The Water Environment Federation (WEF) proudly announced the 2015 WEF Awards recipients, honoring two Illinoisans at the recent WEFTEC meeting: the Honorable Laurel Prussing, Mayor of Urbana, IL and Commissioner Frank Avila, Metropolitan Water Reclamation District of Greater Chicago. Both received the WEF Public Officials Award.

The annual awards program recognizes individuals and organizations that have made outstanding contributions to the water environment profession, WEF, and its Member Associations.

Recipients include individuals and organizations that contribute to the sustainability of water resources and make
President’s Corner
By Lou Storino, IWEA President

WEFTEC 2015 – Chicago, held Sept. 26-30 at McCormick Place, provided an abundant opportunity for water sector enrichment. IWEA members participated in all aspects of the conference: planning committees, moderating and presenting at technical sessions/workshops, exhibiting in the great hall, competing in the Operation Challenge, attending meetings and networking at the IWEA/CSWEA Welcome Reception and other events. Thank you for your participation and representation of IWEA at this incredible event, One World, One Water, One Event – WEFTEC. Please encourage your colleagues to join WEF and IWEA, and to participate in our events.

Following WEFTEC, IWEA participated in the Imagine a Day Without Water campaign, Oct. 6-8, a national education campaign to engage the public and key stakeholders about how water is essential, invaluable, and needs investment. The campaign is an education advocacy effort by the Value of Water Coalition. You received an email during the campaign, and if you follow IWEA on LinkedIn, Twitter or Facebook, you also saw various aspects of the campaign, such as the “Water is Essential” flow chart (pictured below). I encourage every member to participate by sending IWEA a photo illustrating what the “Value of Water” means to you. Photos will be posted on the IWEA website and may be submitted to Mary Johnson at mjohnson@rrwrld.dst.il.us.

The conference planning committee has been hard at work planning the 37th Annual IWEA Conference, Life is Good Water – Renew for the Future, Feb. 29 – Mar. 2, 2016 at the iHotel in Champaign, IL. The conference will open with Raj Bhattarai, Environmental and Regulatory Services Division Manager of Austin Water Utility, Austin, Texas, speaking on resource recovery. Be sure not to miss his keynote address.

An ad-hoc committee of IWEA volunteers, led by Chuck Corley, is planning WEFMAX 2016 at the Hard Rock Hotel Chicago, May 4-6, 2016. WEFMAX is a WEF-budgeted annual program offering Member Association (MA) leaders an opportunity to attend one of four meetings each year that provides a forum to learn what is new from WEF. It also provides sessions for ongoing exchange of MA information. With WEF, Member Associations volunteer to jointly sponsor a WEFMAX meeting. Please mark your calendar and plan on attending.

Looking to April 2017, the Executive Board is working with the Illinois Association of Water Pollution Control Operators in planning a joint conference in Springfield, IL.

Water is Essential

PROBLEM
Water infrastructure and resources are at risk

SOLUTION
Investment in water must be a top priority

FUTURE
Ensure clean, safe water so all communities can thrive
a profound impact on the future through involvement with water professionals and education.

Mayor Laurel Prussing is the first woman mayor of Urbana. She was first elected in 2005 and has been re-elected twice. Mayor Prussing earned a B.A. in Economics from Wellesley College, a M.A. from Boston University and is near completion of a Ph.D. in Economics (Public Finance) from the University of Illinois.

Mayor Prussing has demonstrated a strong commitment to improving and protecting the water environment and preserving Urbana’s natural resources. She has inaugurated and seen the completion of the Boneyard Creek Master Plan, a project that enhanced the physical appearance of the creek through naturalization, landscaping, bank stabilization and other amenities, while maintaining the creek’s primary drainage function. She has fought to protect the Mahomet Aquifer, her city’s primary source of drinking water. Mayor Prussing has also focused on improving Urbana’s stormwater management and infrastructure.

Commissioner Frank Avila was elected to the MWRD Greater Chicago Board of Commissioners in 2002 and was re-elected in 2008 and 2014. He is the Chairman of the Engineering Committee, Finance Committee, the Maintenance and Operations Committee and the Public Health and Welfare Committee. He is also Vice-Chairman of the Affirmative Action Committee and the Industrial Waste/Water Pollution Committee.

Commissioner Avila works to protect the health and safety of the public and protect the quality of water in the Chicago area waterways. His top priorities include cost-effective wastewater treatment, flood prevention, and the regulation of waste disposal to protect our waterways by eliminating toxic chemicals from the source to prevent endocrine disruption.

Commissioner Avila received his B.S. in Civil Engineering from the University of Illinois-Champaign in 1961 and his M.S. in Finance from the University of Arizona-Tucson in 1968. He owned a civil engineering company, Avila & Associates, Inc. and practiced engineering and land surveying for more than 45 years.

