- 9-10** USEPA Asset Management Workshop, Hosted by CSWEA, Monona Terrace, Madison, WI
- TBA** MN Section CSWEA/MWOA Collection System Workshop, Location TBA

## OCTOBER

- TBA** MN Section CSWEA/MWOA Collection System Workshop, Duluth, MN
- 18-22** WEFTEC '08, Chicago, IL

## NOVEMBER

- TBA** IL Section CSWEA Maintenance & Safety Seminar, Location TBA
- 6** MN Section CSWEA 23rd Annual Conference on the Environment, Earl Brown Heritage Center, Brooklyn Center, MN

## DECEMBER

- 4** USEPA Energy Management Workshop hosted by CSWEA, Monona Terrace, Madison, WI

## FEBRUARY 2009

- TBA** MN Section CSWEA/MWOA 25th Annual Innovative Approaches to Wastewater Operational Problems Seminar, St. Cloud, MN

## APRIL 2009

- 7** 14th Annual, CSWEA Education Seminar, Monona Terrace, Madison, WI

## MAY 2009

- 18-22** Lincolnshire Marriott Resort, Lincolnshire, IL



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# Protective Coating Maintenance Program Selection Using Engineering Economic Analysis

David Barnas, P.E., PCS

It is a happy day when an owner places a new elevated steel water storage tank into operation. Eventually though, the day will come to inspect and maintain a tank's protective coatings. Ultraviolet rays, thermal expansion, and a host of forces will have been at work to degrade the coating. The initial protective coating was an investment, and a proper maintenance program can cost 30% less than other selected maintenance programs. The components affecting this savings are presented here so that you can select and implement your own protective coating maintenance program.

## Proper surface prep and coating help manage maintenance

Initial surface preparation design and execution, including profile, in conjunction with the desired coating system should protect your tank for its first 15 years of service, at least. Proper surface preparation and coating application at the beginning of the tank's service life will help maintain the protective coating and the tank.

One type of maintenance is periodic cleaning of the exterior with power washing. This process extends the useful life of protective coatings. Even moderate service conditions require cleaning every five years with oxygenated bleach that removes mold and mildew and suppresses their return. Elevated tanks have self-cleaning portions that are cleaned by rain, but the under-bowl portion, where structural steel members are subject to high stresses, is not self-cleaning. This area generally remains moist with condensation, which fosters mold and mildew. Dust accumulation here also promotes mold and mildew growth; high-gloss coatings impede but do not eliminate dust accumulation. When you select a power washing service, make sure the mobile power washers complete their work from lift equipment and do not attach to the tank. Otherwise, the washers can damage the tank exterior. During periodic cleanings, touch up paint at the hatches, doors, seams, and other crevices or traffic areas to prolong coating life.

A second type of maintenance uses water jetting and overcoating. Water jetting will remove failed portions but will not impart a profile to the tank surface. Instead, for recoating, you will have to rely on the original profile for the overcoating system to adhere where the steel is bare. Water jetting has the advantage of not requiring total containment, unlike abrasive blasting. But used water and paint debris still must be collected and disposed of properly.

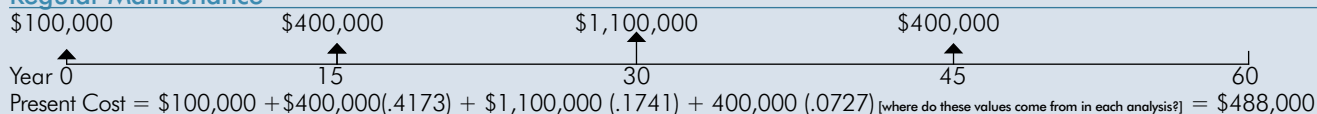
A third type of maintenance coating is complete removal of the coating, often by dry abrasive blasting, and full replacement. Total containment, which can be expensive, is required when blast cleaning coatings so that the surrounding area is protected. If your initial surface preparation and coating application are optimal, you can extend the time before which complete removal and recoating are needed.

## 60-year life, 2MG elevated tank in the Midwest, 6% annual interest

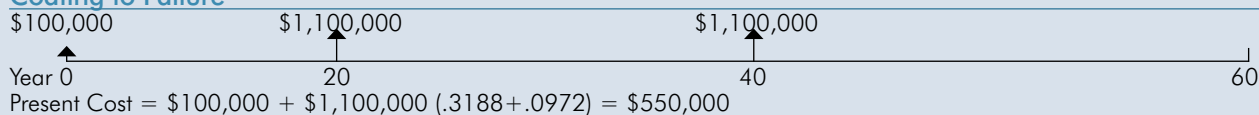
| Program            | Present Cost | Total Cost (2006) |
|--------------------|--------------|-------------------|
| Regular            | \$488,000    | \$2,000,000       |
| Coating to Failure | \$550,000    | \$2,300,000       |
| Proactive          | \$341,000    | \$1,500,000       |

The proactive maintenance program shows a 30% reduction in cost compared to a regular maintenance program.

