Students and Young Professionals Participate in WEFTEC 2013

By Lou Storino

As a kick-off to WEFTEC, IWEA students and young professionals participated in the construction of a rain garden at Haines Elementary School, in Chicago’s Chinatown neighborhood, on Saturday, October 5. This service project was sponsored by the WEF Students and Young Professionals committee. Many IWEA students and young professionals participated not only in the construction of the rain garden, but also in the year-long effort to plan, design, and organize it.

The project consisted of replacing a 1,000 sq. ft. section of pavement with native plantings to help relieve stormwater runoff. In the past, heavy rain would pool on the playground and enter the combined sewer. Now the rain garden will collect the stormwater and assist adequate drainage.
President’s Corner

by Dan Bounds, President, IWEA

WEFTEC 2013 brought 22,600 people together in Illinois with one common goal - collaboration on the many challenges we face in protecting our water environment. This year’s WEFTEC set new records for attendance and offered unprecedented technical sessions and program events.

Over 970 exhibitors displayed the latest in technology and services. Governor Pat Quinn granted the first ever, gubernatorial proclamation for WATER’S WORTH IT® month, encouraging Illinois residents to engage in water awareness and conservation.

The IWEA/CSWEA WEFTEC Reception was a big hit. More than 370 members reconnected with each other to kick off the conference. I took note of several things we can consider for future WATERCON programs and events.

Planning is well underway for WATERCON 2014 in Springfield. The technical sessions have been set and an outstanding group of abstracts have been selected for presentation. A Wastewater Operators Challenge is an exciting new addition for the 2014 exhibition, and the IWEA Annual Banquet returns to the Abraham Lincoln Presidential Library and Museum.

Several other great IWEA events are coming up soon. A joint IWEA/ISAWWA/CSWEA young professionals social is planned at Haymarket Brewery on November 14; the Collection Systems Seminar is November 14 in Lisle; the Biosolids Seminar is November 20 at the MWRDGC Stickney Plant in Cicero; and the Government Affairs Conference will be on January 10 in Burr Ridge.

Go to our website for registration information and further details.

IWEA’s committee members invest a lot of time and energy into providing valuable events for our membership and a big thanks goes out for their continuing excellence. IWEA is nearing 1,000 members strong, and reaching that number would be a great association accomplishment. Look for information on a membership drive to reach the 1,000 member mark next year. If you haven’t done so already, check out WEF’s WATER’S WORTH IT® campaign and website and take the pledge to raise awareness about the value and importance of water, water-related issues, and the water profession. I did.
Back to Safety Basics
By Alice Ohrtmann, Safety Committee

Being new to the safety world, I thought I would go back to some basics for this month's safety article. I came across this information on the BLR Safety site. It is just good common sense information that we forget because we believe these things just won’t happen to us!

Cold stress is serious
Prolonged exposure to cold will eventually use up your body’s stored energy, which can cause hypothermia, or abnormally low body temperature. Because it affects the brain and makes us unable to think clearly, an individual may be experiencing hypothermia but be unable to do anything about it.

Symptoms include shivering, fatigue, loss of coordination, and confusion. In later stages, shivering stops, the skin turns blue, pupils become dilated, pulse and breathing slow, and the victim loses consciousness. Hypothermia requires professional medical attention.

Other types of cold stress include frostbite (an injury to the body caused by freezing), trench foot (resulting from prolonged exposure to wet and cold conditions), and chilblains (damage to the capillary beds from repeated exposure to temperatures just above freezing to as high as 60°F).

To prevent cold stress, NIOSH recommends that workers:
- Schedule maintenance and repair work for warmer months.
- Schedule cold jobs for the warmest part of the day.
- Drink warm liquids.
- Take breaks in warm areas.
- Participate in training that addresses risk, prevention, symptoms, monitoring, treatment, and PPE.

Where are the energy sources?
Electricity is an obvious energy source. Other forms include mechanical, hydraulic, pneumatic, chemical, and thermal energy sources. Each source of potentially hazardous energy will be identified in the lockout procedure for each process or piece of equipment.

How do I control these energy sources?
You must neutralize all energy sources associated with a process or piece of equipment. This may mean shutting the power off and locking the switch. It could also mean securing them so they cannot move.

Who needs to know?
If you’re going to take a piece of equipment out of service, inform your coworkers who operate the equipment, work nearby, or work near the power source of the lockout. That way, they will not interfere by bypassing your lockout, trying to operate the equipment, or doing anything else that could endanger you.

Remember, never assume that everyone knows everything you know. We all have different safety experience. If you see something that you know to be unsafe, tell someone. Safety should be everyone’s top priority!