Welcome New Members!  
By Frederick Wu, Membership Chair

SEPTEMBER
Craig Blanchette, Aqua Illinois  
Hao Chen  
Michael Colby  
Robert Czernek  
Joe Dinkel  
Amanda Fiegel  
Ivonne Friday, Bloomingdale Township  
Timothy Hopkins, Aqua Bio Technologies  
Jayashree Jayaraj  
Diana Kapanzhi  
Marcy Knysz  
Amanda Lardizabal  
Dabney Lyles  
John Robak, Greeley & Hansen LLC

Jay Shetty  
Seth Snyder  
Laura Southworth  
Yijie Tian

AUGUST
Aubree Basso  
Michael Cunningham  
Douglas Erickson  
Charles Jackson  
Michael Ott, Strand Associates  
Shane Remmert, Crawford, Murphy and Tilly  
Paul Ruscko, HR Green  
Mark Wagstaff, M3 Engineering Group, PC  
George Zurmely, City of Streator

JULY
Ambria Benesch  
Nichole Brown, Baxter Woodman  
Fatima Farooqi  
Jason Jones  
Sanjay Kottapalli  
Emma Lamblin  
Lillian Oliver  
Daniel Reynolds  
Paul Roots  
Zack Sasnow  
Kruti Sutaria  
Isabel Trumbull  
Anthony Warmack
IWEA Goes to WEFTEC

WEFTEC 2015, Water Environment Federation’s Annual Technical Exhibition and Conference, came to Chicago’s McCormick Place in September. Members of IWEA were everywhere, enjoying all the meeting had to offer.

Thanks to our official photographer Ted Denning for all these lovely pictures!
Opening Session

Operations Challenge
Delegates’ Corner
By Mary Johnson, Delegate 2016 and Mark Halm, Delegate 2017

From Disruptive Change to a Revolution

This year at WEFTEC, the message at the opening general session was clear. Our industry, which has embraced Disruptive Change, is now leading a Revolution. We can no longer single-mindedly think of wastewater treatment plants as industrial facilities with the purpose of reclaiming water, but must instead embrace the idea that wastewater treatment plants can be truly green factories. The executives, chemists, operators, mechanics, engineers and biologists within our industry are uniquely qualified to take the century old mission of reclaiming water into new realms: creating green energy with renewable fuels, harvesting nutrients and even precious metals.

WEFTEC provides a great forum for the exchange of ideas and technologies. WEFTEC 2015 can boast 20,385 attendees, 1,027 exhibitors and more than 1,000 presentations. There is an energetic buzz at WEFTEC. You can continue the buzz and make your voice heard by becoming a water advocate and engaging elected officials and the public on water issues. WEF is providing training with the goal of creating a network of advocates in every state. To find out more about this program, visit http://www.wef.org/wateradvocates/. Some ammunition to lead a local revolution can also be found at the Value of Water Coalition, www.thevalueofwater.org. The media kit on the Value of Water Coalition website includes facts and figures that will grab the attention of people involved in our industry, and perhaps more importantly, those who do not understand the true value of water.

The challenge for many of us is keeping the adrenaline flowing after WEFTEC. One great opportunity is by generously giving your time and talent and leading a local revolution by becoming an active member of an IWEA Committee. The committee descriptions are available at www.iweasite.org

In the coming year, Mary Johnson will be serving on the WEFMAX committee and Membership Workgroup within the House of Delegates (HOD), and Mark Halm will be serving on the Innovative Utility Management Workgroup. Please do not hesitate to contact Mary or Mark if you have questions, comments, or suggestions that you would like brought before the HOD.
The village of New Lenox Wastewater Treatment Plant No. 1 is located in downtown New Lenox near the Metra Train Station. The first wastewater treatment plant for New Lenox was built in the 1960's and sent the effluent to Hickory Creek.

A major expansion in 1989 brought the treatment plant into the 20th century with better technology. During this expansion, the effluent limitations got more demanding including treating ammonia nitrogen and de-chlorination.

Over the past 25 years, New Lenox has gone through many projects and expansions since the community was one of the fastest growing in the state from 1990 to 2008. New Lenox has added automated filters, more aeration tanks and final clarifiers to accept greater capacity, a chemical nutrient removal system, an additional 750,000-gallon sludge storage tank with cover and a gravity belt thickener to thicken the sludge. They have also built a new office and maintenance garage plus added supervisory control and data acquisition (SCADA) to assist remotely in the operations of the plant, storm lagoon, and the 12 lift stations.

In 2005, New Lenox did a major improvement for odor control and installed covers for their digestion process and built odor control units. In 2007, New Lenox installed a gravity belt thickener that thickens the sludge and sends the remaining supernatant to the headworks. Adding some digesters, installing a gravity belt thickener and changing operational mode reduced solids at New Lenox. There was less to haul and the digestion process worked more efficiently as the population continued to rise.

