Chicago ASPENews
Chicago Regional Chapter of the American Society of Plumbing Engineers
Vol. 43, No. 8
March, 2012

Chicago Chapter General Meeting
Thursday March 15, 2012

La Villa Restaurant & Banquets
3632 N. Pulaski Road
Chicago, IL 60641

FREE Parking!

AGENDA

5:30pm  Cocktail Hour, sponsored by Liquitech
6:30pm  Dinner, ($35 ASPE Members with RSVP/$40 Non-Members and Walk-ins)

For more information, see the VP Technical article inside this newsletter

RSVP as soon as possible to Rick Butler, VP Technical!

⇒ Return the enclosed card for those of you getting this via US Mail
⇒ Call: 224-238.8515
⇒ Fax: 815-477.9984
⇒ Email: Chicago.ASPE.RSVP@gmail.com

MENU

Appetizers:
• Focaccia Bread
• Antipasto Salad
• Soup

Dinner:
• Rotini Pasta with Tomatoes and Basil Sauce
• CORNED BEEF AND CABBAGE (HEY ST PATTY’S)
• Baked Potatoes with sour cream and butter
• Chicken Siciliana

Dessert:
• Tiramisu

Drinks:
• Soda, Coffee, Wine & Beer – Cash Bar

Local Chapters are not authorized to speak for the Society
February’s “winter” meeting was very well attended, the Parthenon proves to be one of our favorite locations. Thank you all for attending our monthly meetings and getting involved. Special thanks to those who RSVP’d and followed through with their commitment. I would like to point out that having unexpected guests, slows down the normal flow of the meeting and it puts a task on the restaurant and serving stuff. Reservations are at the reach of your fingertips, just send an email to Chicago.ASPE.RSVP@gmail.com and we will save you the best table in the house!

Our February meeting marked the first meeting for our new Vice President Membership, Mr. Mark Kaulas form Bornquist. He accepted the position after our previous VPM stepped down. The Chicago Chapter is looking forward to implementing programs to retain our current members and to increase our membership numbers if possible. We understand the economy still presents difficulties and challenges, but we will do whatever we can to promote our Society. Let’s all welcome our new VPM, an ASPE Chicago member since 1981!

If you have any topics you would like to see or if you would like to present something you think ASPE Chicago members would enjoy, please let our VP Technical Rick Butler know (rbutler@lochinvar.com).

Save the Date
The ASPE Convention and Engineered Plumbing Exposition is coming up in late October in Charlotte, NC. This event provides you with the opportunity to receive great education sessions and firsthand experience of the latest products and technologies available in the industry. Manufacturers generally unveil their latest and most innovative products during this event. The Convention is scheduled to take place on October 27-31, 2012. Yes, it is Halloween weekend. We will be looking for ASPE Chicago Delegates, if you are interested in attending the obligatory business meetings and at the same time have a good time with plumbing engineers from around the world, just send me an email (fxs@grummanbutkus.com). We will select all delegates during our May meeting, election night.

2012 ASPE Chicago Basic Plumbing Classes – March 7, 2012
Please remember that the ASPE Chicago Chapter Basic Plumbing Classes will start again on March 7, 2012. As of today, we have 17 people registered. The syllabus and registration have been attached to this newsletter and will be available in our website (http://chicago.aspe.org).

UPDATE
The class will no longer take place at Environmental Systems Design.

Our new location will be,

Sargent & Lundy
www.sargentlundy.com
55 East Monroe Street
Chicago, IL 60603
(312) 269-2000

Thank you Sargent & Lundy for stepping in and supporting the Chapter!

Please contact David DeBord (david.aspe@gmail.com) and Dan Fagan (dfagan@cannondesign.com) if you have any questions.
PRESIDENT’S MESSAGE (cont’d)

ASPE Chicago Chapter Jobs Program
It is a fact that the economy is still going through ups and downs. However, ASPE Chicago is here to help, it is our intention to help you all find a new position.

Please remember that our Chapter built a list of skilled professionals who are looking for work. If you are hiring, please email our ASPE Chicago Jobs Program Chairperson, Jason McDonald at JasonSAMcDonald@gmail.com or call him at 812 463.2112. This information is kept confidential; please let us know if you would like to be included on the ASPE Chicago Jobs Program. And I hear from Jason that there is some hiring going on right now. Let’s hope this is a sign that things are picking up!