When should you use lockout/tagout (LOTO)?
Use LOTO whenever you have to put yourself in a dangerous position involving machinery. For example, make sure a piece of equipment cannot start up, cycle, or move before you:
- Put your hands, arms, or upper body into the point of operation;
- Put your body under an elevated piece of equipment, such as a raised dump truck bed, that could fall on you; or
- Put yourself in the path of something that could move unexpectedly, like a parked vehicle and a trailer.
The blowers in diffused aeration provide the oxygen necessary to treat the biological, ammonia, and nitrate loads in the incoming municipal wastewater. These blowers were once designed to run at constant speeds 24/7, maintaining the minimum design DO level in the wastewater, regardless of the (bio-chemical) load, which is subject to daily and seasonal variations. This resulted in excessive DO levels, and wasted energy. The graph below illustrates the exponential increase in power consumption and cost when the DO levels in the aeration tank rise above the 2 mg/l design criteria.

![Graph illustrating exponential increase in power consumption and cost](image)

Today’s motor control technology is capable of controlling the blower speeds using variable frequency drives (VFDs). This allows the blowers to ramp up and down in response to the DO level in the aeration tank, and reduce energy consumption at the slower speeds. The improved control schemes also incorporate the measurements of ammonia and nitrate levels, deliver more accurate dosing of air, and help in the efficient removal of solids. An ion selective electrode (ISE) located at the entry points to the aeration basin makes this more sophisticated approach possible.

A simple mathematical correlation for the blower power demand, which correlates to the cube of the blower speed, gives us an idea of what type of savings are available from this approach. If the blower motor operates at 80% of its full speed, delivering proportionately less oxygen into the aeration tank, the calculated power consumption is 50% of full power \((0.8 \times 0.8 \times 0.8 = 0.512)\). These are very significant savings, just with the addition of blower speed controls.

Upgrading to a more efficient blower can also achieve notable savings. Positive displacement blowers, once used heavily at municipalities, had an efficiency range of 45 to 65% while multistage centrifugal blowers operated at efficiencies of 50 to 70%. The new, throttled inlet vane centrifugal blowers and the high-speed turbo blowers report operating efficiency ranges of 70 to 80%.

The turbo blowers feature the advanced technology found in jet engines. They operate at very high speeds, up to 30,000 RPM, compared to the older designs that operated at 3,600 RPM. These high efficiency blowers offer a wide range of airflow, quiet operation and a typically small footprint. The only notable disadvantage is the limited sizing options. Some feature the advanced technology of inlet guide vanes, to improve blower efficiency even further.

There are several manufacturers of turbo blowers in the US market: ABS, Aerzen, Atlas Copco, Dresser Roots, HSI, Hoffman, Howden, Neuros, PillerAerator GmbH, and Turblex. All the indicated manufacturers also provide the variable speed controls, whereas Howden and Turblex also incorporate control of the intake louvers.

When considering an aeration blower upgrade, pay attention to the ‘wire-to-air’ efficiency. This value incorporates all the losses in the system, starting from the variable speed control, motor efficiency and any mechanical power transmission losses, down to the finally delivered pressurized air. The aeration efficiency can improve 20–40% by changing the type of blower used, and adding automatic DO control. Multiple projects polled have shown an ROI of 1–2 years.
Good Times At WEFTEC 2013 In Chicago!
photos courtesy of Ted Denning

WEFTEC Opens

Josh Filler rebuilds a pump seal for the pump and mixer maintenance event.

Sewer Rats rebuild a pump & mixer for the maintenance event. (left to right) John Conry, Matt Jurjovec, Josh Filler & Miguel Vallejo

John Conry (Sewer Rats’ Team Captain) and Ops Challenge judges observe pressure testing of pipe repair event. No leaks!

Cordell Samuels (left), WEF President, presented MWRD Commissioner Debra Shore with the Water Environment Federation’s Public Official award.

Sign of the Times.

(from left to right) Sandra Ralston, President- Board of Trustees 2013-14; Ed McCormick, resident-Elect; Matt Bond, Past President 2011-12.

(Anirudh Jain, winner of the U.S. Stockholm Junior Water Prize, shows off his celebrated project, “Use of Sulfidation as a Novel Method for Reducing the Toxicity of Silver Nano-Particle Pollution.”

(Anirudh Jain, winner of the U.S. Stockholm Junior Water Prize shows off his celebrated project, “Use of Sulfidation as a Novel Method for Reducing the Toxicity of Silver Nano-Particle Pollution.”

