

**** Chicago ASPENEWS

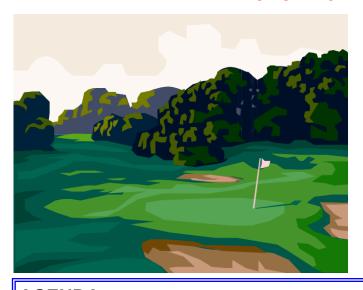


Chicago Regional Chapter of the American Society of Plumbing Engineers Vol. 44. No. 11 June. 2013

Chicago Chapter Annual Golf Outing

Friday June 14, 2013

Date Revised Hilldale Golf Club 1625 Ardwick Drive



- Beverages will be served on the course throughout the day.
- There will also be special displays and activities as you play the course.
- Golf Prizes and Door Prizes! Plenty to choose from!
- Lunch will be served between the 9th and 10th

AGENDA

7:30am Breakfast and warm up!

8:30am Shotgun tee-off. Don't be late!

3:00pm Cash bar

4:00pm **Buffet Dinner**

RSVP as soon as possible to our Golf Outing Chair, Steve Triphahn!

Call: 224.293.6333

Email: <u>steve.tri</u>phahn@wtengineering.com

Special Thanks to:

Daugherty Sales for providing breakfast rolls!

Metropolitan Industries for providing lunch: hot dogs, sausages and chips!

All Affiliate Members and Manufacturer's Representatives for their continuous support to the ASPE Chicago Chapter!

Local chapters are not authorized to speak for the Society



PRESIDENT'S MESSAGE

In 1727, at the age of 21 years old, Benjamin Franklin gathered eleven friends to form the Junto, Latin for "the meeting". This was a club that enriched community life in Philadelphia by helping establish vital institutions like the first public library (1731), the first public hospital in Pennsylvania (1751), and the first business college (1749); later to become the University

of Pennsylvania. Their mission was to improve the lives of ordinary citizens furthering the "common good."

Over the years, I have seen ASPE Chicago grow and thrive thanks to the contributions of great individuals. People that also believe in the "common good." As a contributor of the Chicago Chapter Board of Directors, I developed great friendships with these hard working people and shared laughs and tears alike with volunteers and supporters. They are a remarkable group of selfless and dedicated individuals. I would like to thank you all for your trust and inspiration. I enjoyed this opportunity tremendously, and it contributed to my personal growth. The best lesson learned is probably the conviction that public service makes a difference in people's careers and hence has a direct effect on their personal lives, and families.

By no means is this my swan song. I have great respect and admiration for our Chapter's mission, and will continue being an active contributor. We have our Society's 50th Year Anniversary and Convention in our own "Back of the Yards" in 2014, and that will be another great volunteering opportunity.

I need to express my gratitude to several people. If you don't see your name here, please accept my apologies for the list could take over the entirety of this newsletter. Your hard work and opportunities provided did not go unnoticed. First of all, I want to thank my wife, Heather Sanchez, for her understanding and unconditional support. Thanks a lot to my employer Grumman/Butkus Associates and our company's President Dan Doyle for their continuous support to our organization. The board of directors was phenomenal, good job team! If I pushed you sometimes, it was because I deeply care for our chapter and its members and because I believe in you. I received excellent advice from Chicago past Presidents David DeBord, Dan Fagan, Joe Ficek and Jason McDonald, your support was invaluable. Kudos must go to Phill Kroll, Product Show Chair; Theresa Allen, Newsletter Editor; and Webmaster genius, Jim Moynihan, the person that turned the internet switch on to our newsletters over eleven years ago; Don Johnson, one of our founding fathers and a membership retention machine; Steve Triphahn, our golf outing guru; John Neiman, Picnic Chair; Emily Smith, Picnic Co-Chair, and all the countless volunteers, contributors and members that make ASPE Chicago -in my opinion- the best chapter in the world.

The Board of Directors truly feels accomplished and honored to have been a part of our Chapter's continuous success. We are very proud to have accomplished several goals over the past two years. Some of the most relevant accomplishments of **your** Board of Directors were:

• Provided Great Technical Presentation at Popular Venues
We focused on cross training sessions, code relevant issues, joint meetings and
fun tours. We provided a very well received variation to Booster Night

Supported Humanitarian Efforts

Our commitment to help one another expanded beyond our professional work. Our Chapter contributed to several organizations like Toys for Tots, Camp I am Me, Shriner's Hospital, Chicago Food Depository, Water for People, Batten Disease Support and Research Association, and the Wounded Warriors Project among others.

....continued on next page...

