



Upcoming Meeting

Date: October 24, 2018

Time: 6:00pm to 8:00pm

Place: Olive Grove Restaurant

Topic: WSSC Code Updates

Speaker: Chris Imhof- WSSC

Meeting Format

6-6:30 Social

6:30-6:45 Announcements and Table Tops

6:45 Dinner Served

7:00-8:00 Speaker



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In This Issue

- Presidents Report –pg2
- Project Spotlight –pg3
- Board of Directors -pg7
- VP Technical Report –pg11
- Advertising Opportunities–pg13
- Technical Article --pg15-16
- AYP & WOA Report - pg18
- Convention & Expo - pg21-22
- Historian Article –pg24-25
- Legislative Report - pg28-29
- Treasury Report –pg31
- Membership Report –pg33
- Meeting Schedule –pg34

MEETING LOCATION



Olive Grove
Restaurant & Lounge

705 North Hammonds Ferry Road
Linthicum, Maryland 21090
Phone: 410.636.1385

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**Jeffrey W. Edwards, CPD ,GPD
President**

President's Report

We started off the new technical meeting season last month with a great topic (Legionella prevention) and a great turnout so thank you to everyone for attending.

There were great discussions during and after the meeting on how engineers attending the meeting designed their domestic hot water systems regarding legionella prevention. I intend to hold a meeting at Mueller in next couple of months with some local engineers to bounce ideas and thoughts off each other on legionella prevention so if you would like to join us, please contact me.

I'd also like to thank the five manufacturer rep firms for presenting some of their products with table top displays during the meeting. If any manufacturer rep firms would like a table top this month, please contact myself or Kathy Dwyer ASAP.

I just returned from the ASPE Convention in Atlanta, GA. I served as our chapter's delegate and attended two days of business meetings with 280 other delegates who voted on ASPE's Society By-Laws as well as for the 2018-2020 Board of Directors. The product expo was very good and per some of the manufacturer's I spoke with were very happy with the turnout. I attended five technical classes that were very informative and attended, so much so that in several classes, extra chairs had to be brought in to prevent attendees of having to sit on the floor.

As we all know, there is a big hole in the 2015 International Plumbing Code regarding how they want us designers/engineers to size roof drains when it states to use roof drain manufacturer's published flow rates that currently don't exist. Myself, Chuck, Karen and George (from Mueller and chapter board) visited most roof drain company booths and inquired about their plans for testing their drains and how they recommend sizing roof drains. I don't have the space here to explain everything we heard but feel free to speak to me at October's meeting and I will try to explain it all.

I hope to see everyone at our next meeting.

**Best Regards,
Jeff Edwards, CPD, GPD
President-ASPE Baltimore Chapter**



Project Spotlight



Duke University Opens a New Home for the Arts

Duke University's new Rubenstein Arts Center, a 71,000-square-foot hub for artistic production, recently opened on the Durham, North Carolina, campus. Known as "the Ruby," the two-story facility was designed to inspire creativity and enable the arts to become "an essential part of every Duke student's experience," says David M. Rubenstein, who chairs the university's board of trustees and contributed \$25 million to the center.

"The Ruby" Showcases Art in Action

The Ruby's paneled glass facade animates the campus with views of lively "art in action," including dance rehearsals and visual arts activities. The building includes a 200-seat black box theater for performances and the media arts, a 100-seat film theater, dance rehearsal space, video production studios, flexible production studios and makerspace designed to support cross-disciplinary projects, painting and drawing studios, classrooms, a radio station, and lounge spaces.

The building was designed by William Rawn Associates. "What was most exciting about this project was the opportunity to embody Duke's ambitious mission for a culture of interdisciplinary study in the arts," the architects have noted. "The chance to reinvent the role that the arts play within a research university led to a building that needed to be immersive, flexible, and open—within itself and outward to the broader campus."