Water for People
We donated February’s 50/50 raffle money to Water for People. Our contributions will save many lives, so if you are looking for additional tax exemptions, please consider Water for People, a registered U.S 501c3 nonprofit organization, ID# 84-1166148

Did you now that every 15 seconds a child dies because they didn’t have clean drinking water? Find more at www.waterforpeople.org.

One more thing before I go, it is true, this is my last article. Yes, this is my last article as a single man. Heather and I are getting married a few days after the March meeting. As you can imagine, we have been very busy planning our big day, but so far, so good. I even had time to volunteer for ASPE and get a few things done.

Thanks a lot for your continued support and interest in ASPE Chicago and thank you for attending our meetings. WE hope you appreciate the hard work of the board of directors. On the other hand, if you haven’t been to a meeting in a while, please think about joining us in March. We are set for a great technical presentation, good food and friends. I hope to see you on March 15 at La Villa!

World Water Day – March 22, 2012

http://www.unwater.org/worldwaterday/

International World Water Day is held annually on 22 March as a means of focusing attention on the importance of freshwater and advocating for the sustainable management of freshwater resources.

An international day to celebrate freshwater was recommended at the 1992 United Nations Conference on Environment and Development (UNCED). The United Nations General Assembly responded by designating 22 March 1993 as the first World Water Day.

Each year, World Water Day highlights a specific aspect of freshwater. On this page, we present a brief overview of the different themes that have been the focus of World Water Day celebrations.

Drought is still the #1 problem

Drought ranks as the single most common cause of severe food shortages in developing countries. Drought caused more deaths during the last century than any other natural disaster, and Asia and Africa rank first among continents in the number of people directly affected. (Below, E. et al., 2007.)

(continued on page 4) --------------------------->
**PRESIDENT’S MESSAGE (cont’d)**

There are 7 billion people to feed on the planet today and another 2 billion are expected to join by 2050. Statistics say that each of us drinks from 2 to 4 litres of water every day, however most of the water we ‘drink’ is embedded in the food we eat: producing 1 kilo of beef for example consumes 15,000 litres of water while 1 kilo of wheat ‘drinks up’ 1,500 litres.

When a billion people in the world already live in chronic hunger and water resources are under pressure we cannot pretend the problem is ‘elsewhere’. Coping with population growth and ensuring access to nutritious food to everyone call for a series of actions we can all help with:

- follow a healthier, sustainable die;
- consume less water-intensive products;
- reduce the scandalous food wastage: 30% of the food produced worldwide is never eaten and the water used to produce it is definitively lost!
- produce more food, of better quality, with less water.

At all steps of the supply chain, from producers to consumers, actions can be taken to save water and ensure food for all.

And you? Do you know how much water you actually consume every day? How can you change your diet and reduce your water footprint? Join the World Water Day 2012 campaign “Water and Food Security” and find out more!

Frank Sanchez CPD, President
fxs@grumannbutkus.com; 847 316.9251

**TECHNICALLY SPEAKING**

Spring is almost here, or it has been here all year (what a crazy winter)!

**February Meeting Recap**

Good turnout again, although we had too many non RSVP’s again. Please note that the price for non-RSVP’s will be $10.00 more than RSVP’s. We have to institute this policy because the chapter is losing money based on our guaranteed minimums that throw us off since we do not get accurate RSVP’s.

A big “Thank You” to our Cocktail hour sponsors, Lochinvar and Viega!! I hope everyone had a chance to visit the Viega “Mega press” Primer. How could you not, it was right next to the bar!

Thanks again for a non-member doing a presentation for our group. Nina Newhouser, from the Resource Solutions Group did a fine presentation on the benefits to us to research a plumbing project with potential gas rebates available to our customers. I know she represented NICOR, but these types of rebates are available through Peoples & North Shore Gas as well.