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http://www.facebook.com/ lau.chicagochapter

https://www.facebook.com/groups/ ASPE.Chicago/

LINKEDIN

www.linkedin.com/groups? home=&gid=2393408

PRESIDENT'S MESSAGE CONTINUED...

• Published One of the Best Newsletters at Chapter Level in the Nation

This is one of the benefits of your ASPE membership. A lot of work goes into every single page of your Chicago ASPENews. Please take full advantage of this work.

Rescheduled our Product Show to the Fall

Event planning will continue during the summer. We will strive to provide you with the best show in the region.

Reinstalled the ASPE Chicago Chapter Scholarship

In an effort to promote the field of plumbing engineering, we created the ASPE Chicago Chapter Engineering Scholarship to recognize a graduating high school student or college student who is/will be participating in an engineering curriculum.

- Founded the First ASPE Chicago Chapter Student Chapter at IIT and the Second in the Nation We are investing in the future of our Society. For more information, please visit http://aspeillinoistech.wix.com/aspe
- Established the First ASPE Chicago Chapter Family Picnic

Our Society is composed of colleagues and competitors, but more importantly we are a group of friends. This will help strengthen and improve one of the chapter's best assets: networking.

• Unveiled a New and Improved Website While Reaching Out to Our Members Through Social Media

http://chicago.aspe.org/

https://www.facebook.com/groups/ASPE.Chicago/

https://www.facebook.com/lau.chicagochapter?fref=ts

http://www.linkedin.com/groups?gid=2393408&trk=hb_side_g

Provided Additional Educational Sessions

The ASPE Chicago Basic Engineering classes and the all-day CPD review were very well received

• Established the Vice President, Affiliate Position

Our Chapter's Affiliate Members and manufacturer representatives have been critical to our success. In previous years, this position was appointed and didn't have a vote in the board. This changed with the 2013-2014 elections.

• Established the Vice President, Education Position

This person will assist the board with the poard of directors with the planning of additional educational sessions and will be an advisor to our recently formed ASPE Chicago Student Chapter.

And the Best for Last

We all had fun while volunteering!

We hope you found our work beneficial for the enhancement of your careers.

Stay Classy Chicago,

Frank Sanchez, CPD; President

fxs@grummanbutkus.com; 847.316.9251

ASPE Chicago Announcements

Please continue reading the rest of this newsletter. We have some exciting things and important announcements in the pipeline.

VICE PRESIDENT, TECHNICAL: TECHNICALLY SPEAKING May Meeting Recap

We had great weather, great food, and a fantastic turnout for our May meeting. A total of 72 people attended the event. A gentle reminder, we could really use those RSVP's, it allows us and the restaurant to plan accordingly.

Thanks again to Siemens for sponsoring the cocktail hour and providing a detailed presentation, "High Purity Water Systems and Healthcare Designers Guidelines." Dan Heilman and Richard Turkiewicz did an outstanding job.

June Meeting

Hope to see most of you out on the links at our chapter golf outing on June 14. Location is the same, Hilldale Golf Club, in Hoffman Estates, IL. A big "**Thank You**" to Steve Triphahn, our Golf Chairman for putting this together again.

ASPE Meeting Schedule

The May meeting brought our technical programs to a close for the 2012-2013 season of our ASPE Chicago Regional Chapter. During the summer we will be working on the new Meeting Schedule for the 2013-2014 season. If you have a particular topic that interests you please contact the <u>new</u> Vice-President, Technical, Mark Mannarelli at <u>mmannarelli@dbhms.com</u>.

Finally, at the May meeting I was voted in as Chapter President for the 2013-2014 season. This is quite an honor and I hope I can fill the shoes of all the excellent past presidents. I look forward to working with the new board in keeping the ASPE Chicago Chapter the greatest chapter in the world.

Rick Butler,

Proud to be VP Technical of the Chicago Regional Chapter of ASPE

rbutler@lochinvar.com; 224 238.8515

ASPE Chicago Chapter Elections

All Chicago Chapter members in good standing are eligible to run for a board position. Once again, Joe Ficek, CPD of Grumman/Butkus Associates stepped in to handle the elections. He reached out to our membership and contacted several individuals that made the commitment to run for a board position.

The new Board of Directors will start its tenure on July 1st, 2013 and is composed of the following individuals:

President

Rick Butler

Vice President, Technical

Mark Mannarelli

Vice President, Education

Jill Dirksen

Vice President, Legislative

Francisco DeHoyos

Vice President, Membership

April Rickets

Vice President, Affiliate

Nevo Martelli

Treasurer

Sean Allard

Administrative Secretary

David Erickson

Corresponding Secretary

Chris Sbarbaro

Congratulations to the new ASPE Chicago Board of Directors!