Addressing Multiple Requirements

"The hallmark of the Ruby is its flexibility," says Tom Syvertsen, PE, LEED AP, who served as Mueller Associates' project manager for mechanical, electrical, and plumbing engineering services. "There are many different uses and types of spaces, from the glass-enclosed dance cube, which features radiant heat for the dancers' comfort, to the visual art studios that require special ventilation. In the 'Ruby Lounge,' a multi-purpose student performance space, pipe grids installed at the ceiling level allow for the use of flexible theater lighting systems. The building's HVAC system is also designed to handle the higher loads as may be needed for major productions."

Syvertsen notes that the acoustical challenges also required special attention, with carefully specified duct sizes to accommodate acoustical treatments and silencers that attenuate sound throughout the duct system. "The adjacencies and stringent acoustic requirements of the various spaces added some complexity to the project," he says.

The Ruby celebrated its grand opening in January 2018. "The state of the arts at Duke is one of growing excitement and interest," stated Scott Lindroth, the university's vice provost for the arts, in the *Duke Chronicle*. "With the Ruby, we have fabulous facilities that enable departments and student organizations to engage more seriously with the arts."



If you would like to contribute a project to this section, please email Jeff Edwards at jedwards@muellerassoc.com or Jason Eagles at jason@bayassociates.com

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Chuck Swope, PE, CPD, LEED AP BD+C
Vice President—Technical

Technical Report

I must say that I was a little apprehensive about attending the 2018 ASPE Convention and Expo. After some encouragement from our friendly neighborhood Chapter President, Jeff Edwards, it was decided that as a Chapter Officer, it would be a good idea to go. I was worried that since this was my first convention that I would be overwhelmed or would miss out on things that I wanted to see. Now that I've returned, I can say without a doubt that this was not the case! Not only did the technical sessions and expo go smoothly, I was able to learn much more than I thought that I would have. I met so many people I thought that I'd have a hard time keeping track of where I had been and who I talked with. To the folk's credit at ASPE National that put this all together, there was an electronic system that kept track of how long we were on the floor and the product reps were able to scan our badges easily to get our contact information. This system also works to our benefit, we as the attendees are also able to log in and find out who we were scanned by. Even a short power outage couldn't stop the Expo! While it did shut down some of the glitz and glamor of the booths, it also allowed the reps to shine to show off their product knowledge without distractions.

For those that attended the Expo only, may I suggest attending the technical sessions as a full attendee at the next convention. I was personally able to attend four technical sessions, including topics like Rainwater Harvesting, Incorporating LEED v4 into projects, Lab Pure Water and Waste Water Treatment, and Domestic Hot Water Recirculation design. There were so many topics it was hard to choose! In addition, there was also a factory tour of Syncroflo's new facility, so there was something for everyone. For those that did attend, I hope that you were able to get in the sessions you wanted. I understand the Hunter's Curve discussion was standing room only. Don't forget that the handouts are available online to download, but are only available for full attendees.

This month's technical session will be presented by the Washington Suburban Sanitary Commission, commonly known as the WSSC. For those unfamiliar, the Wikipedia article on the WSSC tells us that it is a bi-county political subdivision of Maryland that provides safe drinking water and wastewater treatment for Montgomery and Prince George's Counties. It's important to note that they not only provide review of our designs and enforce the codes, but are also responsible for maintaining the facilities and reservoirs that our designs depend on. Their jurisdiction is limited to Prince George's and Montgomery Counties, but many of our Chapter Members have projects in these areas. WSSC's presentation will cover recent code changes they are adopting that we all need to be aware of to incorporate into our designs.

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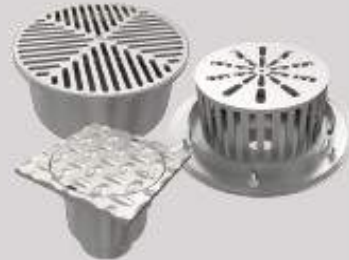
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WSSC: We all live downstream

“We all live downstream” is a figurative phrase commonly used to explain the effect of pollution on the environment, specifically the pollution of water. In the early 1900’s, the phrase had a much more literal meaning to areas of Washington that were downstream of the creeks in the suburban areas of Maryland. Citizens of Montgomery and Prince George’s counties, the two Maryland counties adjacent to the District, were polluting the streams that flowed to Washington. This pollution caused health concerns for the public as well as worry for new city parks along Rock Creek and the Anacostia River. Between 1911 and 1918, a series of meetings, commissions, reports, and legislation eventually resulted in the creation of a bi-county jurisdictional utility. On May 1, 1918 Maryland Governor Emerson Harrington signed the Act of 1918 and the Washington Suburban Sanitary District was created. The Washington Suburban Sanitary Commission, know more commonly as WSSC, was established to oversee this new district. This utility would be responsible for the sewage and water supplies for Montgomery and Prince George’s Counties.