**This Month’s Meeting**

La Villa is giving us our St Patty’s day Celebration. Corn Beef & Cabbage, good stuff!! Our first presenter for the night is Meghan Johnson from Liquitech, Inc. Meghan’s background is in biology and is well suited to present on the topic. She will present on waterborne pathogens in our water supply, and preventions for contamination. Main topics discussed for prevention are:

- Thermal Heat / Flush
- Point of use Filtration
- Copper Silver Ionization

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**TECHNICALLY SPEAKING (cont’d)**

- Ultraviolet
- Hyper Chlorination
- Chlorine Dioxide
- Chlorine Injection

She will also discuss the Myths of Legionella:
- Treated Water is safe?
- Instantaneous V.S. Storage Tanks
- Mixing Valves
- No Dead “legs”

All – proper design is KEY. A discussion of ASHRAE standard 188p will also take place

Following Meghan’s presentation we will have an “Open Forum” hosted by Joe Ficek of Grumman/Butkus. Joe has been involved in many “legionella” projects. He will be the moderator in an open discussion on this topic. Bring your questions and concerns on this important topic to discuss with the entire chapter.

**Product Show Committee Meeting**

We are getting very close to our most popular event of the year. We will be finalizing the presentations now, if you have a last minute entry, or idea let us know NOW! Please send these to:

  - Phill Kroll- pkroll@metrodgn.com
  - Rick Butler- rbutler@lochinvar.com

Additionally, we need to get more people to attend the show, if you need flyers to give to people let us know, we can get you plenty. We are looking to get people out of the box from our traditional audience; architects, contractors, building engineers…. Let them know, and bring them by. Let them know that these are great presentations, great booths, great food, and great prizes!!

Thanks for all of your support; we together make ASPE Chicago the best chapter in the world for ASPE!

**Rick Butler, Vice President Technical**

rbutler@lochinvar.com; 224 238.8515

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**YOUR NEW VP MEMBERSHIP**

Chapter members, I’m your new VPM.

I’ve volunteered to fill the Vice President Membership position (we all know what happens when you volunteer) and I’ll try to do my best. While I’ve been on the Board before, it was many years ago and never in this position. So please cut me a little slack while I learn my responsibilities.

Having stated that, I’m ready to go. So if you need to contact me, please do so at:

**Mark Kaulas**

Bornquist, Inc.

7050 N. Lehigh Ave.

Chicago, IL  60646

T:  773.774.2800

F:  773.594.2872

Cell:  773.551.1032

E-mail: mkaulas@bornquist.com
I wanted to bring up an issue or concern that we have all come across as plumbing designers, and that is scalding and thermal shock in a hot water system.

Over the years, manufacturers have designed products to maintain standards. Unfortunately some questions have come up regarding scalding and thermal shock. For instance, in showers with the introduction of new low flow shower heads. Please refer to the following ASSE Web site: www.asse-plumbing.org for a white paper report on the “Scald Hazards Associated with Low-Flow Showerheads”. The paper infers that the maximum flow rate of a showerhead should match that of the automatic compensating shower valve with a minimum flow rate equal to or lower than that of the showerhead. It talks about the problems, examples of the problems, additional issues as well as the solution to the problem.

Below, I have provided certain ASSE standards that pertain to scalding and thermal shock and a chart indicating the temperature and the length of time that certain burns can occur.

**ASSE 1016 - Automatic Compensating Valves for Individual Showers and Tub/Shower Combinations**
The associated valves are designed to protect against thermal shock and scalding. The standard calls for a maximum temperature limit stop of 120 F.

There are three (3) types of tempering valves:
- **Type P** or pressure balancing,
- **Type T** Thermostatic or
- **Type T/P** Combination thermostatic/pressure balancing

Pressure balancing devices have a pressure balancing piston or diaphragm that equalizes the pressure between the two inlet ports and maintains the same outlet temperature, as long as the incoming temperatures remain the same. Thermostatic type devices have a temperature-sensing element that senses the mixed water in the mixing chamber and adjusts the inlet ports with a bi-metallic thermal element, liquid paraffin wax piston or other type of thermal sensing element to maintain a relatively constant outlet temperature. The combination thermostatic and pressure balancing type devices have temperature-sensing and pressure-sensing elements and can compensate for both temperature and pressure changes.