Keynote Speaker Kevin Carroll, author of “Discover Your Red Rubber Ball”

WEFTEC welcomes Illinois Gov. Pat Quinn

Opening Session Panel (left to right) Moderator G.Tracy Mehan III, former EPA Assistant Administrator for Water; Principal Cadmus Group; Chew Men Leong, Chief Executive, PUB Singapore; Sue Murphy, CEO, Water Corporation of Western Australia; Harlan Kelly Jr., General Manager San Francisco Public Utilities Commission; Heiner Markhoff, President and CEO, GE Water & Process Technologies.
Plant Profile
By Tim Farrell, Plant Operations Committee

Location
Village of Hampshire, Kane County, IL
Utilities Supervisor/Lead Operator
Mark Montgomery

Influent Design
Design average flow 2.76 MGD
Design maximum flow 6.90 MGD
Design Loading 4,695 pounds BOD
5,524 pounds TSS

Discharge limits
BOD 10 mg/L (30 day average)
TSS 12 mg/L (30 day average)
Ammonia (Mar-May/Sept-Oct) 1.5 mg/L (monthly average); 3.8 mg/L (weekly average)
Ammonia (June-August) 1.4 mg/L (monthly average); 3.5 mg/L (weekly average)
Ammonia (Nov-Feb) 1.8 mg/L (monthly average); N/A mg/L (weekly average)
Phosphorus 1 mg/L (30 day average)
Total Nitrogen Monitor Only

Effluent Performance (2012)
Avg. Flow 0.903 MGD
BOD 1.2 mg/L
TSS 5.8 mg/L
Ammonia 0.02 mg/L
Phosphorus 0.82 mg/L

The Hampshire Wastewater Treatment Facility was originally constructed in 1956, and has grown with several expansions that took place in 1965, 1979, 2003, 2007 and 2010.

From 1999 to 2010, the Village of Hampshire partnered with EEI to champion the three expansions to their wastewater treatment facility (WWTF). The 0.75 MGD project consisted of expansion and modernization of the WWTF by converting the existing fixed film RBC and trickling filter plant to an activated sludge oxidation ditch system within the footprint of the existing facility. The 1.50 and 2.76 MGD projects addressed additional capacity requirements, stricter effluent standards, biological and chemical phosphorus removal, and enhanced tertiary treatment.

The final improvements consisted of headworks equipment including climber and perforated screens, screenings washing presses, a grit tank and classifier, raw sewage pumping, two 3-ring oxidation ditches with BNR control, alum chemical feed, four final settling tanks, tertiary disk filters, UV disinfection, an eight acre polishing wetland, a laboratory/office building, and a complete SCADA system. Biosolids management facilities include a thickening building containing a 2-meter GBT and RAS/WAS pumping, four aerobic digestion tanks with jet mixing and DO controlled blowers on VFD’s, a dewatering building containing two centrifuges and a screw conveyor, and a storage building for 150 days of biosolids storage.

The Hampshire Wastewater Treatment Facility is unique for polishing wetlands to supplement effluent treatment prior to discharge into Hampshire Creek. The nearby natural plant and aquatic species offers a special, advanced treatment option to achieve high quality effluent.

The NPDES permit condition also establishes a goal of 2% of treated effluent for non-potable water uses. The plant’s non-potable water system recycles treated effluent water for non-potable water uses throughout the facility and makes it available to outside contractors for irrigation or other non-potable uses.
Mary Johnson, Tim Kluge, and John Lamb attended the WEFTEC House of Delegates meeting on Saturday, October 5 in Chicago.

The morning session included a review of the previous year’s activities and the business plan for the coming fiscal year. Of particular interest to IWEA members was WEF’s plan to increase dues. (See separate article on page 10)

In addition, several invited speakers talked about their organizations and initiatives.

- Linda Kelly spoke about WEF’s Value of Water public awareness campaign. Its aim is to educate and raise public knowledge of the value of water and the water industry as well as increase investment in and support of water infrastructure. WEF is partnering with AWWA, NACWA, AMWA, and several private entities in this effort. You can learn more about this campaign at www.thevalueofwater.org.

- Monica Brown of Water for People spoke about the organization’s commitment of water for “everyone forever”. To implement this goal, WFP not only brings water and sanitation projects to underserved regions, but partners with local communities to monitor and maintain installations.

- Carl Janson spoke about WEF’s participation in the July 2013 Boy Scout Jamboree in Bechtal Reserve in Beckley, West Virginia. Approximately 1,000 scouts visited the WEF exhibit.

- Ken Kirk of the National Association of Clean Water Agencies gave an update on utilities of the future.

- Jeanette Brown spoke about WEF’s Operator Strategy Group. This group will formalize a long-term strategy that addresses operator member needs and is in line with the WEF strategic plan. Projects include improving website and database resources for operator training, developing apprentice programs, expanding operator training sessions associated with WEFMAX meetings, and updating manuals of practice, especially MOP 11.

- Delegates were also briefed on WEF’s 2014 Business Plan, which includes Value of Water messaging described above, an emphasis on resource recovery (nutrients, energy, and water), and a stormwater initiative.

All WEF Delegates are asked to participate in a work group and these groups met during the afternoon session.

Tim Kluge joined the Non-Dispersibles Work group. This group will deal with issues related to non-dispersibles, such as “flushable” wipes, that do not break down after entering a public works collection system. The group plans to identify utilities impacted by non-dispersibles, collect MA position papers and draft legislation documents for a resource library, collect and share public education materials, and develop presentations for WEF and MA events.