### Plant Profile

**By Craig Soling, Plant Operations Committee Member**

**Location**

**Village of New Lenox**  
**Wastewater Treatment Plant No. 1**

**Superintendent**  
**Robert M. Turley**

<table>
<thead>
<tr>
<th>Influent Design</th>
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<tr>
<td>Design average flow</td>
<td>2.516 MGD</td>
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<tr>
<td>Design maximum flow</td>
<td>5.103 MGD</td>
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<table>
<thead>
<tr>
<th>Permit Effluent Limits in 2014</th>
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<tbody>
<tr>
<td>CBOD5</td>
<td>20 mg/L (daily max); 10 mg/L (monthly average)</td>
</tr>
<tr>
<td>TSS</td>
<td>24 mg/L (daily max); 12 mg/L (monthly average)</td>
</tr>
<tr>
<td>Ammonia (April/May/Sept/Oct)</td>
<td>2.9 mg/L (daily max); 1.3 mg/L (monthly average)</td>
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<tr>
<td>Ammonia (Nov-February)</td>
<td>1.3 mg/L (daily max); 2.8 mg/L (monthly average)</td>
</tr>
<tr>
<td>Ammonia (March)</td>
<td>3.1 mg/L (daily max); 1.5 mg/L (monthly average)</td>
</tr>
<tr>
<td>Ammonia (June-August)</td>
<td>1.8 mg/L (daily max); 0.6 mg/L (monthly average); 1.4 mg/L (weekly average)</td>
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<tr>
<td>D.O. (March-July)</td>
<td>5.0 mg/L (daily max); 6.25 mg/L (weekly average)</td>
</tr>
<tr>
<td>D.O. (August-February)</td>
<td>4.0 mg/L (daily max); 4.5 mg/L (weekly average); 6.0 mg/L (monthly average)</td>
</tr>
<tr>
<td>Fecal Coliform (MPN)</td>
<td>&lt;400 (daily max)</td>
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<tr>
<td>Cl2 residual</td>
<td>0.05 mg/L (daily max)</td>
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<tr>
<td>Total Nitrogen &amp; Zinc Monitor</td>
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<tr>
<td>Phosphorous</td>
<td>1.0 mg/L (monthly average)</td>
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<table>
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<tr>
<th>2014 Effluent Performance</th>
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<tr>
<td>Daily Influent Average Flow</td>
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<tr>
<td>CBOD5</td>
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<tr>
<td>TSS</td>
<td>1.88 mg/L</td>
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<tr>
<td>Ammonia</td>
<td>0.19 mg/L</td>
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<tr>
<td>Phosphorous</td>
<td>0.75 mg/L</td>
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This year’s Plant Operations Tour was held on Thurs., July 16 at the New Lenox Wastewater Treatment Facility. The tour gave industry professionals a look at the evolution of the treatment plant and some of their in-house projects.

The event was attended by approximately 20 people. Donuts and coffee were provided in the morning with some light-hearted discussion. Mike Turley, the Wastewater Treatment Plant Superintendent, provided the welcome and introduction and also discussed the history of the plant and improvements to the collection system.

EJ Equipment was on site and provided some hands-on experience with their televising camera truck. Many enjoyed driving the sewer televising camera around the yard. It wasn’t NASCAR, but it was fun. The village also had their sewer cleaner on display. The staff from New Lenox led another hands-on activity regarding manhole repair and chimney seals. If anyone needs help on how to reduce infiltration and inflow, call New Lenox. They have it down to a science.

After the hands-on activities, attendees had a pizza lunch provided by Walter E. Deuchler Associates, Inc. IWEA would like to thank them for their generosity! After lunch, the group toured the treatment plant. The tour focused on the recent improvements made to the chemical feed system, homemade odor control units and lab building.

The chemical feed system is comprised of storage tanks, feed pumps and piping. Alum is used at the plant and fed to a potential of nine locations. Staff is still working to determine the optimal dosing and locations. However, they feel that currently the best feed point is at the influent to the final clarifier based on the dosage required to achieve desired effluent TP.

Odor is a concern at the treatment plant since their aerobic digesters take primary sludge and the plant is located in the middle of town. In an effort to control and reduce odors, New Lenox staff covered the aerobic digesters and built odor control units comprised of wood chips and carbon. These units are fed passively by the exhaust air from the cover system by the blowers.

The lab was the last stop on the tour. Kathy Baltz presented some of the various tests she performs for plant operations along with tests for environmental groups and other agencies. The day concluded with everyone heading back to the administration building for water and ice cream (thank you Mike!) before heading home.

The IWEA Plant Operations Committee would like to thank the Village and its staff for the tour and for taking time out of their busy day to present and discuss their facility.
Under the guidance of their instructors, IWEA Operations Committee Member Rick Lallish and Kurt Neuhaus, the students in the water treatment technology program at the Environmental Resources Training Center (ERTC) of the School of Engineering at Southern Illinois University-Edwardsville recently installed an advanced wastewater treatment process at their training center. The students converted a 35-year old obsolete treatment system into an advanced Moving Bed Biofilm Reactor, also referred to as an MBBR.