**ASSE 1017 - Temperature Actuated Mixing Valves for Hot Water Distribution Systems.**
Thermostatic mixing valves complying with ASSE 1017 are designed to control temperature from +/- 3 to 7 F, depending on the size, when flowing at the required flow rate.

**ASSE 1066 - Individual Pressure Balancing Valves.**
These are in-line pressure-balancing valves that can be installed in the hot and cold water supply lines to the faucet. This device controls pressure imbalances that lead to thermal shock; it does not provide scald protection for Individual Fixture Fittings. This device controls pressure imbalances that lead to thermal shock; it does not provide scald protection.

**ASSE 1069 - Automatic Temperature Control Mixing Valves.**
The ASSE 1069 Automatic Temperature Control Mixing Valves are designed for gang shower applications such as those in a school, prison or health club with On-Off controls at each shower station.

**ASSE 1070 - Water Temperature Limiting Devices.**
In-line devices such as the ASSE 1070 thermostatic mixing valve limit the water temperature of the hot water supply to a shower valve, but they do not provide thermal shock protection since additional unprotected cold water is mixed in downstream of the device. This device limits the water temperature to fixtures such as sinks, lavatories or bathtubs and reduces the risk of scalding. The device shall be either the final temperature regulation or have water further tempered downstream of the device with the addition of cold water.

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Another misconception is water heater thermostats and temperature settings controls. Water heater thermostats do not control temperature. Hot water systems are designed and water heaters are generally sized to store hot water at 140 F. When the thermostat is set at a lower temperature, the water heater has a reduced capacity to deliver hot water. As a result, when users run out of hot water, and the water heater thermostat is re-adjusted to a temperature above 120 F, this increases the temperature to a scalding temperature and in some cases it could be adjusted even higher than the original setting. The water heater will continue to store and deliver water at scalding hot temperatures. The solution is using a thermostatic mixing valve and not tinkering with the water heater burner controls.

Another issue that is still alive in our water supply systems is “Legionnaires Disease”. It appears that an Italian woman at the ripe old age of 82 contracted the disease while visiting her Dentist. Scientists tested the water in the Dentist’s water lines for certain devices used for patient care. It turned out to be stagnant water in the lines. Yes this incident happened in ITALY.

The ADA (American Dental Association) recommends that dental water lines contain no more than 500 colony forming units of bacteria per milliliter of water, the same limit recommended by the U.S. Centers for Disease Control and Prevention. Please visit the ADA web site for additional information.

I just want to stress that the plumbing engineer’s focus needs to not only produce the best quality design but must always have the public’s well-being in their mind as well when designing hot water systems.

Mark Mannarelli, Vice President Legislative
mmannarelli@esdglobal.com; 312 456.2354

Table 1 - Water Temperature Effects on Adult Skin
(Source: Report prepared by Dr. Moritz and Dr. Henrique’s at Harvard Medical School in the 1940s)

<table>
<thead>
<tr>
<th>Temp.</th>
<th>1st Deg. Burn</th>
<th>2nd Deg. Burn</th>
</tr>
</thead>
<tbody>
<tr>
<td>111</td>
<td>270 minutes</td>
<td>300 minutes</td>
</tr>
<tr>
<td>113</td>
<td>120 minutes</td>
<td>180 minutes</td>
</tr>
<tr>
<td>116</td>
<td>20 minutes</td>
<td>45 minutes</td>
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<tr>
<td>118</td>
<td>15 minutes</td>
<td>20 minutes</td>
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<tr>
<td>120</td>
<td>8 minutes</td>
<td>10 minutes</td>
</tr>
<tr>
<td>124</td>
<td>2 minutes</td>
<td>4.2 minutes</td>
</tr>
<tr>
<td>131</td>
<td>17 seconds</td>
<td>30 seconds</td>
</tr>
<tr>
<td>140</td>
<td>3 seconds</td>
<td>5 seconds</td>
</tr>
<tr>
<td>151</td>
<td>Instantaneous</td>
<td>2 seconds</td>
</tr>
</tbody>
</table>
The February Chicago Chapter Meeting was a success. We had a couple of good presentations, one by Nina Newhouser from the Resource Solutions Group and the second one by Steve Montgomery of Lochinvar. As always, excellent Greek food that all 62 members who attended the event got to enjoy.