Mary Johnson joined the Member Association Leadership Development Work group. This group will assess MA Leadership training needs, evaluate currently available resources, and develop guidance documents and presentations that may be used in peer-to-peer training sessions at WEF and MA leadership events.

The October 2013 House of Delegates meeting was the last meeting of John Lamb’s term as an IWEA Delegate. Many thanks to John for his dedicated and ongoing service to the Illinois Water Environment Association.
In many surface waters, human activities have elevated nutrient concentrations beyond native conditions. The USEPA, in concert with the IEPA, is currently considering initiatives to limit nutrient concentrations in an effort to reduce or eliminate local water quality impairments and hypoxia in the Gulf of Mexico.

Existing Rules
For many years, Illinois has had water quality standards for various forms of nitrogen and phosphorus for different types of receiving waters. For instance, there have been concentration limits for total phosphorus in lakes to reduce the potential for eutrophication. Due to the potential health impacts of drinking water with high nitrate-nitrogen concentrations, there have been nitrate-nitrogen limits for discharges to surface waters used as public water supplies. Ammonia-nitrogen is limited in ambient waters because of its toxicity to aquatic life.

These standards have been translated into POTW discharge permits in different ways. There are also several newer rules and policies that result in POTW control requirements for total nitrogen and phosphorus independent of the water quality standards.

The current rules have a technology-based effluent standard that limits total phosphorus concentrations for larger POTWs that discharge close enough upstream to impact lake water. The technology-based limit now includes all major treatment plants that are undertaking an expansion. This extension, known as the interim phosphorus standard, affects treatment plants regardless of their proximity to lakes or streams.

Additionally, the anti-degradation rules have been applied to expanding POTWs resulting in those POTWs being required to construct and operate de-nitrification facilities, without a corresponding permit limit for total nitrogen.

Narrative Standards
In response to USEPA’s nutrient initiatives, Illinois EPA has undertaken an extended effort to develop nutrient standards for streams in Illinois. In their research, they found nutrients have little adverse impact on stream health in Illinois, with certain limited exceptions.

In response, IEPA has modified the State’s narrative water quality standards for offensive conditions. It specifically defines the measurement of streams for nutrient impacts, and applies phosphorus effluent limits to major POTWs above stream segments. IEPA has had an extensive stakeholder process to vet this regulatory proposal, and has preliminarily presented it to USEPA. The IEPA has been told that its proposal is not completely consistent with USEPA’s expectations for ambient concentration limits, but if adopted, IEPA’s proposal would result in the significant reduction of nutrient loads in receiving waters.

Illinois Nutrient Strategy
At the request of USEPA, Illinois EPA has partnered with the Illinois agricultural community to develop a statewide strategy for nutrient reduction. Agricultural activities are a significant source of both nitrogen and phosphorus in Illinois water. The strategy will address many issues including:

- State-wide narrative standard development
- Intrastate nutrient loading concerns (Gulf of Mexico hypoxia) and ways to reduce and reverse the historic trend of increasing nutrient loading tributary to the Gulf of Mexico via the Mississippi River
- Costs and feasibility of nutrient loading reduction both from point sources (primarily POTWs), as well as non-point sources (agriculture, urban stormwater runoff, etc.)
- Identification and prioritization of watersheds with the heaviest nutrient contributions
The Metropolitan Water Reclamation District of Greater Chicago put together a team to compete in the Operations Challenge event at WEFTEC this year, sponsored by the Illinois Water Environment Association. The IWEA “Sewer Rats” (pictured above from left to right) consisted of Matt Jurjovec, John Conroy, Miguel Vallejo and Josh Filler. Operator Challenge teams are primarily made up of four tradesmen who work in maintenance, with one member from operations.

The Sewer Rats entered the competition with high expectations, but were also realistic as first-time competitors. They placed third in their division of thirty-one teams, which was a great accomplishment for a new team! They also brought home third-place trophies in two individual events, the lab and process control test.

The Operations Challenge consists of five events related to maintenance and operations at a treatment plant. Challenge categories include: Lab, Process Control, Collections, Maintenance and Safety. The same team members compete in all of the timed events and the goal is to finish as quickly as possible without any time penalties, which are given for improper technique or incorrect safety procedure.

Competing in Operations Challenge is a great opportunity for teams to showcase their skills and expertise. It’s also an excellent training tool for everyday skills, such as safety and maintenance, and a way to cross-train employees in areas that they normally would not see. For example, the lab event consists of setting up and performing a BOD test and the process control event requires extensive knowledge of plant processes and controls. The cross-training can benefit employees when they need to troubleshoot problems in the plant or collection facilities.
Water Environment Federation Dues to Increase
By Mary Johnson, Delegate 2016

IWEA members who are also members of the Water Environment Federation will see a dues increase as of January 2014. This increase will be reflected in the renewal notices generated after September 2013.