ASPE ANNIVERSARIES

10TH ANNIVERSARY

Mike A. Castellano

Brian G. Conway, P.E.

James Earl Dipping, P.E.

Michael Lev Fine

Randy Fiorito

Craig J. Froeter

Michael Jason Gollins, P.E.

Gabriel Gomez CPD

Paul L. Larson P.E.

Joseph Michael Leonard

Michael J. Perroni P.E.

April L Ricketts PE

Christopher Paul Rohan, CPD

Frank Sanchez, CPD

Keith Schreiner

Joseph Gregory Thomas, P.E.

Neil William Vogel

Kevin Zaleski

20TH ANNIVERSARY

Steven G. Adams P.E.

Mark W. Handzel

Edward J. Kedzie P.E.

Phillip J. Kroll CPD

George J. Palermo

Ann Marie Seidl

30TH ANNIVERSARY

Alexander P. DiBiaso

Robert B. Huston P.E.

Mark J. Kaulas

William Mark Thompson

40TH ANNIVERSARY

Robert K. Abbott

Robert P. Dahlmann P.E., CPD

David L. Pardue

NEW! ASPE Young Engineers (AYE) - Chicago Event - June 13th, 2013

Registration is now open for the Chicago AYE Networking Event. The event is open to ASPE members in the AYE category (35 and younger), as well as members in good standing of the Chicago Student Chapter. We encourage registration to get a rough head count. One free drink ticket will be provided, as well as light appetizers. Hope to see you there!

To RSVP please follow this link:

http://aspe.org/avenetworking

IIT Student Chapter Seeks Internship Opportunities

A few of our IIT ASPE Student Chapter volunteers are looking for internship opportunities this summer. Internships will allow these young engineers to accumulate new skills and gain a real world perspective on an occupation.

Please let Frank Sanchez, <u>fsanchez@grummanbutkus.com</u>, know if you have any summer internship opportunities available. He can forward you their resumes upon request.

You can find more information on the IIT ASPE Student Chapter here:

http://aspe.org/node/1177

http://aspeillinoistech.wix.com/aspe

https://www.facebook.com/aspeiit



VICE PRESIDENT, LEGISLATIVE

Hello again from your V.P Legislative,

First, I would like to say thank you to all the members who came to the meeting and gave me your vote of confidence last month. It is a privilege and an honor to know many of you personally and I will make an effort next year to visit with all at the monthly meetings.

Second, I would like to thank the past board for all the hard work and dedication to make the past two years very productive with all the challenges that had to be overcome to make this the best chapter in the ASPE organization.

Illinois Life Safety Code

Not many of the plumbing engineers are familiar with the *Life Safety Code* in Illinois and the Office of the State Fire Marshall, so I have provided information below:

Office of the State Fire Marshall 1035 Stevenson Dr. Springfield IL 6270 (217) 785-0969

Additionally, here is some of the useful information that can be obtained on the Illinois State Fire Marshall web site:

<u>Does the Life Safety Code apply to a building that was occupied prior to the state's adoption of the Code?</u> *Answer:* Yes.

Unlike many building codes and local ordinances, the NFPA Life Safety Code is applicable to both new and existing occupancies. Examination of the Life Safety Code reveals that for most occupancy classifications, the code provides a chapter describing requirements for "new" occupancies and a sister chapter applicable to "existing" occupancies of the same classification. Although the existing occupancy chapters are often less stringent in some requirements than those applicable to new occupancies, it is not true that existing occupancies do not have to comply with the Life Safety Code.

What is the definition of a high rise in the Life Safety Code?

Answer:

A building greater than 75 ft. in height where the building height is measured from the lowest level of fire department vehicle access to the floor of the highest occupiable story.

Always remember to check with the local authority for local amendments' and adoptions to the code for each municipality outside the City of Chicago.

Must all high rise buildings in Illinois be protected by automatic sprinklers?

Answer: Not necessarily.

The 2000 NFPA Life Safety Code that has been adopted and is enforced by the Office of the State Fire Marshal does not contain an across-the-board requirement that all high rise buildings be protected by an automatic fire sprinkler system. The Life Safety Code addresses fire safety requirements within buildings based upon the occupancy classification of the structure. Furthermore, the Life Safety Code has varying requirements for "new" occupancies as opposed to "existing" occupancies. Although true that the Life Safety Code does indeed require some high rise occupancies to have automatic fire sprinkler systems, other occupancy classifications are allowed to either be protected with an automatic fire sprinkler system or prove equivalent safety through the use of an engineered life safety system. (The Life Safety Code describes an engineered life safety system as a document developed by a registered professional engineer who is experienced in fire and life safety systems design. The system shall be approved by the authority having jurisdiction and might include any or all of the following systems: (1) partial automatic sprinkler protection, (2) smoke detection alarms, (3) smoke control, (4) compartmentation, or (5) other approved systems.

