

Upcoming Meeting

Date: November 28, 2018

Time: 6:00pm to 8:00pm

Place: Olive Grove Restaurant

Topic: Rainwater Harvesting to
Potable Water

Speaker: Jesse Rodriguez from Aqua
Treatment Services

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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MEETING LOCATION



Olive Grove
Restaurant & Lounge

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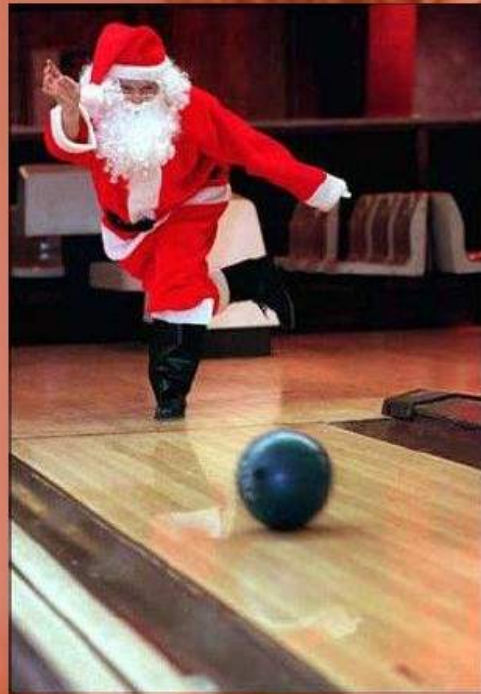
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**Jeffrey W. Edwards, CPD ,GPD
President**

President's Report

Our October monthly meeting had another great turnout. Chris Imhof, from WSSC as well our Education Chairman, did a great job of updating everyone on the revisions and changes to WSSC's 2018 plumbing and gas fuel code.

As I write this report that will be published within next couple of days in our November newsletter, I realize the Thanksgiving holiday will be upon us in the next couple of weeks. I hope everyone has a safe and happy Thanksgiving.

Speaking of the holidays, please mark on your calendar that our Holiday Party will be on Wednesday, December 12th, 7-10 PM, at Mustang Alleys. Please try to join us and refer to the flyer in our newsletter for more information on this great event.

The Baltimore ASPE board has been working hard behind the scenes planning for our upcoming AYP (ASPE Young Professionals) and WOA (Women of ASPE) events. Stay tune for flyers and additional information soon.

Each month in our newsletter, we provide a dedicated page that highlights a company's project titled Project Spotlight. So far, only Mueller Associates and Kibart Incorporated have provided projects for insertion in our newsletter in our last 12 publications. There are certainly many MEP firms in our area that work on great projects that deserve to be highlighted in our newsletter. If you are proud of the work you and your company do, please consider sending me your project that could be including in our newsletter that goes out to over 300 names on our email list.

I hope to see everyone at our next meeting.

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



Project Spotlight

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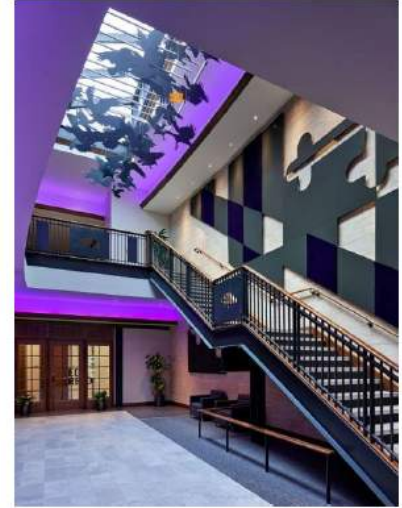
Baltimore Ravens Under Armour Performance Center Renovation and Addition Owings Mills, Maryland

Completion Date: 2018
Cost: \$45 million

Kibart provided mechanical, electrical and plumbing design engineering for the interior renovation of the 113,237 SF training facility, as well as a 46,000 square foot, 2 story addition to the Baltimore Raven's Under Armour Performance Center located in Owings Mills, Maryland. The project includes a combination of administrative and executive office spaces, conference rooms, players' meeting rooms, training rooms, locker rooms, media room, player/personnel dining, a broadcast studio, and a large auditorium.