The WEF portion of annual dues for professional and academic members will increase from $88.00 to $101.00. PWO member dues will increase from $47.00 to $54.00. The IWEA portion of annual dues will remain the same at $15.00.

The WEF Board of Trustees has also approved unspecified dues increases for 2015 & 2016. WEF uses dues to provide services to individuals and member associations. Member benefits include Water Environment & Technology magazine, discounted conference registration, public education, and no-charge webcasts and technical information. MA resources include membership recruitment, awards and recognition, dues billing and collection, website resource center, WEFMAX meetings, e-News, and the Water Advocates program.

WEF estimates the costs of providing these services to each member to be $252.00. Because WEF has not had a significant dues increase in the past 10 years, there is a significant gap between cost of service and dues.

It is important to note that WEF’s membership rates traditionally have been and will remain the lowest among national associations.

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<th>HOW DO WEF’S INDIVIDUAL DUES COMPARE WITH OTHER MAJOR WATER SECTOR ORGANIZATIONS?</th>
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<td>Water Environment Federation</td>
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<td>International Water Association</td>
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<td>American Water Works Association</td>
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<td>American Society of Civil Engineers</td>
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WEF consistently has increased the quality and quantity of products and services by providing the highest quality of water education, networking, and business opportunities – as well as providing new programming in vital water sector areas, including innovation, stormwater, and energy. The organization looks forward to continuing to provide excellent service and education to its membership.

Ammonia-Nitrogen Criteria

USEPA also recently published new criteria to determine the level of ammonia considered toxic in ambient waters. The new levels are roughly half of those currently used to develop ammonia-nitrogen treatment plant effluent limits.

Illinois EPA is expected to revise the water quality standards in Illinois to reflect the new federal criteria. Lower water quality standards in Illinois will likely result in lower treatment plant effluent limits for ammonia-nitrogen at Illinois POTWs. Illinois EPA needs to evaluate many details to determine the extent and schedule of these changes.

THE STRATEGY IS EXPECTED TO BE COMPLETED IN THE LATER HALF OF 2014.
For additional information please refer to www.epa.state.il.us/water/nutrient/index.html

Continued from page 8
How Long Have You Been a Wastewater Operator? 25 years or more?

By Pat Schatz, Awards Chair

Join the WEF Quarter Century Operator Club!
When you started in the wastewater profession…
• …did George H. Bush defeat Michael Dukakis in the Presidential election?
• …was the Hubble Space telescope launched into space?
• …did a postage stamp cost 24 cents?
• …were Rainman, Big and Who Framed Roger Rabbit the hit movies?

Well, that was the year 1988! It is now 25 years later so you may be eligible to join the WEF Quarter Century Operator Club.

The Quarter Century Operator Club recognizes operators of wastewater treatment facilities for their service and dedication in a difficult and dangerous profession.

Eligibility Requirements:
• Member of WEF for a minimum of five consecutive years immediately preceding application.
• Significant, full-time participant in the water environment profession for a minimum of 25 years, 10 years of which must have been in active participation in the day-to-day collections, maintenance, operations, laboratory, or management of a wastewater transportation or treatment facility.
• Completed and signed application.
• Complete and detailed resume of experience.

For more information and the application form, go to www.WEF.org the award section or contact Pat Schatz, IWEA Awards Chair.

On Sunday, October 6, the Learning Lounge highlighted wastewater research by Rockford University. The segment highlighted ongoing research to determine the prevalence of antibiotic resistance among bacterial populations from wastewater effluent compared to the local Rock River. Additionally, the research determined whether these resistant strains could potentially cause human disease by analyzing toxin production and identifying bacterial species associated with human disease.

Jenilee Johnson, Rockford University student and WATERCON 2013 poster first place prize recipient, presented Serine Protease Activity Correlated with Cytotoxicity among Aeromonas Isolates from the Rock River and a Local Wastewater Reclamation Plant in the learning lounge. (Photo courtesy of Lou Storino, MWRDGC)

Haines Elementary students, staff and volunteers from around the world stand in the rain garden that will prevent flooding on the playground and serve as a lasting reminder that students and young professionals can change the world! (Photo courtesy of Dan Wendt, MWRDGC)

Sarah Stringer presenting her research work Aeromonas hydrophila and A. veronii Identified Among Cytotoxic and Hemolytic Tetracycline Resistant Aeromonas Isolates from Rock River and Local Wastewater Reclamation Plant in the learning lounge. (Photo courtesy of Lou Storino, MWRDGC)
IWEA Operations Challenge Coming to WATERCON 2014!

By Gunilla Guilding, Watershed Management Committee

The Plant Operations Committee has been very busy this year planning the “Event of the Century”, well . . . so far anyway. Next year, IWEA will have its first ever Operations Challenge. “Whoa down there Nelli!” This event is not as extensive as WEFTEC, but will take place Monday, March 17, 2014 at 1 pm in the center aisle of the Exhibit Hall.