"By utilizing the existing tank and piping, it was economically feasible to introduce the ERTC students to a new treatment process," explained Rick Lallish, Program Director for Water Reclamation.

An MBBR uses hundreds of one-inch diameter bio-discs, which look like a plastic version of Honeycomb cereal, to be the medium for the growth of a biological film layer. "The discs act like little apartment buildings where bacteria and other micro-organisms can live," said ERTC Director Paul Shetley. "Professionals in the water industry refer to the micro-organisms that help clean the wastewater as bugs."

According to Shetley, once the bugs move into their little homes, they begin eating the organic matter and cleaning up the water. The bio-discs are circulated throughout the water column using air bubbles pumped into the bottom of the tank. As the air bubbles rise, they provide oxygen for the bugs and, at the same time, the bubbles cause the water and the bio-discs to circulate.

The students’ hands-on training consists of the operation of the training-scale treatment plant housed at the center. The ERTC provides the students with the opportunity to operate five separate water treatment processes while attending the one-year program. There are three drinking water plants: a surface water, a groundwater and a membrane filter plant along with two wastewater treatment systems-- an activated sludge plant and the MBBR. The Center also houses two water quality teaching laboratories.

The ERTC offers a one-year certificate of completion in the Water Quality Control Operations Program. In conjunction with Lewis and Clark Community College, students may also earn an associate’s in applied science. Graduates from ERTC are eligible to take the state exams to become certified water treatment operators in Illinois and Missouri.

SIUE Students Build Advanced Water Treatment System

Submitted by Rick Lallish, Plant Operations Committee

The newly installed Moving Bed Biofilm Reactor is inspected by students in the one-year Water Quality Control Operations Program at the Environmental Resources Training Center at SIUE. Pictured from left to right: Jim Hoffmann of Highland, Nate Bailey of Hardin, Justin Whitney of Smithton, Rick Lallish (program director), Branson Keehner of Jacksonville, Austen Zimmer of Highland, Paula Ledoux of Belleville, and Adam Matthews of St. Louis.
The Fourth Annual IWEA NRR Workshop, co-sponsored by the Illinois Association of Wastewater Agencies and the Illinois Association of Water Pollution Control Operators, was held on Sept. 4 at the Medinah Shriners in Addison. The workshop brought together presenters from all facets of the industry: academia, consulting, municipalities, regulatory, and equipment manufacturing.

To kick off the program, this year’s keynote speaker, Dr. Art Umble of MWH presented an invigorating speech on balancing resources for the 21st century. According to a report titled “Charting Our Water Future”, published by the 2030 Water Resources Group, during an average economic growth scenario and assuming no efficiency gains, the global water demand would grow 40 percent above current accessible, reliable supply by year 2030. Main drivers for the global water challenge are due to economic growth and development, particularly in China. Despite the fact that demand of water for domestic use will decrease, and efficiency of water use in agriculture and industry will improve, the supply and demand gap is still far from being close. The problem could be exacerbated if we account for global climate change impacts on local water availability. It is apparent that water scarcity has become the “new normal”. As such, a new look on the water-energy nexus is deemed to be necessary.

Understanding the relationship of how water is demanded for energy production and how energy is required to produce clean water is crucial. Obviously, solving the global water crisis is not an easy task, but one sustainable solution that we can all play a role in is to treat waste streams as value streams. Wastewater treatment plants are essentially resource recovery factories where nutrient, energy, and water can all be recovered and reused. Dr. Umble presented a few configurations on what these resource recovery “factories” may look like in order to recognize the full potential of the facilities.

Our second speaker, Dr. Wen-Tsu Liu of the University of Illinois, shifted gears a bit and presented his work on microbial ecology for enhanced biological phosphorus removal (EBPR) processes and some of the gaps and challenges in full-scale applications. While it is well documented that phosphate accumulating organisms (PAOs) and glycogen accumulating organisms (GAOs) compete in EBPR processes, there could also be competitions within each PAO and GAO community. The microbial diversity of PAOs and GAOs is different under different EBPR process configurations. More case studies and research projects using full-scale application will help to bridge the gaps.

As mentioned earlier, this year’s program consisted of representatives from different aspects of the industry. A well-known representative from the Illinois Environmental Protection Agency, Ms. Marcia Willhite, gave a comprehensive coverage of the Illinois Nutrient Loss Reduction Strategy (NLRS). The strategy is intended to tackle both local nutrient-related water quality as well as the Gulf of Mexico hypoxia issues. It covers three areas of nutrient discharge: non-point source, point source, and stormwater runoff. The final strategy was issued in July of this year. The
implementation phase of the strategy is currently underway. Echoing from the NLRS, one viable and effective solution to address the nutrient, as well as other water quality issues, is through local watersheds. Therefore, new for this year, the NRR committee invited three watershed workgroups to present in the workshop. Representatives from the Fox River Study Group (Scott Bell of Limno Tech), the Des Plaines River Watershed Workgroup (Ms. Andrea Cline of Geosyntec), and the DuPage River Salt Creek Workgroup (Mr. Nick Menninga of Downers Grove Sanitary District) gave us an update on the progress made of the workgroups. Last but not least, two case studies on nutrient removal were presented. Mike Turley of the village of New Lenox presented the first case study. His talk was on the planning and implementation of using alum for phosphorus removal for Sewage Treatment Plant (STP) No. 1. Brian Tucker of Springfield Metro Sanitary District presented the second case study and shared the brand new Spring Creek Facility that implemented a modified UCT process for nutrient removal.