Does the Office of the State Fire Marshal enforce the Life Safety Code in health care occupancies? *Answer:* No.

Although the Life Safety Code is applicable in these occupancies, the Illinois Department of Public Health (IDPH) enforces the NFPA Life Safety Code in Illinois' licensed hospitals, nursing homes, assisted living facilities and ambulatory care facilities.

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VICE PRESIDENT, LEGISLATIVE CONTINUED...

How often are sprinklers systems required to be tested?

Answer:

The Life Safety Code adopted and enforced by the Office of the State Fire Marshal makes reference to another NFPA standard to define the testing and maintenance requirements for sprinkler systems. Specifically, NFPA 25 Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems is referenced. NFPA 25 establishes testing and maintenance schedules for various system components (i.e., valves, alarm devices, sprinklers heads, etc.). There is not one singular answer to the question of how often sprinkler systems or their components must be tested. NFPA 25 sets varying requirements based upon the type of sprinkler system and types of components and appurtenances that are present. By statute, those who inspect and maintain automatic sprinkler systems (other than weekly or monthly inspection and testing of control valves and gauges) must be OSFM-licensed fire sprinkler contractors.

Additional Codes that Are Referenced in the Life Safety Code

Please note that the *Life Safety Code* makes reference to several other NFPA standards, and they become mandatory because of the *Life Safety Code* reference. These include, but are not limited to:

- NFPA 10 Standard for Portable Fire Extinguishers
- NFPA 13 Standard for the Installation of Sprinkler Systems
- NFPA 13D Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes
- NFPA 13R Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height
- NFPA 14 Standard for the Installation of Standpipe, Private Hydrant, and Hose Systems
- NFPA 20 Installation of Stationary Pumps
- NFPA 54 The National Fuel Gas Code
- NFPA 58 The LP-Gas Code
- NFPA 72 The National Fire Alarm Code
- NFPA 96 Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations
- NFPA 101A Guide on Alternative Approaches to Life Safety

Additionally, the rules imposed by the Office of the Illinois State Fire Marshal do not override those enforced by other state licensing agencies. Often licensing rules of other state agencies require building features not required by the Life Safety Code. Owners should also familiarize themselves with the applicable licensing rules of other agencies that may apply to their occupancies.

Lastly, it should be noted that the rules of the Office of the State Fire Marshal (OSFM) serve as the **minimum** criteria that are required to be met by building and facility owners. Most state rules do not supersede the requirements imposed by local rules and ordinances. Local rules may be more stringent than the requirements of the OSFM and owners are obligated to comply with such requirements.

Formulas for Flow and Pressure in Fire protection

Standard spray sprinklers, both quick and standard response type, are controlled sprinklers, and the minimum pressure is 7psi per NFPA 13. Any higher pressure must be calculated on the density curves in NFPA 13. The pressure to achieve the specific flow required is based on the sprinkler spacing, the K factor of the sprinkler and the pressure available (based on your design and the available water supply). You must calculate the flow required using the following formula

Q=K * $P^{1/2}$ to determine flow and P= $(Q/K)^2$ to determine the pressure. where Q=flow (in qpm) K=K Factor P=Pressure (in psi)

Mark G. Mannarelli, Vice President, Legislative

mmannarelli@dbHMS.com

ADMINISTRATIVE SECRETARY

The May Chicago Chapter Meeting had an attendance of 72 members.

The free dinner raffle winner was: Tony Garcia From Riddile & Associates.

There were two \$100 winners at the 50/50 raffle: Richard Simms, from Crane Plumbing LLC., & John Stanzi from Metropolitan Industries. This month the Chicago Chapter will donate \$200.00 to the ASPE Scholarship Fund.

Let us review one Item that is being gradually changing throughout the Chicago suburbs, due to the acquisition of new equipment by local Fire Departments.

Every building with a fire protection sprinkler system requires a **Fire Department Connection (FDC)**, also known as a Siamese connection. FDCs are most commonly located on the front of buildings close to the main entrance, but additional connections may also be located on one or more sides of the building depending on the size of the building and the local Fire Department requirements. The two most common installations for FDCs are "Freestanding or Post type" and "Wall Mounted." NFPA 13 requires that the FDC be located on the street side of buildings, but the local Fire Department and/or Fire Marshal have the final approval for the location.