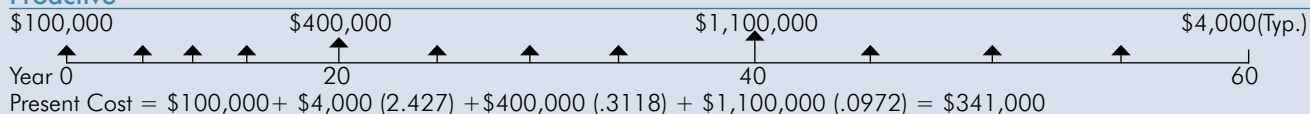
### Regular Maintenance



### Coating to Failure



### Proactive



(#) -factor to equate the future expense or future expenses for periodic costs, to the present cost at the interest rate of 6% for the time indicated. Known as the Sinking Fund which is the inverse of Series Compound Amount which may be more familiar as interest accrued on savings or a loan.



## Maintenance options

Three tank coating maintenance programs are evaluated below using an engineering economic analysis. In all three evaluated programs, there is an initial investment of \$100,000 in the protective coating system and 6% annual interest for a two-million-gallon elevated steel storage tank in the Midwest. Although this tank size and location may not match your situation, the relative costs assumed in the example reflect the principles advocated. Assumed costs for the work are \$4,000 for power washing, overcoating \$400,000 and removal and replacement costs of \$1,100,000.

- **Regular maintenance** provides a 15-year service life for each coating system applied, with no intervening maintenance. Water jetting and overcoating are performed at year 15. Full containment, complete coating removal, and replacement are provided at year 30, and water jetting and overcoating are performed at year 45.
- **Coating to failure** provides a 20-year life between each cycle of full containment, complete coating removal, and replacement. There may be other costs, due to the detracting in appearance and possible damage to the substrate or steel loss. Such ancillary costs result from leaving the coating beyond its useful life without periodic maintenance.
- **Proactive maintenance** provides for periodic (every five years) washing of the tank exterior and coating touch-up to extend the useful coating life to 20 years without the risks to the tank's appearance and integrity that occur with coating to failure. The result is water jetting and overcoating at year 20 and full containment with complete coating removal and replacement at year 40.

## Analysis

In the three examples, an engineering economic analysis was used to determine the present cost of each maintenance program considered. The present cost is the equivalent cost of all future costs of the coating maintenance at the assumed interest rate of 6%. After determining the present cost of each option, a comparison can be made to determine the most economical program.

## Summary

An initial coating and each subsequent coating are investments that require proper maintenance to prolong the useful life of the coating. The demonstration here of a proactive maintenance program is meant to assist steel tank (and especially elevated water storage tank) owners in formulating their own maintenance program. The proactive maintenance program is suggested because it is the most economical and aesthetically pleasing, provides a protective coating in continual service, and extends the useful life of the coatings.

*Mr. David P. Barnas, P.E., PCS, currently a Project Engineer with Consoer Townsend Envirodyne Engineers, is a certified Protective Coatings Specialist and a member of the SSPC C.2 Surface Preparation Group Committee. He has 24 years of experience in constructing and designing water and wastewater structures, 19 years of which included protective coatings for water storage tanks in the Midwest.*



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## LOWER BIDS ARE NOT ALWAYS THE BEST ECONOMICS

**PROPER CLEANING PROCEDURES ARE THE BEST ECONOMICS.**

**When receiving cleaning bids** for the exterior of water tanks for the mildew removal, the lower bids are sometimes not always the best deals. In general, the lower bids received do not include cleaning the tanks with the proper cleaning agents. When pressure washing with water only and not using a pre-soak system to kill the root of the mildew stains, this will allow the mildew to start growing back on the tank as soon as six to eighteen months.

**Midwest Mobile Washers of Illinois** has offered water tower and water storage tank cleaning service for over fifteen years. We clean and safely remove mildew stains on the exterior sides of water towers and water storage tanks. In due time the mildew stains cause damage to the painted surface causing it to crack, peel and flake which eventually leaves rust marks on the surface of the tank.

**Midwest Mobile Washers** researches every year to stay in compliance with laws and regulations that may be required from state to state. Our employees are trained with the products that we use through attending educational classes and our supplier support. We also attend organizations in the cleaning and restoration industry to keep abreast and updated on all chemicals and proper procedures in our industry.

**One of our trademarks** is after the tank is cleaned, we apply a mildew inhibitor to help retard mildew growth. With this inhibitor applied, mildew stains will stay away for years to come depending on the surrounding atmosphere.