The goal of the Operations Challenge is to provide a fun but educational experience. The four areas of competition will be Laboratory, Maintenance, Safety, and Operations.

The Laboratory challenge (SM 4500-CL G) will consist of a low-level chlorine analysis. Each participant will be required to don the provided goggles, lab coats, aprons, and gloves. Emphasis will be on procedure, technique, set up and clean up. The challengers will be evaluated on 20 different aspects of the analysis. Judges will be knowledgeable and stringent, just like the regulators!

The Maintenance challenge will consist of work on a rotary lobe pump. The challengers will use the provided equipment and tools necessary to remove the lobes and rebuild the pump. Grading will be on 20 different aspects of the job including preparations, maintenance techniques, clean up, and use or lack of profanity. Judges are industry professionals and equipment representatives, so be on your toes!

The Safety challenge will be a difficult one requiring simulated entry into a hazardous atmosphere confined space. Participants will have to pretend for entry by suiting up with the required safety gear including a tyvek suit, gloves, helmet, mask, and harness. They will need to hook up to a tripod and have a permit and air monitor. You know.. the paperwork! Grading will be based on correct confined space entry procedures as defined by 29 CFR 1910.

Whew, exhausting!

Sharpen up your wits! The Operations challenge is a quiz developed by the high academics at the Environmental Resources Training Center. These guys say the quiz will challenge even the most knowledgeable and astute operator. It’s short, but the scenario will make you think.

The grade sheets will be submitted to the Head Judge table. There, in a top-secret, high- security area, the knowledgeable judges will tabulate the results. The winners will be announced at the end of the event. Each participant will be awarded a Certificate of Achievement. The winners of each event, individual and team, will receive a trophy and the undying respect and adulation of the crowds.

This event is for team or individual participation. Teams can be made of 2-4 people. Each member of the team must enter at least one challenge. Individuals may choose to enter just one challenge or all four, making it easy to participate as you wish. Information on registration for the Operations Challenge will be forthcoming.

Welcome New Members

By Frederick Wu, Membership Chair

JULY
Ghanshyam Chandu Patel
MWRDGC
Allison Fore
Jillian Ann Goodlove
Tretter and Associates, Inc.
William G. Hart
Woodard & Curran
Andy Jackson
Woodard and Curran
Andrew Lorenz
URS Corporation
Timothy R. Brown
City of East Moline

MEGHAN HARTMAN
Engility Corporation
Hiteshkumar C. Shah
MWRDGC
Mo Wright
RAMA Consulting Grp.
Joseph Evers
City of Elgin
Andrew Erikson
CH2M HILL
Cameron Jones
Benton & Associates, Inc.
Paul May
Burr Ridge, IL
Ms. Katherine Lazicki
ARCADIS-US
Keith Schmuck
3M
Joseph C. Renn
City of Naperville - SWRC
Thomas J. Johnson
MWH Americas, Inc.
Paul May
Burr Ridge, IL
Ms. Katherine Lazicki
ARCADIS-US
Keith Schmuck
3M
Joseph C. Renn
City of Naperville - SWRC

SEPTEMBER
Thomas J. Johnson
MWH Americas, Inc.
Rafael Velázquez-Monroy
MBE Cleantech
Leslie Earl Peterson III
River City Construction LLC
Dr. Meltem Urgun-Demirtas
Argonne National Laboratory
Ratul Roy
Gurmanpreet Singh Bhalpaul
Illinois Institute of Technology
Xin Song
Northwestern Univ. Library
Angelica Sunday
Green Infrastructure Referenced in Illinois Code

Following last spring’s historic flooding in which 35 Illinois counties were declared disaster areas, Governor Pat Quinn signed legislation which includes green infrastructure as a means to handle stormwater runoff and address flooding. Public Act 098-0330, which was signed in mid-August, gives municipalities a greater ability to build and invest in innovative stormwater management infrastructure such as green roofs, rain gardens, bioswales, tree boxes, porous pavement, native plantings, constructed wetlands and more. The law expands to include these measures as well as many others a municipality can employ to help prevent flooding.

Specifically, the law declares that cities and villages, “for drainage purposes may lay out, establish, construct, and maintain drains, storm sewers, detention basins, retention basins and other ‘green infrastructure’ facilities… ditches, levees, dykes, pumping works, and machinery, and may acquire the necessary land and machinery therefore, and in this manner may provide for draining or otherwise managing the runoff, such as by infiltration, evapotranspiration, or collection, on any portion of the land within their corporate limits, by special assessment upon the property benefited thereby, or by general taxation, or a combination of both. No lot, block, tract, or parcel of land, however, shall be assessed more than once in any one year by a municipality for maintenance.”