Highlights include the following:

- Renovation/Expansion of domestic hot water production, serving:
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 - o Commercial Kitchen Food Preparation
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- Water conservation fixtures for locker rooms and restrooms.
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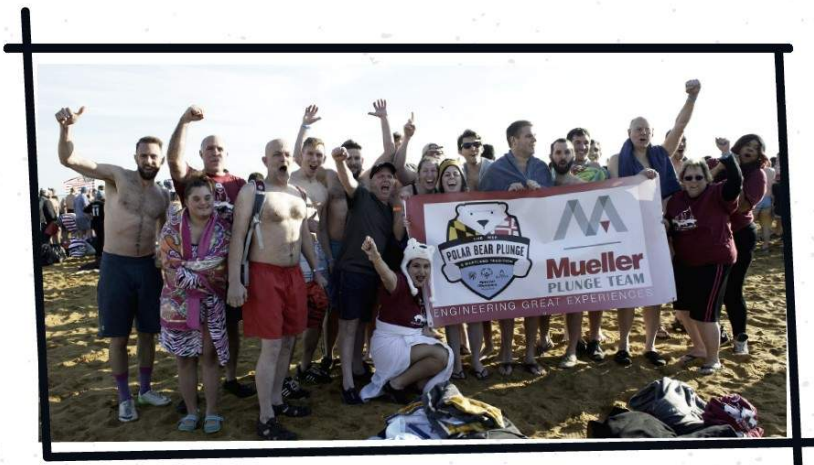
LEED FACTS

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June 2018	
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Sustainable Sites	8/26
Water Efficiency	8/10
Energy and Atmosphere	26/35
Material and Resources	6/14
Indoor Environmental Quality	10/22
Innovation	5/6
Regional Priority Credits	1/4



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

Technical Report

I would like to thank Chris Imhof and his colleagues Angelo Prevezanos and Chip Matthews at the WSSC for their invaluable presentation at our meeting last month. At face value, code updates may not be the most flashy topic, but they are probably the single most important factor that affects the design of a building. After all, the codes are not arbitrary, but are intended to allow buildings to operate safely, efficiently, and conveniently, in that order.

This month’s presentation on converting harvested rainwater to potable water comes to us courtesy of Jesse Rodriguez from Aqua Treatment Services and Jay Otto from Otto Sales, Jesse will cover why we should consider using rainwater to supplement a potable water system, what equipment should be considered, and the hurdles to get your system approved by your jurisdictions.

Jesse Rodriguez is the Vice President of Business Development at Aqua Treatment Service (ATS). He has over 35 years of experience in water treatment designs and applications and is a member of the Water Quality Association Sustainability UV Task Force. He has also written and published several articles on Ultraviolet Water Disinfection for Drinking Water Applications, as well as Commercial, Medical and High Purity Water Disinfection. Jesse works with private and public sector and engineering firms to meet local, state, and federal regulatory specifications and designs for water treatment and filtration.

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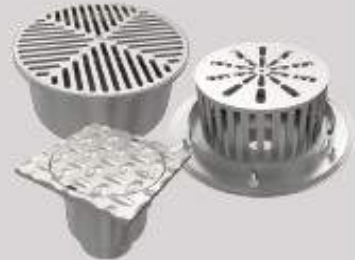
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The Future is Now

Business pours in for the rainwater industry.

August 25, 2017

Author: [BF Nagy](#)



This article originally appeared in *Plumbing Engineer*, a TMB Publishing publication. For more articles like this, please visit www.phcpros.com.

“Into each life some rain must fall,” wrote Henry Longfellow in 1842 in a simple and melancholic poem. He may not have realized that within 200 years, in many parts of the world we are now either thankful for rainfall when we can get it, or struggling with torrential downfalls. Increasingly we are learning to employ sophisticated technologies designed for a chaotic world of water management.