Over the next 100 years WSSC would make great strides, overcome adversity, and eventually become one of the largest water and wastewater utilities in the United States. In the early years WSSC faced the challenges of the great depression and record droughts. During the great depression, WSSC started and completed the construction of the Robert B. Morse Water Filtration Plant. In the midst of World War II, the Brighton Dam was built and Patuxent Water Filtration plant became operational. The dam created the 800-acre Triadelphia Reservoir. In 1941, WSSC was recognized by the US Office of Civil defense for the commission’s dedication to protection and security during the war. Beginning in 1943 and continuing through the late 1960’s, WSSC even took on trash collection in Montgomery County, operating trash incinerators and landfills.

The 1950’s and 1960’s brought on a new era of civil rights in the United States. WSSC began to desegregate in the 1960’s, hiring consultants to help with recruiting and promoting African Americans to supervisory roles. By 1972, WSSC had appointed the first woman and the first African American to the WSSC Board of Commissioners. In 1993, WSSC named its first African-American general manager. Carla Reid became the first female general manager of WSSC in 2016.

As the population in the suburbs of DC grew, so did WSSC. The Howard Duckett Dam and Reservoir were completed in 1952 and the Potomac River drinking water plant opened in 1961. Sewage treatment plants in Piscataway and Western Branch were built in the 1960s, followed by Seneca plant in the 1970s. Currently, WSSC is served by 3 reservoirs, 2 drinking water filtration plants, and 7 wastewater treatment plants.

As time marched on, WSSC evolved and adapted to new standards and embraced the latest technology. In 1970, President Nixon created the Environmental Protection Agency and in 1974, the federal government passes the Safe Drinking Water Act. In 1987, the state formed the Maryland Department of the Environment. In 1978, WSSC was the first in the US to repair aging sewer pipe with trenchless technology. In 1982, WSSC began the use of personal computers in their offices. In 2000, the WSSC Consolidated Laboratory Facility opened. The lab is state-of-the-art, providing analytical support for plant operations, environmental programs, and regulatory monitoring. The lab performs over 500,000 water quality tests per year. In 2007, WSSC added acoustic fiber optic technology to water mains; this technology can detect leaks before pipe failure. Also in 2007, WSSC replaces the “The Plumbing and Gasfitting Regulations of WSSC” with the “2007 WSSC Plumbing & Fuel Gas Code”. This new code adopts and amends the 2003 IPC and IFGC.

In 2018, the Washington Suburban Sanitary Commission celebrates “A Century of Serving Our Community” and looks forward to continuing to serve all those who live downstream.

WSSC Regulatory Services Division

The WSSC Regulatory Services Division oversees the enforcement of the WSSC Plumbing and Fuel Gas Code. In July of 2018, the code was updated and consists of the adoption of the 2018 IPC and IFGC with amendments by WSSC. The Regulatory Services Division consists of over 70 employees. Within the Division there are several Sections. The FOG Section is responsible for plan review, permitting, and inspections in regards to the discharge of fats, oils, and grease. The Industrial Discharge Control Section protects the health of the public and the WSSC infrastructure from the introduction of pollutants. The Code Planning Section is responsible for the development and interpretation of WSSC code. The Cross Connection Section protects the health of WSSC customers by investigating potential cross connection risks and through the inspection and testing of backflow preventers. The Plans Review and Licensing Section reviews plumbing plans submitted by master plumbers, designers, and engineers for code compliance. They also assist in processing plumbing permits and answering code questions. All of the previously mentioned divisions are supported by the Plumbing Inspections Section. WSSC has more than 2 dozen plumbing inspectors.