All presentations are available for download from the IWEA website. I would like to thank all the speakers who delivered excellent presentations, as well as all of the committee members and exhibitors. Without their help, the workshop would not have been such a success.

Sewer Rats Compete in Operations Challenge

By Ed Staudacher, 2015 IWEA Sewer Rat

The Metropolitan Water Reclamation District of Greater Chicago (MWRD) put together a team to compete in the 2015 Operations Challenge event at WEFTEC this year, sponsored by IWEA. The team, the Sewer Rats, consisted of John Conry, Josh Filler, Sandra Matual and John Malinowski. The group is composed of tradesmen who work in maintenance, with one member from operations. They placed second in the Laboratory Event, which was an entirely new challenge this year and a great accomplishment.

For anyone not familiar with Operations Challenge, there are five events in which a four-person team must complete a task related to maintenance and operations at treatment plants. The five events are Lab, Process Control, Collections, Maintenance and Safety. The same four-team members compete in all of the events, which are timed. The goal is to be the fastest team without any penalties. The penalties are in the form of time added to the event and can be severe since the objective is to perform the events using proper technique while following appropriate safety standards.

Competing in Operations Challenge is a great opportunity for teams to showcase their skills and expertise. It is 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 experience.

As the host city, the Sewer Rats trained with two teams from Germany on the Saturday before WEFTEC at the MWRD’s training facility. The German teams do not have access to the equipment used during competition and this was their only opportunity to practice on the actual equipment prior to competing. Working with two other teams was a great experience for all involved. The events are always exciting, but having three teams to root for made it extra special.

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Photo by Bernie Held

Highlights Continued...
Laboratory Committee at WEFTEC

The lab committee was very busy this year at the WEFTEC 2015 conference. We participated in two different events. The first was a workshop entitled “Laboratory Skills for Treatment Plant Operators”. This workshop gave attendees hands-on training in the analyses of BOD, TSS, phosphorus, pH, ammonia, fecal coliform and chlorine residual. This was a full-day workshop with attendees coming not only from all over the United States but other countries also. It was a learning experience for us as well, as we were able to hear how other labs perform tests.

The other event we participated in was the lab portion of the Operators Challenge. Several members showed up on Saturday to help set up the event and on Monday, we had seven members work as judges. The lab event this year was new for the participants as well as the judges. The participants had to do ammonia, pH and alkalinity. There were more than 40 teams competing this year. It was exciting to judge as well as to participate.

I would like to thank the committee members for all their hard work planning and participating in both of these events. A special thank you to Mary Johnson for handling all the paperwork and correspondence with WEF that made the workshop possible.

2016 Scholarship Application Released

Check the IWEA website for an updated Clean Water Scholarship application! The Association offers Clean Water Scholarships to students from Illinois who are enrolled in an Illinois school and pursuing a water-related degree. Please spread the word so that we can get as many qualified applicants as possible. We have been impressed with the variety of applicants in years past and would like to keep that trend going.

Thank you to everyone who had a part in the golf outing this summer. Without events like this, our scholarships and charitable giving would not be possible. We have big plans for our basket raffle this year. We were quite pleased with its debut last year and can’t wait to expand upon that success. If you would like to sponsor a basket, please do so on your conference registration. Otherwise, look for us at the conference and buy a ticket for a chance to win your favorite basket.

SAVE THE DATE!

IWEA GOVERNMENT AFFAIRS SEMINAR
FRIDAY, JANUARY 29, 2016

Chicago Marriott Southwest
Burr Ridge, IL

Keynote Speaker
Marcia Willhite, IEPA Bureau of Water
Operators Quiz!