Managing water

From Legionella in New York to lead contamination in Flint, to flooding in Miami and water rights battles along the shores of the Colorado River, the rules for water in North America can now be a matter of life and death, not to mention prosperity, successful agriculture, and quality of life in cities.

The Government Accountability Office reports that 40 of 50 state water managers expect shortages in the next 10 years (2013-2023).

“I’ll bet anyone \$1,000 in any city in North America that your water rates and storm water costs are going up a lot, and I’ll win all those bets and retire early,” says David Crawford, founder of Rainwater Management Solutions (RMS) in Salem, Virginia. “These costs are both multiplying in leaps in bounds because billions must be spent by our governments on infrastructure.”

In December, *Reuters* reported that about 3,000 other places in the U.S. have much higher lead contamination in drinking water than Flint, Michigan. In 2015, *The Atlantic* said there are 772 urban communities with crumbling sewer infrastructure that needs upgrading. It said the EPA reports that up to 75,000 overflows send untreated sewage into American waterways every year; by one estimate we need \$1 trillion in new water infrastructure.

“In Richmond (Virginia), they charge you a storm water fee on the basis of how much impervious surface you have — the bigger the area, the higher the fee,” says Crawford. “In Washington D.C., I’ve heard of projects not going forward for just one reason: no storm water permit. In Atlanta, one customer is paying \$110,000 every month for water.”

Anyone planning to build anything might be wondering is there a cheaper, safer way. That’s why manufacturers, engineers and installers of rainwater, grey water and storm water systems are experiencing booming demand. MARKETSandMARKETS, a research company estimated U.S. market expansion of more than 9 percent annually for the next five years, while industry people hint at even faster recent and future growth rates.

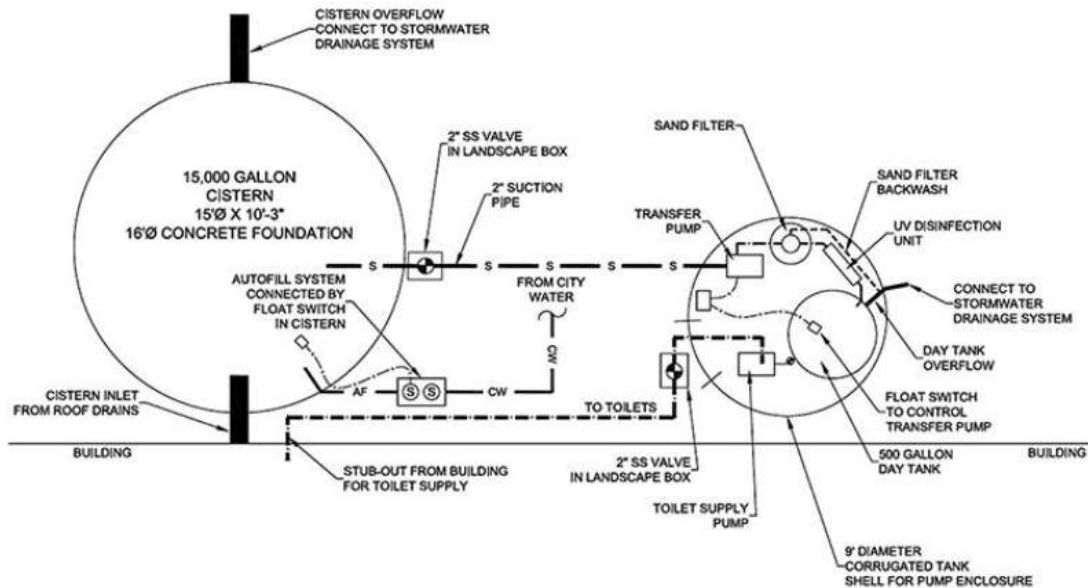
Texas school installs three rainwater systems

Chris Maxwell-Gaines of Innovative Water Solutions talks about the city of Austin. “They have introduced incentives for using storm water or rainwater harvesting systems. But water charges have gone up tremendously for everyone.” His company recently

This article originally appeared in *Plumbing Engineer*, a TMB Publishing publication. For more articles like this, please visit www.phcpros.com.

designed systems for the Sycamore Springs Elementary School on the western outskirts of the city that will capture rainwater from 45,000 square feet of flat roofs for use in irrigation and for flushing toilets inside the building. The water is collected in two corrugated metal, poly-lined 15,000-gallon cisterns for bathrooms and one 12,000-gallon cistern for watering the landscaping.