Plumbing and Fuel Gas plans are required for all commercial construction. The code official shall have the authority to waive submittal requirements under certain conditions. Typically, commercial work with ten or less plumbing fixtures and/or three or less gas appliances may be waived. However, plans shall not be waived for the following scenarios; food service establishments, fuel gas system with greater than three appliances, shell-building construction, and any building with new or upgraded water, sewer, or metering scheme.

Applicants can apply for permits and submit drawings using WSSC's online ePermitting and ePlan review systems. Previously, only master plumbers could submit drawings to WSSC for plan review. Starting in July 2018, a designated "plans submitter" or an engineer can submit drawings to WSSC for review. By allowing the engineer to submit plans, the master plumber is no longer the middle-man between the plans reviewer and the designer. The engineer can have full access to plan review comments and resubmit drawings without coordinating delivery with the master plumber.

WSSC Plan review staff is available to engineers by phone, email, or in person at WSSC Headquarters in Laurel, MD. For general inquires and code questions engineers should call 301-206-8886 or email PlumbingPlansReview@wsscwater.com. For specific projects, engineers can contact individual plan reviewers; contact information is listed on WSSC website. Plan review staff is also available to meet in person, please schedule meeting prior to visiting the office.

Sources:

Washington Suburban Sanitary Commission. "*Beyond the Pipes, A Century of Serving Our Community*" Laurel, MD: Washington Suburban Sanitary Commission, 2018.



Christopher Imhof PE, CPD
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Karen Schulte, PE, CPD, LEED AP BD+C
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Women of ASPE Leadership Forum at the 2018 ASPE Convention

I and over 40 other women had the honor of attending the Women of ASPE Leadership Forum at the 2018 ASPE Convention in Atlanta, Georgia. From the opening remarks by Delta Faucet's Jason Gonzalez, where it was announced that Delta Faucet has graciously continued their sponsorship of Women of ASPE, through the four keynote speakers it was an inspiring day. The day topics spanned from generational diversity, perceptions of gender roles, and what it's like to be the first female plumber in New York City Plumbers Union.

While it simply would not do justice to the speakers to try to give you a full synopsis of the day and their speeches and ensuing discussion. I will leave you with some food for thought that I think everyone can relate to.

Many of us on a daily basis work with co-workers several generations from baby boomers to generation X to millennials. It's easy to stereotype and make generalizations about the characteristics of people from each generation. We must remember that while we may have our differences, we can learn from one another and we all have something to bring to the proverbial table.



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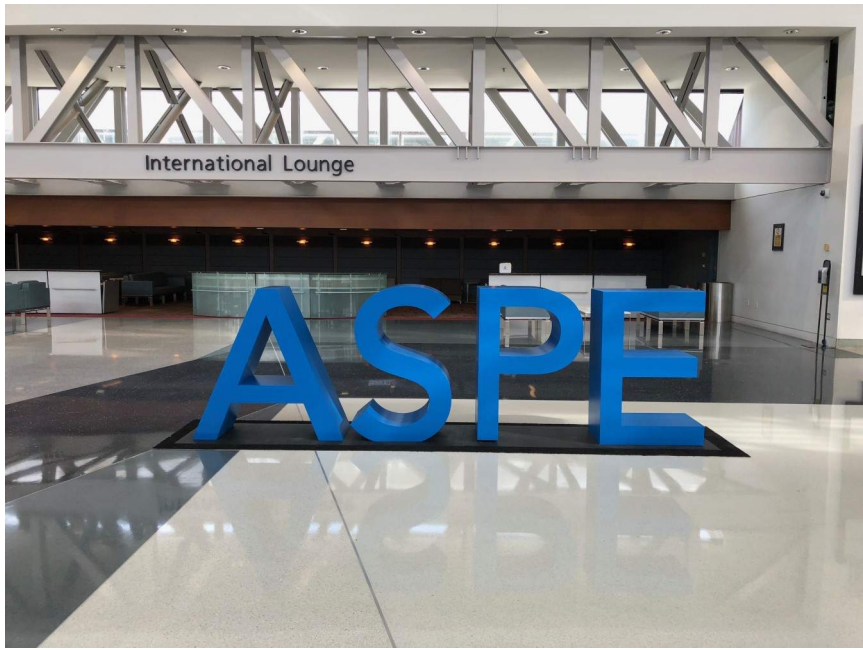
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Historian