By Rick Lalish, Plant Operations Committee
(Answers on page 19)

1. How much of a Rotating Biological Contactor (RBC) is submerged at any given time?
   - A: 20%
   - B: 40%
   - C: 60%
   - D: 80%

2. How long does it take for oxidation ditch contents to travel rotor to rotor?
   - A: 1 - 2 minutes
   - B: 3 - 6 minutes
   - C: 9 - 12 minutes
   - D: 12 - 15 minutes

3. What is the recommended velocity of flow in a grit chamber?
   - A: 0 to 0.5 feet per second
   - B: 0.7 to 1.4 feet per second
   - C: 1.6 to 2.1 feet per second
   - D: 2.2 to 2.6 feet per second

4. When may the attendant on a confined space team enter a permit-required confined space?
   - A: Never
   - B: Only to conduct an emergency rescue
   - C: Only when the entrant is not visible
   - D: Anytime, as long as it is included on permit

5. Where is the recommended point for measuring flow in a parshall flume?
   - A: 2/3 upstream of the throat in the diverging section
   - B: 2/3 upstream of the throat in the converging section
   - C: 2/3 downstream of the throat in the diverging section
   - D: 2/3 downstream of the throat in the converging section

Operations Challenge

The Plant Operations Committee is gearing up for another fun and interactive event at the IWEA Annual Conference. The Operations Challenge is a fun and educational experience for operators, engineers and manufacturers alike.

This year the Operations Challenge will be held on Tues., Mar. 1, 2016 in the Chancellor Ballroom at the iHotel in Champaign. The event will kick off at 1 p.m.
Municipal Separate Storm Sewer System (MS4) Permit Program Update

IWEA’s Watershed Management Committee recently held a program update call with IEPA staff. Jeff Hutton with IEPA’s Permits Section provided an update on the Illinois NPDES MS4 permit program.

Phase II of the MS4 program began in 2003 and required small MS4s in urbanized areas to obtain MS4 permits and implement the six minimum control measures required. IEPA has developed a general statewide MS4 permit. To comply with it, communities submit a Notice of Intent (NOI). The current general MS4 permit is being revised by IEPA with new and updated requirements. A draft of the new permit has gone out to public notice, and comments have been received. IEPA is reviewing the comments and preparing a final draft that will be submitted to USEPA for approval. IEPA is hoping to have the final draft permit approved by USEPA by the end of the year.

The permit revision will have three main elements related to climate change, water quality monitoring and environmental justice. Municipalities will be asked to provide general contingency planning for climate change conditions. Water quality monitoring requirements will be modified to include a variety of monitoring schemes on an annual basis, such as site specific/critical area monitoring, pollutant-specific monitoring or collaborative watershed-wide monitoring programs. Regarding environmental justice concerns, the permit is expected to require adequate public notice and outreach to all demographics within a community for input on water quality plans and programs.

After IEPA has the updated general MS4 permit in place, IEPA may assess specific areas for individual MS4 permits. Potential areas may include Lake Michigan communities, TMDL watershed areas and active watershed group areas. IEPA’s MS4 Program website has the latest program information: http://www.epa.illinois.gov/topics/forms/water-permits/storm-water/ms4/index.
As a kick-off to WEFTEC, IWEA students and young professionals joined 110 volunteers in the construction of a rain garden at Pershing East Magnet School in Chicago's Bronzeville neighborhood on Sat., Sept. 26. This service project, “The Pershing Cultivation Project: Growing Green Gardens and Young Minds,” was sponsored by the WEF Students and Young Professionals Committee. IWEA young professionals participated not only in the construction of the rain garden, but in the yearlong effort to plan, design and organize it as well. IWEA was a co-sponsor of the event.

The Pershing East Magnet School Learning Garden incorporates a learning classroom within a rain garden. Students will gain a first-hand experience in native prairie planting, the inner-workings of a rain garden, and the necessity of the water cycle to sustain life.

The learning garden was designed for a 25-year storm, with 18.5 inches of open-graded aggregate. It can retain more than 7,000 gallons of stormwater. In addition to installing landscaping and native plants, volunteers helped construct a 700-foot square outdoor classroom with permeable pavers, stormwater storage, and two learning stations.