SYCAMORE SPRINGS ELEMENTARY SCHOOL TOILET SUPPLY SCHEMATIC



Rainwater is filtered through a backwashing sand filter and a UV light disinfection system, transferred to a 500-gallon poly day tank, then pressurized for supplying toilets. For gardening, it pumps directly from the sand filter and UV to the irrigation plumbing at set intervals during the week. In both cases, an auto-fill feature uses small amounts of municipal water if necessary, so the pumps never run dry.

If 1 inch of rain falls, the system could potentially collect a total of 27,000 gallons of water. The theoretical annual maximum is about 800,000 gallons each year, but, with typical rainfall, Maxwell-Gaines thinks the school will save approximately 500,000 gallons. He estimates savings for the school of about \$10,000 each year, if wastewater charges are included.

Grey water and rainwater tech at plumber's training facility

Crawford's RMS company designed a grey water system and rainwater system for the new Plumbers Union Local 130 training facility, where all future Chicago-area plumbers will learn about them. "The union wanted to install equipment that not only helped reduce their water footprint, but also served as a learning lab for their students," says Nate Nickerson of Critical Flow, an RMS technology partner.

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For grey water, they consulted with local contractors who installed their Grayworks GW500 system, capable of treating up to 500 gallons a day. It receives water from lavatories and showers within the new facility, treats it and uses it for irrigation outside. Normally, these systems are delivered as one unit that includes biological treatment, filtration, disinfection, project-specific polishing, and online instrumentation; but parts of the enclosure were removed so trainees could see the components.

The system uses a proprietary self-cleaning pre-filter to remove grease, lint and hair. Pollutants are biologically degraded by microorganisms, and pathogens are eliminated by UV disinfection. Dye and chlorine systems can be included as an option. The integral chemical cabinet also accommodates dosing pumps, chemical storage and spill containment.

David Crawford leads RMS and is also the President of the *American Rainwater Catchment Systems Association* (ARCSA). From 2013 to 2015, this organization worked with the American National Standards Institute (ANSI) and the American Society of Mechanical Engineers (ASME) to develop standards 63 for rainwater catchment and 78 for storm water harvesting.

According to Crawford, they are still voluntary guidelines, but refined future versions are likely to become law in many regions. These are taught at the Chicago training facility. “We teach them how to quote it, how to sell it, how to install it, and how to make money on it,” Crawford says.

ARCSA Executive Director Heather Kinkade says in addition to developing the standards, the organization produces training materials in English and Spanish, conducts workshops, offers online training and undertakes industry advocacy efforts. It has established a relationship with a third-party organization to administer exams for designers, installers and inspectors of rainwater systems. “Next year we hope to do the same for storm water professionals,” she says.



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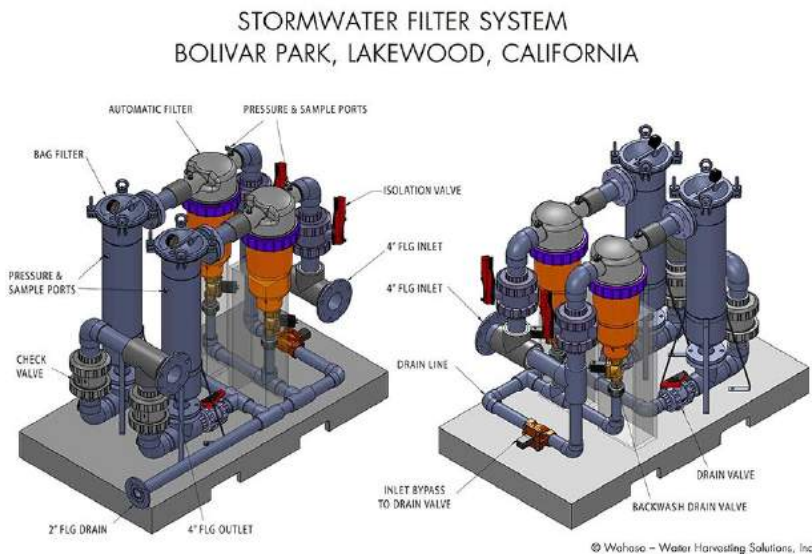
California park irrigated using storm water