MEMORIES FROM PAST ASPE BALTIMORE CHAPTER EVENTS

The Baltimore chapter of ASPE received its charter in 1974 from National. In our 44 year history many memorable things occurred. Remembering dates and exact persons involved from the early years is difficult, but some of the unforgettable things that happened we will remember for life. The following are a few events that comes to mind.

The first year things went fairly well considering that most consulting engineering firms in town did not have separate plumbing engineering departments and Baltimore ASHRAE was very strong. Thanks to Ed Dwyer, president of E.J. Dwyer, Inc. for getting people to join ASPE and attend the meetings, along with Bill Hammett of Henry Adams Consulting Engineers providing interesting topics and speakers. Meetings were held at various restaurants around Baltimore to determine which one would work best for our chapter. Even though we signed in as the American Society of Plumbing Engineers, most of the restaurants would direct our attendees to the room where the “Plumber’s” were meeting. They were always surprised to see plumbers wearing coats and ties.

Meetings back then were basically the same as today’s meetings with chapter news after dinner and a guest speaker for the evening. The one meeting I don’t think anyone who was present will forget was at a restaurant on York Road near the State Fair Grounds. The guest speaker was giving a demonstration on the freeze plugging method for water piping repairs. Our meeting was in a separate small room off the main restaurant. As the liquid nitrogen was being injected into the jacket around the pipe, there was a slight leak of the cold nitrogen gas that drifted into the main restaurant. Thinking the building was on fire, people were evacuated and the fire department arrived. Everything was clarified quickly and people were allowed back in with a few minutes, but the Baltimore Chapter of ASPE was not welcomed back in the future.

After a few years we held a local plumbing product show for the Baltimore engineers. Though the product show did well and helped our chapter treasury, we could not compete with the local ASHRAE product show so we worked at a deal with ASHRAE to combine both shows into one and split the profits based on the proportions of HVAC vs Plumbing manufacturers/representatives displaying. This help improved ASPE’s local engineering present.

The most successful meetings were when we would invite several chief plumbing inspectors from various county or city agencies to discuss differences in the plumbing codes they used and why. Back in the late 1970’s and early 1980’s there were 20 different plumbing codes used in Maryland. Several cities and counties in the state had their own plumbing code developed by their plumbing department. When we held a panel discussion at the chapter ASPE meeting with plumbing inspectors we always had a good turnout to see how they each would defend their code. The good thing that came out of the meeting was the chiefs understanding there is more engineering to plumbing systems than they realized. Several plumbing inspectors took our plumbing engineering courses we started in the early 1980’s.

Realizing that the chapter needed to offer a plumbing design course in 1980/1981 we started a two (2) semester, fourteen (14) weeks per semester course that met once a week for two (2) hours classes. The first semester was all the basic systems in the typical plumbing code you would encounter on a project. The classes were arranged in the same order as you would design a typical project. The first class started with some plumbing history then went into finding your utilities on site and their restrictions. The final classes dealt with sizing of water piping, specifications, and acquiring approval for construction. The second semester dealt with specialty plumbing systems such as swimming pools, medical gases, water treatment, sprinkler systems basic, septic systems (which were in many Maryland plumbing codes), etc. Classes were held at the Engineering Society of Baltimore and we averaged 40 people for each semester. Over a twelve (12) year period, the course was given five (5) or six (6) times. The classes were attended by all types of plumbing industry personnel. It included local engineers and designers, engineers from various Government agencies in Washington, plumbing inspectors, plumbing sales representatives, and project managers from local contracting firms. We sent a copy of our instructor manuals to ASPE National, but assumed they felt the classes were too geared for Maryland, which was our goal. By the way we used the Maryland State Plumbing Code, which was very similar to the National Standard Plumbing Code and at each class we would explain any special differences in the other eighteen (18) to twenty (20) codes used in Maryland, based on the subject for the night.