The IWEA Executive Board and Committee Chairs participated in a team-building hike at Starved Rock State Park in Oglesby, IL, on Sept. 11 at their fall quarterly meeting. In attendance were Deb Ness, Treasurer; Dan Bounds, Watershed Committee; Laurie Riotte, IWEA Executive Director; Lee Melcher, Plant Operations; Amanda Withers, Awards; Kendra Sveum, Past President; Mary Johnson, Corporate Secretary; Dan Collins, First Vice President; Bernie Held, Newsletter Chair; Carlee Scharnhorst, Scholarship and Charitable Giving and Lou Storino, IWEA President.
2014-2015 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>Lou Storino</td>
<td>MWRDGC</td>
<td>(312) 751-3167 <a href="mailto:Louis.storino@mwrd.org">Louis.storino@mwrd.org</a></td>
</tr>
<tr>
<td>President</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mark Termini</td>
<td>Village of Addison (retired)</td>
<td>(630) 628-0502 <a href="mailto:mark.termini@att.net">mark.termini@att.net</a></td>
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<tr>
<td>Vice President</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daniel Collins</td>
<td>MWRDGC</td>
<td>(708) 588-4300 <a href="mailto:daniel.collins@mwrd.org">daniel.collins@mwrd.org</a></td>
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<tr>
<td>First Vice President</td>
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</tr>
<tr>
<td>Eric Berggren</td>
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<td>(312) 443-4916 <a href="mailto:eric.berggren@hdrinc.com">eric.berggren@hdrinc.com</a></td>
</tr>
<tr>
<td>Second Vice President</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mary Johnson</td>
<td>Rock River Water Reclamation</td>
<td>(815) 387-7523 <a href="mailto:mjohnson@rrwrusters.com">mjohnson@rrwrusters.com</a></td>
</tr>
<tr>
<td>Delegate 2016/</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate Secretary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mark Halm</td>
<td>Walter E Deuchler Associates</td>
<td>(630) 897-4651 <a href="mailto:mhalm@deuchler.com">mhalm@deuchler.com</a></td>
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<tr>
<td>Delegate 2017</td>
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<td></td>
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<tr>
<td>Debra Ness</td>
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<tr>
<td>Treasurer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kendra Sveum</td>
<td>Donohue &amp; Associates, Inc.</td>
<td>(312) 583-7233 <a href="mailto:ksvem@donohue-associates.com">ksvem@donohue-associates.com</a></td>
</tr>
<tr>
<td>Past President</td>
<td></td>
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<tr>
<td>Laurie Frieders</td>
<td>Glenbard Wastewater Authority</td>
<td>(630) 391-2169 <a href="mailto:ExecMgr@iweasite.org">ExecMgr@iweasite.org</a></td>
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<tr>
<td>Executive Director</td>
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<tr>
<td>Bernie Held</td>
<td>Crawford, Murphy &amp; Tilly, Inc.</td>
<td>(630) 336-2030 <a href="mailto:bheld@cmtengr.com">bheld@cmtengr.com</a></td>
</tr>
<tr>
<td>Newsletter Chair</td>
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</tbody>
</table>

All photographs are courtesy of Ted Denning unless credited otherwise.

IWEA Leaders Welcome New Environmentalists
By Nathan Davis, Collection Systems Committee

Congratulations to IWEA members with new babies:

Fred Wu and his wife Dawn on the birth of their daughter Lillian Karner Wu in August, 2015. Fred is our Membership Chair.

Krishna Pagilla and his wife Sreetha on the birth of their daughter in August, 2015. Krishna is an IWEA Past President (2012 - 2013).

Dan Small and his wife Traci on the birth of their son Charlie James in June, 2015. Dan recently stepped down as Student and Young Professionals Committee Chair.
Calendar of Events

IWEA Calendar of Events

<table>
<thead>
<tr>
<th>Date</th>
<th>Meeting/Activity</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 12, 2015</td>
<td>Collections Systems Seminar</td>
<td>Hyatt Lisle, Lisle IL</td>
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<tr>
<td>December 4, 2015</td>
<td>Executive Board &amp; Committee Chair Meeting</td>
<td>Starved Rock Lodge, Utica, IL</td>
</tr>
<tr>
<td>January 29, 2016</td>
<td>Governmental Affairs Seminar</td>
<td>Chicago Marriott Southwest, Burr Ridge, IL</td>
</tr>
<tr>
<td>February 10, 2016</td>
<td>Industrial Pretreatment Dinner</td>
<td>Ditka’s, Oak Brook Terrace, IL</td>
</tr>
<tr>
<td>February 29 –</td>
<td>IWEA Annual Conference</td>
<td>iHotel, Champaign, IL</td>
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<tr>
<td>March 1, 2016</td>
<td></td>
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<tr>
<td>May 4-6, 2016</td>
<td>WEFMAX 2016</td>
<td>Hard Rock Hotel, Chicago, IL</td>
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</tbody>
</table>

Please see iweasite.org to register for events.

Well Wishes to Krishna Pagilla

By Lou Storino, IWEA President

As you may have heard, Krishna Pagilla is moving out of Illinois at the end of the year. He has accepted a new faculty position at the University of Nevada in Reno. IWEA President Lou Storino said a few words to thank Krishna for his dedication to IWEA at the IWEA/CSWEA WEFTEC Welcome Reception, held at the Chicago Hilton on Sept. 27.

Dr. Pagilla started his career as a civil engineer at the County of Sacramento Regional Wastewater Treatment Plant in Elk Grove, California in 1991. In 1995, he joined the Illinois Institute of Technology and worked his way up from Assistant Professor to Professor. In 2013, he was honored with the WEF Fair Distinguished Engineering Educator Award.

Dr. Pagilla has been a fellow of WEF since 2011. He has served on countless WEF Committees. He is a past president of IWEA and was instrumental in starting IWEA’s Nutrients Committee as well as the IIT AWWA/ WEF Student Chapter.

A special thank you to Krishna Pagilla for his invaluable support of IWEA and well wishes in his new position at the University of Nevada.
IEPA Accepting New USEPA Ammonia Limits (update)

The Illinois Environmental Protection Agency (IEPA) Ammonia Workgroup has formed a subgroup, the Ammonia Implementation Rules Committee. This subgroup has been tasked with tackling the implementation issue for ammonia. They met mid-October to look at Part 355 of the Illinois Administrative Code (the ammonia implementation rules) to review how IEPA currently determines ammonia limits in NPDES permits before working on the new ammonia limits.