There are a few types of buildings that will require a closer and early coordination with the design team and the fire department, these buildings are: Stadiums, Shopping Malls, and buildings with multiple active entrances with separate parking lots.

There are two very common types of FDC's: "Screw Type" and "Storz type"





Screw Type

Storz Type

The FDC shall be arranged to face the street, driveway or fire apparatus access route as specified by the Fire Department. FDCs shall be installed so the lowest point on the inlet connection is between 18 and 42 inches above finished grade at its location, and within 100 feet from nearest fire hydrant. The FDC type will be a compatible connection with the local fide department equipment (Fire Pump Truck Hoses). The number of FDCs will be a related to the size of the building and the fire protection sprinkler system. It is important that the hose lines between the pumper truck and the FDC are properly rated for the higher pressures produced by the pumper truck. Providing a fitting adapter to convert one FDC types is not always the solution. Siamese connections shall be equipped with plugs or caps, this is to prevent dirt and other foreign objects from entering the piping, which would inhibit water flow or prevent the connection from being used during an emergency. To prevent water from collecting in the piping between the check valve and the inlet body, an automatic drip shall be installed at the lowest point of the FDC piping. Without the automatic drip any collected water could freeze and prevent use of the fire department connection under fire conditions. NFPA 13 and NFPA 14 require that a sign with one inch raised letters be provided on each FDC to identify the type of system (such as sprinkler, standbipe, or combined). These are frequently cast into the plate surrounding the inlets with raised lettering. Labels shall contain the required operating pressure for that particular system, and the portion of the building that it covers. Some jurisdictions require larger signs that can be visible to firefighters and pumper drivers from farther away. Symbols may be provided as well to indicate whether the connection feeds sprinklers, standpipes, or both (see NFPA 170 Standard for Fire Safety Symbols). Prominent signs can help greatly where the FDC is on a building set back from the street. Some jurisdictions require a light to help identify the FDC's location in the dark and to have the access path paved or of a solid surface (no dirt, grass, or gravel).

J. Francisco DeHoyos, Administrative Secretary
ASPE Chicago Chapter Region 5 Legislation Representative

FDeHoyos@dbhms.com; 773.732.1150

Symposium

If you are interested in receiving a free trip to the Symposium, please contact Frank Sanchez at fxs@grummanbutkus.com or 847.3165.9251 by Friday June 14, 2013, indicating why this will be beneficial to your career.

2013 ASPE Technical Symposium September 19-22, 2013 Buena Vista Palace Hotel, inside the Disney World Resort.

Please visit http://aspe.org/2013tech for more information.



CHICAGO CHAPTER PRODUCT SHOW NEWS

Firstly, the big news: this past month we finally decided on the venue for the 2013 ASPE product show. We will be remaining at White Eagle in Niles. The committee researched many possibilities and we had some lively debates. With the challenge of changing the date and since our National Convention will be in Chicago in 2014, we think it best to remain at a known location. Thanks to all Product Show Committee members who helped in our venue search!

Currently we are working on new advertising, giveaways, new class topics and of course getting reservation forms out to all our vendors. Hopefully I can hand out a whole bunch of applications at the Golf Outing. I am sure no one will lose the forms after a long day on the links. We will also be posting the applications on the website! We are also doing research on locations for the 2015 Chicago Chapter Product Show. For now, please mark your calendars for...

42nd ANNUAL ASPE CHICAGO CHAPTER PRODUCT SHOW White Eagle Banquets, Niles, IL

Thursday, September 26th, 2013

If you have any ideas please call or drop me an email. Or come to the next Product Show Meeting.

Next Product Show Meeting

Date: Thursday, April 6, 2013

Time: 6:00 PM

Location: Lochinvar Facility, 801 Chase Ave, Unit E, Elk Grove Village, IL

Please RSVP if you plan to attend.

Phill Kroll, CPD, ASPE Chicago Chapter Product Show Chairman 224.629.4444 Ext: 213

Pkroll@metrodgn.com



<u>HISTORIAN</u> End and Beginning of the Year(s)

Congratulations to Rick Butler on being elected as our Chapter's 23rd President! Thank you to Frank Sanchez, CPD, for his excellent term as President. We look forward to another banner year with the new Board. Three men served twice in the 22 previous Presidential terms.

The Chicago Chapter history is being updated to show the presidential update, the Charlotte Convention events, the Product Show changes and the expansion of our Educational activities and endeavors. Look for it soon on the *website*!

See you at the golf outing!