Chicago MWRD Commissioners Adopt Watershed Management Ordinance

On October 3, 2013, the Metropolitan Water Reclamation District of Greater Chicago (MWRD) unanimously adopted the Cook County Watershed Management Ordinance (WMO). MWRD began developing the WMO in 2007 pursuant to its stormwater management authority granted by the Illinois General Assembly. The WMO establishes uniform stormwater management regulations for Cook County in order to abate the negative effects of stormwater runoff and help to prevent flooding from new upstream commercial, municipal, and residential developments or redevelopments. The WMO incorporates comments...
received during both the 2009 and 2013 public review periods, results received from an Economic Impact Study, and input from the WMO Advisory Committee. The full text of the adopted WMO, which goes into effect on May 1, 2014, can be downloaded from MWRD’s website at http://wmo.mwrd.org.

EPA’s New Guide for Infiltration Practices at Vacant Parcels and Brownfields

In July 2013, EPA released a new guide to help communities, developers, and other stakeholders determine the appropriateness of infiltration at vacant parcels and brownfield sites. A brownfield is a property where redevelopment or reuse may be complicated by the presence (or likely presence) of contamination. Many cities are interested in revitalizing urban areas by redeveloping vacant parcels and brownfield sites. Integrating green infrastructure into these sites can provide many environmental and community benefits. However, while vacant or underutilized parcels may seem ideal for locating infiltration-based stormwater practices, it is important not to mobilize the contaminants in the soil or the risk of groundwater contamination will increase.

After the stakeholder conducts a detailed site investigation to identify the location, limits, and contaminants in soil and groundwater, the guide walks them through a decision-tree built around the following questions to determine whether infiltration or other stormwater management approaches are appropriate for a specific brownfield property:

- Is a LNAPL, DNAPL, biodegradable waste, or leachable contaminant source present at the site?
- Is groundwater beneath the property impacted or could it become impacted?
- Are areas or parts of the property not impacted?
- Are there State standards that can be referred to as a guide in making decisions?
- Will infiltration interfere with any required remediation?
- How does the site interact with other sites or land uses nearby?

The guide is available for download at http://water.epa.gov/infrastructure/greeninfrastructure/upload/brownfield_infiltration_decision_tool.pdf.

Clean Water Scholarship

By Mary Johnson, Scholarship and Charitable Giving Chair

NOW ACCEPTING APPLICATIONS!
APPLICATIONS WILL BE ACCEPTED THROUGH JANUARY 31, 2014

Applications are now being accepted for the IWEA Clean Water Scholarship, which aids students who are preparing for careers working with the water environment. The Scholarships are valued up to $1000.00 and available to Illinois students for use during the 2014/15 academic year.

Winners will be announced at IWEA’s Annual Conference, traditionally held in March. Applications will be accepted through January 31, 2014.

To apply, students must meet the following eligibility requirements.

- Be an Illinois resident or attend an accredited Illinois college or university.
- Have completed at least two years of their undergraduate education at time of the award. Graduate students are also encouraged to apply.
- Have a cumulative college GPA of at least 2.5.
- Be a full-time student enrolled in a water related field of study such as civil or environmental engineering, environmental science, or wastewater systems operation.

Congratulations to our past scholarship winners!

2013  Ian Bradley  University of Illinois
2013  Sara Glade  Illinois Institute of Technology
2012  Damien Di Vittorio  Southern Illinois University
2011  Tadeusz Bobak  Illinois Institute of Technology

For more information or an application, visit the scholarship page at http://www.iweasite.org/Education/ClnWtrSchol.htm.
2013-2014 Executive Committee