Listed as the education chairman for the Baltimore chapter for over twenty (20) years, I would receive several calls a year from out-of-state engineers with questions about information they could not find when designing a project in Maryland. The one question asked the most back then was what plumbing code they were to design around. The city of Annapolis had a different plumbing code than Anne Arundel County, which is where they are located. Frederick City and Frederick County were using different codes. There were several other cities that had different codes other than the counties they were located. This information was not on websites like it is today. Another question asked many times was about natural gas boosters. Some of the gas mains in Baltimore City operate at 3" to 4" WC gas pressure which is too low for most commercial equipment. Eclipse is one manufacturer of gas boosters, but the important information is how to pipe them into the system. Since the booster added heat to the gas, there was a piece of finned tube radiation to relieve heat build-up. You also had to be careful you did not pull too much gas out of the main and short change other customers on their gas supply main. We also received many questions about codes and information for overseas countries. The plumbing code used by many of the countries is the Plumbing Code of England (UK). One of the toughest questions asked was what was the rain fall intensity charts for South Africa. Not something you use every day. Researching these items was fun and very helpful for me when I did two projects overseas.

Stephen Hudson, PE, CPD
Historian - ASPE Baltimore Chapter





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J. Richard Wagner, PE
ASPE Baltimore, V.P. Legislative

ASME A112.6.4 for Roof Drains Still Not Revised for Flow Testing

I've been trying to keep you updated on the status of ASME 112.6.4 for requiring flow testing roof drains for their hydraulic heads to determine the rain load (R) on flat and low slope roofs. I included articles in the February, March, and April 2018 issues of the Baltimore ASPE Newsletter. I skipped the May and September issues because ASME A112.6.4 had not been revised and issued - but it still hasn't been. I don't know if there will be a public review before any final action by the ASME A112 Committee.

My newsletter articles for February, March, and April are available in the Baltimore ASPE website under "Newsletter" and "archived".

Until ASME A112.6.4 is revised and issued and the roof drain manufacturers are required to flow test their roof drains, it will not be possible to indicate the maximum allowable hydraulic heads for the roof drains in the design plans for a roof drainage system. But consideration should be given now to marking the required GPMs for the roof drains on the plans in case it is needed for acceptance of a particular roof drain or its future replacement.

But I have determined recently that the roof rain load (R) in the International Building Code (IBC) is compared with the roof live load (Lr) and the snow load (S). The highest of the three loads is used in the structural design of the roof, not the total for two or all three. The roof live load (Lr) is 20 psf maximum and allows for people on the roof. The snow load (S) varies with design depth and weight, which will vary with the site location and its AHJ. The IBC ground snow load for the Baltimore area is 25 psf.

ASME A112.6.4 presently only applies to 2" through 6" roof drains, but its requirements for flow testing may be increased to include the larger pipe sizes which don't have an ASME standard. ASME A112.6.4 may only require flow testing for a 2" hydraulic head. But to better coordinate the roof drains with their storm drainage piping, the roof drains should be flow tested for several GPMs that are within their pipe size in the plumbing codes. My February Newsletter article had some information about the 2012 ASPE Research Project. Some 6" roof drains had 4" and 5" hydraulic heads for the maximum GPM for their pipe size. There was no test data for 8" roof drains and larger.

ASME A112.6.4 for Roof Drains Still Not Revised for Flow Testing

If roof drains are only tested for a 2" hydraulic head, that may result in roof drains with pipe sizes larger than the storm drain pipe they are connected to. If that's the case, the roof drain should have several feet of its pipe-size discharge pipe before being reduced to its storm drain pipe so that the outlet of the roof drain is not restricted by connection of a smaller discharge pipe.

Presently, there are two different recommendations for designing roof drainage systems. One method, which appears to be in the IPC, is to size the piping based on the roof drains. But you have to determine the GPM for the drain piping layout before you can select a roof drain. The other method is to size the piping first, based on the GPM for the rainfall rate on the roof area being drained by the roof drain. This second method is more traditional where the design of the drain piping system can be completed before finalizing the roof drains. The individual roof drains and their hydraulic heads should not affect the sizing of the drain piping for the roof. They have different design issues.