Respectfully,

Don Johnson, Historian

AFFILIATE LIAISON

First and foremost, I would like to thank all of you that were at the last ASPE Chicago election night for your votes. It will be an honor to serve such a diverse group. I want each of you to know that I will be available to help each of you whenever and however possible when it comes to your association to ASPE.

I would also like to thank my running mates Tom Higgins IV and Chris Wisinski, and wish them well. I would like to extend my hand in appreciation for their friendship, and ask them for their assistance and support in the up and coming years. Please accept a special **thank you** to both of you.

ASPE always recognizes the importance of its Engineers, Affiliates, Contractors and Owners, but we are only as good as the total package. We need each other in order for all of us to succeed. We need to better support each other even during the industry's hard times.

That is where the ASPE organization comes into a significant factor. We have the largest Chapter in the Nation, and with all of us working towards the same goals there is no telling what we can accomplish.

So let's try to support one another a little more each and every day with our projects and products. We need to commit to one another for a better industry and start to support the ASPE meetings, functions and outings. They are tools that we should all appreciate and use to the fullest.

The next ASPE Chicago event is our Golf Outing. Let's show our support.

Nevo Martelli, Affiliate Liaison nevomartelli@comcast.net

TREASURER'S REPORT

Hi everyone,

Thanks for re-electing me as your Chapter Treasurer, and a big congratulations to the rest to the newly elected board! We are doing OK paying our bills and collecting invoices. We have been trying to make our dinner meetings as cost neutral as possible; balancing out how much they cost versus how much we charge. Some cost the chapter more than others based on where they are held. However, as a whole they balance out.

It really does help us out when we have a good idea of how many people are going to attend. **Please RSVP** when you are confident that you will be able to attend. When we have more people at the meeting than we planned, it causes delays serving dinner. When we have less, sometimes we have to pay for un-served dinners. We do add in a number of extra dinners to the RSPV number for folks who forget or do not have email. Compared to 3 or 4 years ago we are doing so much better with RSVPs.

As always, if you have any questions, thoughts, or concerns, let any of your Chicago Chapter Board Members know—we are here to make our chapter the best in Society.

Regards,

Sean Allard, CP, Treasurer <u>sallard@esdglobal.com</u>

Save the Date for our Second Annual ASPE Chicago Chapter Family Picnic

If you would like to assist with the planning, please contact John Nieman, CPD, PE at <u>JNieman@esdglobal.com</u> or 312.456.2323.

Saturday, August 10, 2013 Schiller Woods, Groove # 12



GUEST COLUMNIST — RPZ DANGERS

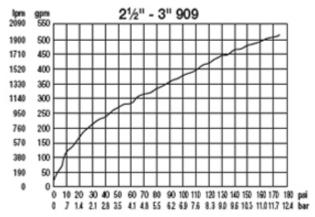
Much of this article is a reprint from another source, but it is very important!

Installing reduced pressure zone (RPZ) backflow preventers indoors carries with it a risk of property damage due to flooding. For many of the projects, it seems many of the floor drains and floor sinks are an inadequate remedy. The risk is related to the relief valve discharge rate differences of RPZs compared to the drain capacity of floor drain and floor sinks. The RPZ is designed to dump water when a

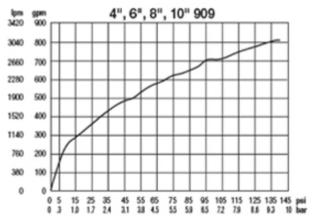
backpressure or back-siphon condition occurs. If something keeps the #2 check valve from closing completely during a backpressure or zero-pressure event, the relief valve dumps. The relief valve discharge graphs below were created by Watts. The drain flow rates are sourced from this link: http://www.engineeringtoolbox.com/sewer-pipes-capacity-d-478.html.

We derive the flood rate below by subtracting the drain capacity from the relief valve discharge rate at 65 PSI. As the graphs below indicate higher pressure rates will increase the flood rate shown.

Flow comparisons based on 4" gravity drain with 12" fall per 100' of pipe.



Flow (65	PSI	=	312	gpm
Drain			=		gpm
Flood	rate	≘ .		219	gpm



There have been numerous cases of building damage, especially following new construction from RPZs installed indoors. The Denver Mayor's office estimated that 5–10% of backflow preventers fail their initial test. This puts additional pressure on design engineers to be sure that system-failure risks are assessed accurately.

Many water jurisdictions (Charlotte, Las Vegas, Chicago, Nashville) are amending design specifications and preferences for new commercial building projects to locate meters and backflow preventers at the Right of Way on the inbound water sources: fire, domestic, and irrigation.