Illinois Water Environment Association Executive Board

<table>
<thead>
<tr>
<th>Member/Position</th>
<th>Affiliation</th>
<th>Telephone/Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dan Bounds, President</td>
<td>CDM Smith</td>
<td>(312) 346-5000 <a href="mailto:boundsdg@cdmsmith.com">boundsdg@cdmsmith.com</a></td>
</tr>
<tr>
<td>Kendra Sveum, President Elect</td>
<td>Donohue &amp; Associates, Inc.</td>
<td>(312) 583-7233 <a href="mailto:ksveum@donohue-associates.com">ksveum@donohue-associates.com</a></td>
</tr>
<tr>
<td>Lou Storino, First Vice-President</td>
<td>MWRDGC</td>
<td>(312) 751-3167 <a href="mailto:louis.storino@mwr.org">louis.storino@mwr.org</a></td>
</tr>
<tr>
<td>Mark Termini, Second Vice-President</td>
<td>Village of Addison</td>
<td>(630) 279-2140 <a href="mailto:MTermini@addison-il.org">MTermini@addison-il.org</a></td>
</tr>
<tr>
<td>Mary Johnson, Corporate Secretary &amp; WEF Delegate 2016</td>
<td>Rock River Water Reclamation</td>
<td>(815) 387-7523 <a href="mailto:mjohnson@rrwrd.dst.il.us">mjohnson@rrwrd.dst.il.us</a></td>
</tr>
<tr>
<td>Debra Ness, Treasurer</td>
<td></td>
<td>(630) 553-8377 <a href="mailto:Debraness1360@comcast.net">Debraness1360@comcast.net</a></td>
</tr>
<tr>
<td>John Lamb, Delegate 2013</td>
<td>City of St. Charles</td>
<td>(630) 377-4918 <a href="mailto:jlamb@stcharlesil.gov">jlamb@stcharlesil.gov</a></td>
</tr>
<tr>
<td>Tim Kluge, Delegate 2014</td>
<td>Sanitary District of Decatur</td>
<td>(217) 422-6931 ext. 214 <a href="mailto:timk@sddcleanwater.org">timk@sddcleanwater.org</a></td>
</tr>
<tr>
<td>Krishna Pagilla, Past President</td>
<td>Illinois Institute of Technology</td>
<td>(312) 567-5717 <a href="mailto:pagilla@iit.edu">pagilla@iit.edu</a></td>
</tr>
<tr>
<td>Laurie Frieders, Executive Director</td>
<td>IWEA</td>
<td>(630) 301-6825 <a href="mailto:ExecMgr@iweasite.org">ExecMgr@iweasite.org</a></td>
</tr>
</tbody>
</table>

First Quarter Financial Report

By Debra Ness, Treasurer

The first quarter of the IWEA fiscal year ran from July 1 through September 30. During this quarter, IWEA received the profit from the WATERCON 2013 meeting. IWEA had a total income of $63,518.60, and total expenses of $34,572.41, for a net profit of $28,946.19 in the first quarter.

Moving into the second quarter, IWEA will need to file the required IRS Form 990EZ. This is filed annually under the Federal IRS statutes as a 501(c)(3) organization. IWEA will also file the required Attorney General report in December.

Financial Statement

Account totals to date are as follows:

<table>
<thead>
<tr>
<th>Bank Accounts</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community Bank</td>
<td>$109,720.80</td>
</tr>
<tr>
<td>Science Fair Fund</td>
<td>$3,976.11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Asset Accounts</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 Month Reserve CD</td>
<td>$12,365.19</td>
</tr>
<tr>
<td>24 Month Reserve CD</td>
<td>$12,852.80</td>
</tr>
<tr>
<td>12 Month Reserve CD</td>
<td>$10,098.32</td>
</tr>
<tr>
<td>24 Month Reserve CD</td>
<td>$10,176.45</td>
</tr>
</tbody>
</table>

**Total**                          | **$159,189.70**

Trivia Answer: Located in the Mississippi watershed, Charles Mound is a gentle, 1,235-foot high hill near the town of Scales Mound and 11 miles northeast of Galena.
Illinois Water Environment Association is a Member Association of the Water Environment Federation dedicated to improving Illinois' surface, sub-surface and atmospheric water. The ILLINOIS CLARIFIER is a quarterly publication of IWEA providing pertinent information by, for and about IWEA Members. The opinions contained herein are those of the authors and not necessarily those of the IWEA or the ILLINOIS CLARIFIER committee. Copy deadlines are the 15th of January, April, July and October. Direct comments and inquiries to: Illinois Clarifier, Karen Dix Managing Editor; email: ILClarifier@juno.com; website: http://iweasite.org/ Printed on recycled paper. Share with a friend and prospective member, then recycle.

Keep your eyes open for these upcoming events!

IWEA Calendar of Events

<table>
<thead>
<tr>
<th>Date</th>
<th>Meeting/Activity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 14, 2013</td>
<td>Collections Systems Seminar &amp; Exhibition</td>
<td>Hyatt Hotel – Lisle, IL</td>
</tr>
<tr>
<td>November 20, 2013</td>
<td>Biosolids Seminar</td>
<td>MWRDGC Stickney Treatment Plant – Cicero, IL</td>
</tr>
<tr>
<td>December 6, 2013</td>
<td>Executive Board &amp; Committee Chair Meeting</td>
<td>Starved Rock Lodge – Utica, IL</td>
</tr>
<tr>
<td>January 10, 2014</td>
<td>Government Affairs Conference</td>
<td>Chicago Marriott Southwest – Burr Ridge, IL</td>
</tr>
<tr>
<td>March 17-20, 2013</td>
<td>WATERCON 2014</td>
<td>Crowne Hotel Plaza – Springfield, IL</td>
</tr>
</tbody>
</table>

Government Affairs Seminar

By Lou Kollias, Government Affairs Chair

The 2014 Joint Government Affairs Seminar with Central States WEA will be held on Friday, January 10, 2014 at the Chicago Marriott Southwest located at 1200 Burr Ridge Parkway, Burr Ridge, Illinois. Speakers will be announced within the next few weeks so watch for further details in future E-blasts and calendar notices.