The free dinner raffle winner was: George Pagach from R.C. Sales & Service LLC.

The 50/50 raffle winner was: Michael Infanger from Victaulic

This month the Chicago Chapter will donate $135.00 to: Water for People

This is an organization that brings together local entrepreneurs, civil society, governments, and communities to establish creative, collaborative solutions that allow people to build and maintain their own reliable safe water systems. Empowering everyone transforms people’s lives by improving health and economic productivity to end the cycle of poverty. http://www.waterforpeople.org/

Francisco DeHoyos, Administrative Secretary
fdehoyos@dbhms.com; 312 915.0557 ext. 251

FEBRUARY MEETING ATTENDANCE

The following list of individuals attended the February 16, 2012 meeting of the ASPE Chicago Chapter. In accordance with ASPE Society policy, these individuals are entitled to 0.75 RU’s towards the required 24 RU’s needed every two years to maintain CPD registration. Meeting attendance is also recognized by the Illinois Department of Professional Regulation to count as 1 PDH towards the required 30 PDH’s needed every two years to renew Professional Engineering licenses.

Steve Montgomery  Mark Mannarelli  Zoya Oberfeld
Darren Rich  Don Johnson  Stephen Lichtmen
Brian Carlos  Francisco DeHoyos  Gabriel Gomez
Andrew Dailey  Frank Sanchez  Phil Blazic
Jim Majerowicz  Meghan Johnson  Dan Patt
Dick Klaess  James Dipping  Nevo Martelli
Larry Himmelblau  Mark Nasuta  Ken Cutler
Joel Mavers  Natalie Ahrens  Tim Kilbane
Ron Carter  Era Yee  David Erickson
George Pagach  David Head  Tony Garcia Jr.
Danielle Schenkoski  George Sobrya  Tom Dolan
Herb Hymen  Randy Fiorito  Ray Cruz
Chris Wisinski  Michael Hanney  Brian Conway
E.J. Kedzie  Dan Courtney  Terry Pappas
Mike Infanger  Rick Butler  Bob Turk
Mike Imaoka  Sean Allard  John Nieman
David Lehman  Tom Higgins IV  Ed Lichner
Michael Cwanek  Paul Riedinger  Eric Carlin
Nina Newhouser  Dennis Richards  Mike Temes
David DeBord  Tony Dauginas  Jeremy Cantor
Joe Ficek  Michael Dore
Mark Kaulas  Jon Sabih

This printing constitutes our record of who was in attendance. We apologize for any misspelling of names and ask that for future sign-ins, please print legibly. Thank you!
March brings St. Patty's Day, March Madness, product shows and expos. Do not miss the IFPA-SFPE product show on March 13 or the ILPHCC Expo on March 23. Just a reminder, the APSE Product Show is coming in April. If there is an organization you would like me to contact please send me an e-mail at kseier@esdglobal.com.

American Society of Sanitary Engineering (ASSE) (http://www.asse-plumbing.org/calendar.html)

OAPI 54th Annual Conference
Dates: March 4-7
Location: Dublin, OH
Details: See ASSE website.

TREEO 29th Annual Cross-Connection Control Conference
Dates: March 7-8
Location: Dayton Beach, FL
Details: See ASSE website.

World Plumbing Day 2012
Dates: March 11
Location: EVERYWHERE

National Fire Protection Association (NFPA) (nfpa.org/supdet)

16th Annual Suppression, Detection and Signaling Research Symposium
Dates: March 5-8th
Location: Sheraton Crescent Hotel, Phoenix, AZ
Cost: $695 Full Symposium, $425 Individual Programs
Details: See ASSE website.

Society of Fire Protection Engineers (SFPE)
(www.chicagosfpe.org)

Illinois Fire Prevention Association (IFPA) (www.ifpanet.org)

13th Annual IFPA-SFPE Combined Fire Prevention Product Show
Dates: Tuesday, March 13
Location: Medinah Banquets, 550 N Shriners Dr., Addison, IL 60101
Time: 4:00 – 8:00 pm
Cost: Admission is free, cash bar, buffet dinner $40
See the flyer included with this newsletter.