Some items to keep in mind when designing systems with RPZs include:

RPZ flooding of indoor mechanical rooms
 Stated above, the floor drain capacity of RPZs of 3" diameter and higher are likely to be cost-prohibitive due to necessary pipe diameter and fall rates.

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RPZ DANGERS CONTINUED...

- Ongoing cost and liability of BFPs in underground vaults
 - Risk of injury in confined space
 - OSHA requires 2 men at any service call and at every annual BFP test
 - Flooded vaults must first be pumped out prior to testing
 - The installed cost of a vault and an aboveground enclosure are comparable
- Difficulty of annual testing due to lack of access to premises
 - Tenants in subdivided spaces often are unaware of the BFP location and complicate access for testing
 - Vacant lease premises are often locked and inaccessible
 - Having all BFPs in one location accessible with one key, eases backflow testing time and reduces cost.
- The change of use of commercial properties over time
 Leased properties change uses over time and a low hazard water user (Double Check BFP) often changes to a high-hazard water user (RPZ BFP).

Fire Department support

When the Fire Department is called to a location during a fire, the Fire Service backflow can quickly be located close to the public Right of Way. Many times, the backflow enclosure includes a Fire Department Connection (FDC) downstream of the backflow piped to the enclosure exterior wall. This speeds up response capability, and reduces risk to firefighters and rescue personnel.

Thanks for reading,

The Most Interesting Man in the World, CPD LEED-AP BD+C, ARCSA-AP Mystery Member

ASPE Chicago Chapter

MAY MEETING ATTENDANCE

The following individuals attended the May 2013 meeting of the ASPE Chicago Chapter. In accordance with ASPE Society policy, these individuals are entitled to **0.75 RU's** toward 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.

Alonzo Anderson	David DeBord	Joe Ficek	Nataila Dankanich
April Ricketts	David Erickson	John Greenwood	Natalie Aherns
Bill Bauer	David Lehman	John Nieman	Nevo Martelli
Bob Dahlmann	Dick Simms	John Stanzi	Otton Finiewicz
Bob Downey	Don Johnson	Jon Triphahn	Patrich O'Boyle
Brandon Taylor	E.D. Kedzie	Keith Seier	Peter Wu
Brian Hank	Ed Lichner	Ken Cutler	Phill Kroll
Bruce Shegarfi	Francisco DeHoyos	Kevin Zaleski	Rich Turkicuicz
Charlie Zowinski	Gabriel Gomez	Lou Faeler	Rick Butler
Chris Sharbaro	George Patermo	Luciana Kayo	Sean Allard
Chris Wisinski	George Sobyra	Mark Gomenzi	Shawn McAuliffe
Damon Camereon	Holly Hirsch	Mark Nasha	Steve Adams
Dan Gordon	James Dipping	Matt Keller	Steve Montgomery
Dan Heilman	Jason Romano	Matt Pardue	Tom Dolan
Dan Patt	Jeff Cochran	Mel Withrow	Tom Higgins
Darren McCuaig	Jim Lagina	Michael Ponx	Tom Ronan
Darren Rich	Jim Majerowicz	Micheal Cwanek	Tony Garcian Jr
Dave Ewing	Joe Dinkel	Mike Imoka	Travis McKnight



INDUSTRY NEWS

I would like to thank everyone for their support over the past two years. Hopefully, I was able to keep you informed of all the industry events occurring locally and nationally. I would like to congratulate Chris Sbarbaro of Cannon Design who will be serving as your new Corresponding Secretary.

American Society of Plumbing Engineers (ASPE)

(http://chicago.aspe.org/?q=Chicago/)

ASPE Young Engineers Chicago Event

Dates: Thursday, June 13

Location: Cactus, 404S Wells, Chicago, IL Details: http://aspe.org/ayenetworking

ASPE Golf Outing - Date Revised

Date: Friday, June 14

Time: Tee-off at 8:30 (arrive at 8:00)

Location: Hilldale Country Club, 1625 Ardwick Drive,

Hoffman Estates, IL

Details: http://chicago.aspe.org/?q=Chicago/

ASPE Summer Family Picnic

Date: Saturday, August 10 Time: 12:00 - 5:00 p.m.