I still don't know what rain loads (R) are being used by the architects and structural engineers. We have never had hydraulic heads for the roof drains to determine what the rain load (R) is for a project.

J. Richard Wagner, PE

ASPE Baltimore, VP Legislative



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Kathy Dwyer
Treasurer

Treasurer's Report

We had a great meeting on September 26th for anyone who missed it! We have 50 folks show up and enjoy a yummy dinner of crab cakes, chicken parmesan and beef tips! I would like to thank and welcome George Gruner at the front table helping Brian Crisp get everyone registered and accounted for.

We had a good showing down in Atlanta at the National ASPE show and I am sure our esteemed president will fill us in on the important results of those meetings.

We have instituted an important new feature with the tabletop presenters! If any engineer stops at a tabletop to gather information they will get another ticket for a chance at those nice \$50.00 bills we hand out every meeting. Please visit the tabletop sponsors at the next meeting.

I am looking forward to seeing you on October 24th at the Olive grove.

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Andrew Cahill — Membership

Membership Report

What a great turnout to kick off 2018-2019. It was great to see everyone following the summer break. Although most of us are now afraid to soak in a tub, take a hot shower or purchase vegetables, the September session was very informative and engaging. Excited for October and hopeful my schedule allows attendance.

The chapter added 3 members in September:

Michael Greulich, James Posey Associates

Matthew Gallagher, E&S Construction Engineers

Dan Galloway, Ames

Please join me in welcoming them to the Baltimore chapter. We look forward to seeing them at our meetings this year.

Let me know if I can be of assistance to anyone interested in joining ASPE. You can direct them to <https://www.aspe.org/join> or email me at andrew.cahill@uponor.com.

Did you know that engineering firms may offer reimbursement to employees for affiliation with professional organizations such as ASPE? In fact, participation with local chapters is often encouraged and provides significant benefits. In addition to the ability to attain CEUs from monthly educational seminars and networking opportunities with other industry professionals, members are provided with a volume of the Plumbing Engineering Design Handbook for each year of participation – a key resource in completing CPD testing. Have a conversation with your firm’s principal about your options for joining ASPE.



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2018-2019 ASPE Baltimore Chapter Meeting Schedule

Date: **September 26, 2018**

Speaker: Craig Boyce - Kemper

Topic: Legionella, ASHRAE 188, and Minimizing Risk

Date: **October 24, 2018**

Speaker: Chris Imhof - WSSC

Topic: WSSC 2016 Code Update

Date: **November 28, 2018**

Speaker: Otto Sales

Topic: Rainwater Harvesting for Potable Reuse

Date: **December 12, 2018**

Event: Holiday Party

Location: [Mustang Alley's](#)

Date: **January 23, 2019**

Speaker: STH

Topic: Fire Protection Design

Date: **February 27, 2019**

Speaker: Sherman Engineering Company

Topic: Lab Specialty Gas Sources and Distribution

Date: **March 27, 2019**

Speaker: Highland Tank

Topic: Grease Interceptor Design

Date: **April 24, 2019**

Speaker: Ultra Pure Water Systems

Topic: Evoqua

Date: **April 26, 2019**

Event: Golf Outing

Location: [The Timbers at Troy](#)

Date: **May 22, 2019**

Speaker: EJ Dwyer

Topic: Digital Mixing Valves



Monthly Sponsorship Opportunities

The Baltimore Chapter of ASPE continues to have successful meetings and is looking to continue improving throughout the year.

The Chapter has the following sponsorship opportunities for each month:

Tabletop Presentations: \$100 to provide a tabletop presentation of equipment or material relative to the plumbing profession. The tabletops will be set up from the beginning to the end of the monthly meeting and provides the opportunity to provide a brief (under 5 minutes) presentation.

Please make checks payable to the Baltimore Chapter of ASPE.

Contact Jeff Edwards or Kathy Dwyer if interested

jedwards@muellerassoc.com

kdwyer@ejdwyer.com