**Midwest Mobile Washers** always consults with engineering companies and paint manufacturers to ensure all safety and proper cleaning methods are applied by their recommendations. Our washing and cleaning procedures of water towers and water storage tanks are completely and totally 100% frictionless. We use no cables, wheel baskets or other fancy hanging devices that rub or scratch the painted surface. Midwest Mobile Washers uses qualified products and applies them in the safest manner.

**Our goals are simple**, "To save the paint". We would be more than proud to extend the life of paint on water storage tanks by several years with an ongoing maintenance program.

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| 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: <b>Central States Water Environment Association</b>  |  |  |            |                                |                  |    |
| Employment Information   |  |  |            |                                |                  |    |
| Employer Code  |  | Other (please specify)   |            | Job Title Code                 |                  |    |
| Environmental Focus  |  | Other (please specify)   |            |                                |                  |    |
| Signature (required for all new memberships)   |  |  |            |                                | Date             |    |
| Sponsorship Information  |  |  |            |                                |                  |    |
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| <b>Membership Categories</b> <i>Select one only</i>  |  | <b>Member Benefit Subscription</b> <i>Select one only</i>  |            |                                | DUES             |    |
| <input type="checkbox"/> <b>ACTIVE</b>   |  |  |            |                                | \$ 102.00        |    |
| Individuals involved in or interested in water quality.  |  | <input type="checkbox"/> <i>WE&amp;T (including Operations Forum)</i>  |            |                                |                  |    |
| <input type="checkbox"/> <b>Young Professional</b>   |  | <input type="checkbox"/> <i>WEF Highlights Online</i> <input type="checkbox"/> Central States Water Magazine       |            |                                |                  |    |
|  |  | YP=<35 yrs of age, < 10 yrs work experience can receive 50% discount for 1 <sup>st</sup> three years of membership |            |                                | \$ 51.00         |    |
| <input type="checkbox"/> <b>OPERATIONS</b>   |  |  |            |                                | \$ 64.00         |    |
| Individuals involved in the day-to-day operation of wastewater collection, treatment or laboratory facility, or for facilities with a daily flow of < 1 mgd or 40 L/sec.   |  | <input type="checkbox"/> <i>WE&amp;T (including Operations Forum)</i>  |            |                                |                  |    |
|  |  | <input type="checkbox"/> <i>Water Environment Laboratory Solutions</i>   |            |                                |                  |    |
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| <input type="checkbox"/> <b>STUDENT</b>  |  |  |            |                                | \$ 30.00         |    |
| Students enroll for a minimum of six credit hours in an accredited college or university. Must provide written documentation on school letterhead verifying status, signed by an advisor or faculty member.  |  | <input type="checkbox"/> <i>WE&amp;T (including Operations Forum)</i>  |            |                                |                  |    |
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|  |  | <input type="checkbox"/> <i>WEF Highlights Online</i>  |            |                                |                  |    |
|  |  | <input type="checkbox"/> Central States Water Magazine   |            |                                |                  |    |
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|  |  | 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.<br>NOTE: Prices listed reflect a substantial member discount!  |  | <input type="checkbox"/> <i>WE&amp;T (including Operations Forum)</i>  |            |                                | \$55.00          | \$ |
|  |  | <input type="checkbox"/> <i>Water Environment Research (Online) (Call for print pricing details)</i>               |            |                                | \$75.00          | \$ |
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| <input type="checkbox"/> <b>Check/Money Order enclosed</b>   |  | <input type="checkbox"/> <b>Charge</b>   |            | <b>Credit Card Number</b>      |                  |    |
| (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  |  |  |            |                                |                  |    |
| <p><b>Send Form &amp; Payment to:</b> Water Environment Federation • Member Service Center • PO Box 18044, Merrifield, VA 22118-0045</p> <p>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</p> |  |  |            |                                |                  |    |



# CSWEA Associate Membership Application 2008

## Contact Information

|   |                       |            |                  |
|---|-----------------------|------------|------------------|
| Last Name   | MI                    | First Name | (Jr., Sr., etc.) |
| Business Name (if applicable)                         |                       |            |                  |
| * Business Address * Home Address<br>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)<br><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

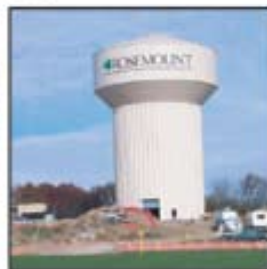
\* Check/Money Order enclosed. Make check payable to Central States Water Environment Association.

OR Visit [www.CSWEA.org](http://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](http://www.CSWEA.org)

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- ◆ Minimal maintenance requirements

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- ◆ 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**

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- ◆ All corrosion resistant components for long term reliability
- ◆ Minimal maintenance requirements



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