Location: Schiller Woods, Groove #12
Details: http://chicago.aspe.org/?q=Chicago/

American Society of Sanitary Engineering (ASSE)

(http://www.asse-plumbing.org/calendar.html)

Q3 ASSE International Board Of

Directors Meeting

Dates: July 19-20 Location: Charlotte, NC

Details: http://www.asse-plumbing.org/calendar.html

National Fire Protection Association (NFPA)

(www.nfpa.org)

NFPA Fire and Life Safety Conference 2013

Dates: June 10-13

Location: Chicago, IL – McCormick Place Details: http://www.nfpa.org/itemDetail.asp? categoryID=943&itemID=22735&URL=Training/

Events%20calendar

NFPA Training throughout the US.

http://www.nfpa.org/itemDetail.asp?%

09categoryID=943&itemID=22735&URL=Training/

Events%20calendar

Illinois Chapter of ASHRAE

(www.illinoisashrae.org)

No report

USGBC – Illinois Chapter (LEED)

(www.usgbc-illinois.org)

Events Calendar (Hyperlink)

Keith Seier, PE, CPD, ARCSA® AP Corresponding Secretary

kseier@esdglobal.com; 312 456.2338

Society of Fire Protection Engineers (SFPE)

(www.chicagosfpe.org)

IBPA Golf Invitational

Date: Tuesday, June 25

Time: TBD

Location: Willow Crest Golf Club, Oak Brook, IL

Cost: \$395/person

Details: http://www.ilburnpreventionassoc.com/

PAMCANI

(www.pamcani.org)

PAMCANI's industry-wide calendar:

www.piccal.org

PAMCANI Golf Outing

Location: West Chicago

June 21st, 2013

http://www.pamcani.org/calendar/register.html

Illinois Fire Prevention Association (IFPA)

(www.ifpanet.org)

IFPA May Meeting - Past President's Night Out

Date: Tuesday, May 28

Time: 6:00 pm Location: TBD

Details: http://www.ifpanet.org/

Illinois Association of Plumbing-Heating-Cooling Contractors (ILPHCC)

(www.ilphcc.com)

Illinois PHCC 120th Annual Convention

Dates: June 13-15

Location: Marriott Bloomington-Normal, Normal IL

Details: http://www.ilphcc.com/

Refrigeration Service Engineer's Society (RSES)

(<u>www.rses.net</u>)

No report

American Society of Professional Estimators

(www.aspechicago.org)

June Meeting

Date: Thursday, June 20

Time: 5:30pm

Location: Brio Tuscan Grill

Details: http://www.aspechicago.org/html/events.html

**** Chicago ASPENEWS



2012-2013 ASPE Chicago Meeting Schedule						
Date	Primer	Technical Session	Location			
September 20, 2012	Phoenix	Waste Water Recycling - Success Stories from Down Under by Phoenix/Aquacell Water Recycling Solutions	Westwood Tavem & Tap 1385 N. Meacham Rd Schaumburg, IL			
October 18, 2012	Thermoplastics for use in Acid Waste Drainage and High Purity Water Systems by IPEX with New-Tech Marketing		La Villa Restaurant 3632 N Pulaski Rd Chicago, IL			
October 27-31	2012 ASPE Convention and Exposition October 27—31		Charlotte Convention Cen- ter, Charlotte, NC			
November 15, 2012 One Hour of IL State CEUs Provided	Viega	Keeping on the right side of State & Local Plumbing Codes by Jim Majerowicz of Local 130	Parthenon 314 S Halsted St Chicago, IL			
December 20, 2012	ASP	E Chicago Chapter Booster Night and Holiday Celebration	La Villa Restaurant 3632 N Pulaski Rd Chicago, IL			
January 17, 2013		of Geothermal, Including Hybrid Systems by ackel of The Energy Center of Wisconsin	Parthenon 314 S Halsted St Chicago, IL			
February 21, 2013 One Hour of IL State CEUs Provided	Indirect Water Heater Systems for Domestic Applications by Mark Kaulas of Bornquist		Venuti's 2251 W. Lake Street Addison, IL			
March 21, 2013	Available	Components of Medical Gas Systems by Ross Williams of ARTEC	La Villa Restaurant 3632 N Pulaski Rd Chicago, IL			
April 18, 2013	Updates to Lead Free Plumbing	Local 130 Tour	Plumber's Training Hall Local 130 1400 W Washington			
May 16, 2013		y Water Systems and Healthcare Designers es by Dan Heilman and Richard Turkiewicz Of Siemens Industry Inc.	Westwood Tavem & Tap 1385 N. Meacham Rd Schaumburg, IL			
June 14, 2013 <u>*New Date*</u>	ASPE Chicago Chapter Golf Outing		Hilldale Golf Club 1625 Ardwick Drive Hoffman Estates, IL			
Saturday August 10, 2013	ASPE Chicago Chapter Summer Event		Schiller Woods Grove #12			
September 26th, 2013	ASI	PE Chicago Chapter Product Show	White Eagle Banquets, Niles, IL			

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