The charge for the subgroup is to come up with a scientifically-based method for determining ammonia permit limits. What is the best use of available data? The agency-monitoring programs consist of both grab samples and continuous monitoring in various locations across the state. How should pH and temperature of the receiving stream be utilized in the future for determining ammonia limits? The subgroup will report to the whole Ammonia Workgroup on their recommendation for the best way to accurately establish ammonia limits on a site-specific basis.

For more information on existing Part 355 rules visit http://www.ipcb.state.il.us/SLR/IPCBandIEPAEnvironmentalRegulations-Title35.aspx.

Report: “Case Studies on Implementing Low-Cost Modifications to Improve Nutrient Reduction at Wastewater Treatment Plants”

Nutrient pollution is one of America’s most costly and challenging environmental problems. However, many of the nation’s wastewater plants were not designed for nutrient removal and major retrofits may be a significant financial hurdle.

The U.S. Environmental Protection Agency’s (USEPA’s) recent report, Case Studies on Implementing Low-Cost Modifications to Improve Nutrient Reduction at Wastewater Treatment Plants, showcases a number of communities that were able to achieve better nutrient treatment at wastewater plants through relatively low-cost modifications without requiring costly infrastructure upgrades.

Nitrogen discharge levels in 12 case studies were reduced by 20 to 70 percent. In many cases, these wastewater plants also reduced energy consumption and lowered operational costs. The report illustrates a number of modifications that can be considered for improving nutrient removal at existing non-advanced wastewater plants including aeration, process, configuration, chemical and discharge modifications.

Note that many of the optimization activities described are complimentary to one another and control system additions or modifications are needed for many applicable optimization activities. To see the full report, visit http://www2.epa.gov/nutrient-policy-data/case-studies-implementing-low-cost-modifications-improve-nutrient-reduction.

Settlement May Require Revisions to Phase II MS4 Permits

The USEPA reached a settlement with the Natural Resources Defense Council and the Environmental Defense Center Inc. Under the settlement, the USEPA would be required to propose a revised rule to its 1999 Phase II Municipal Separate Storm Sewer System (MS4) permits for small communities with populations fewer than 100,000.

The lawsuit claimed that the USEPA did not follow through on requirements of a 2003 Ninth Circuit Court ruling on Phase II MS4 permits and forest road stormwater runoff. The ruling required the USEPA to address procedural issues within the Phase II rule related to issuing Notices of Intent under the small MS4 General Permit option. The case determined that without public review and approval of permits, the rule lacked assurance-regulated communities, and would reduce stormwater pollution to the maximum extent achievable as required by the Clean Water Act.

Because of the settlement, the petitioners have agreed to withdraw their lawsuit. For more information or to review the settlement visit http://stormwater.wef.org/2015/09/settlement-require-epa-revise-phase-ii-ms4-permit/
USEPA Launches New Tool: GIWiz – Green Infrastructure Wizard

The USEPA has released a new web-based tool that helps local officials and other community members consider the benefits and uses of green infrastructure. The Green Infrastructure Wizard, or GIWiz, provides access to tools and resources that support and promote water management and community planning decisions.

GIWiz will help city officials and planners analyze problems, understand management options, calculate design parameters, analyze costs and benefits, evaluate trade-offs, engage stakeholders and/or develop education and outreach campaigns. Users may also produce customized reports that include links to the resources they want to utilize.

The USEPA developed the GIWiz with input from local, state and tribal partners. EPA is inviting additional input on this Beta version of the product, with the goal of making continued improvements going forward. For more information visit http://www2.epa.gov/communityhealth/green-infrastructure-wizard.

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Trivia Answer:

B is false. Microbeads don’t dissolve in water, and when rinsed down the drain, microbeads escape treatment by wastewater plants because of their small size and buoyancy.

Operators Quiz Answers:

1. B (pg. 214 Operation of Wastewater Treatment Plants, OWP)
2. B (pg. 274 Operation of Wastewater Treatment Plants, OWP)
3. B (pg. 84 Operation of Wastewater Treatment Plants, OWP)
5. B (pg. 7-10 Operation of Municipal Wastewater Treatment Plants, MOP11)

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First Quarter Financial Report

By Debra Ness, Treasurer

The first quarter of the IWEA fiscal year ran from July 1 through Sept. 30, 2015. The adjacent graphic lists account balances through September 30, 2015.

During the second quarter, IWEA will complete the Attorney General and IRS required reports for the 2014-2015 fiscal year.

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Financial Statement

as of September 30, 2015

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<th>Description</th>
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Capitol Currents Continued...
Thank you to all our sponsors for the upcoming IWEA Annual Conference!

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IWEA would also like to thank Peterson & Matz for their sponsorship of the recent IWEA Golf Outing.

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