Illinois Association of Plumbing-Heating-Cooling Contractors (ILPHCC) (www.ilphcc.com)

Illinois PHCC Expo
Date: March 23, 2012
Location: Drury Lane Conference Center, Oakbrook Terrace, IL
Contact: More info to go to www.ilphcc.com.

Illinois PHCC CEU Class
Dates: Friday, March 23
Location: Drury Lane Conference Center, Oakbrook Terrace, IL
Time: 9am - 1pm
Cost: $30
Notes: No walk-ins. All registrations must be received by March 13. Must be a licensed plumber to attend. Contact ILPHCC @ 217-522-7219 to register.

Illinois PHCC CEU Class
Dates: Friday, April 6
Location: Heartland College, Bloomington Normal
Time: 1 pm – 5 pm
Cost: $50
Notes: Must be a licensed plumber to attend. Contact ILPHCC @ 217-522-7219 to register.

Illinois Chapter of ASHRAE (www.illinoisashrae.org)

March Monthly Meeting – Hydronic Systems
Date: Tuesday, March 13
Time: 2:00pm – 8:00 pm
Location: Aramark, 2300 Warrenville Road, Downers Grove
Contact/RSVP: http://www.ashrae.org/Events/page/Chicago2012 or www.illinoisashrae.org

USGBC – Illinois Chapter (LEED)
Events Calendar - http://usgreenbuildingcouncilchicagochapter.roundtablelive.org/calendar?
EventView-Mode=1&EventListViewMode=2&SelectedDate=9/22/2011&CalendarViewType=1

SURGE (www.surgeforwater.org)
Surge is a non-profit organization that improves access to clean, safe water for life.
Water the Global Passport
Date: Saturday, March 24
Time: 12:15pm – 4:00 pm
Location: UIC Innovation Center, 1240 W. Harrison St., Chicago, IL
Contact/RSVP: friends@surgeforwater.org

Keith Seier, Corresponding Secretary
kseier@esdglobal.com; 312 456.2338
<table>
<thead>
<tr>
<th>Date</th>
<th>Technical Presentation</th>
<th>Location</th>
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<tbody>
<tr>
<td>September 15, 2011</td>
<td>12 Myths of VFD Booster Systems - Syncroflo/FTI Pumps</td>
<td>Parthenon 314 S Halsted St Chicago, IL</td>
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<tr>
<td>October 20, 2011</td>
<td>Active PH Neutralization/Industrial Waste Treatment</td>
<td>La Villa Restaurant 3632 N Pulaski Rd Chicago, IL</td>
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<tr>
<td>November 17, 2011</td>
<td>The Need for Water Conservation and the Evolution of High Efficiency Plumbing Fixtures</td>
<td>Westwood Tavern &amp; Tap 1385 N. Meacham Rd Schaumburg, IL</td>
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<tr>
<td>December 15, 2011</td>
<td>Booster Night - Patti Vasquez</td>
<td>La Villa Restaurant 3632 N Pulaski Rd Chicago, IL</td>
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<tr>
<td>January 19, 2012</td>
<td>Liquid Assets: The Story of Our Water Infrastructure</td>
<td>La Villa Restaurant 3632 N Pulaski Rd Chicago, IL</td>
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<tr>
<td>March 15, 2012</td>
<td>Waterborne Pathogens - Legionella presented by Meghan Johnson of Liquitech</td>
<td>Happy St. Patty's La Villa Restaurant 3632 N Pulaski Rd Chicago, IL</td>
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<td>April 19, 2012</td>
<td>41st Annual ASPE Chicago Product Show and Seminars</td>
<td>White Eagle 6839 North Milwaukee Ave Niles, IL</td>
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<tr>
<td>May 17, 2012</td>
<td>Reduction of Lead in Drinking Water Act</td>
<td>Westwood Tavern &amp; Tap 1385 N. Meacham Rd Schaumburg, IL</td>
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<tr>
<td>June 21, 2012</td>
<td>Annual Golf Outing</td>
<td>Hilldale Golf Club 1625 Ardwick Drive Hoffman Estates</td>
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If you would like to present any of these topics or become a meeting sponsor, please contact Rick Butler at rbutler@lochinvar.com or 224 238.8515