At Bolivar Park in Lakewood, California, storm water is captured from a nearby watershed of approximately 3,225 acres and pre-filtered into a concrete retention system. It is then filtered, sanitized and pressurized to support irrigation of the 395,000-square-foot parkland. “The park needs about 22,500 gallons each day,” says Stuart Bailin, chief engineer with Wahaso of Hinsdale, Illinois. “A solenoid valve automatically adds municipal water to the system if the cistern runs low.” The system design prevents cross-contamination with the municipal supply.

Water is pre-filtered through a baffle box that screens out particulates larger than 150 microns, because trash, sediment, organic materials and carbons can quickly foul storm water. Filtered storm water is then transferred to a below-grade concrete cistern that holds about 400,000 gallons. A 12-inch outlet at the base of the cistern feeds into a 60-inch concrete wet well adjacent to the cistern. The level in the wet well equalizes with the retention cistern.

An overflow in the wet well drains to the storm water sewers with the help of a 2,500 gpm ejector pump that reduces cistern levels in anticipation of a rain event. “We use a hydrocarbon detector, and if the level is high, we divert water and then monitor system performance on the discharge side, measuring turbidity and pH,” Bailin says. “The nice thing about the turbidity meter is that if the filtration system is not working properly, we know it right away. It’s basically 24-7 online monitoring.”

When there is demand for non-potable water, a drop in the system pressure triggers the main pressurization pumps. Two 20-hp variable frequency drive well pumps provide up to 250 gpm at 80 PSI. A 4-inch pressurized outlet connects to a Schedule 80 PVC line to the treatment system and then to the irrigation inlet.



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A Wahaso Storm water Harvesting System (RW-UV250-0) provides treatment that meets Los Angeles County public health guidelines. Water passes through a self-cleaning mechanical filter that removes sediment and particulates down to 50 microns. It then moves through a high-capacity bag filter that removes particulates above 5 microns. Carbon filtration is next, eliminating odors, colors and other dissolved solids. Ultraviolet treatment is the final step; the UV can handle 250 gpm, eliminating coliform and other pathogens with up to five-sigma certainty. If any issues arise with the UV system, an alert is triggered. It can be set so that no additional water is sent to irrigation until the UV unit is repaired.

The system is controlled and monitored via the Wahaso WCS-100, that automatically manages water treatment and municipal water functions and is compatible with building automation systems (BAS). It captures the amount of water available in the cistern, the volume that has been filtered and sanitized, and the municipal water used. It can also incorporate local historical weather data. Analytics, system alerts, and diagnostics are available on site, on the BAS, or via the internet, on remote password-protected dashboards on any device.

Casino captures condensate

According to Alex Argento, of Wahaso sales group Pura Terra, one of the most innovative and perhaps most rewarding water harvesting systems, was installed recently at a casino near Washington D.C. Not only are they capturing rainwater from the roof, but they are also collecting condensate from air conditioning.

“Engineers might not think it’s worth doing, but the ROI is pretty impressive,” Argento says. In this case, they are collecting about 7,800 gallons in sediment-free condensate each day. Also interesting, the harvested water is used for cooling towers, in addition to flushing and irrigation.

The casino’s large size makes for some big numbers. Total demand for irrigation, toilets and cooling towers is about 32 million gallons annually, and they are achieving displacement of about 13 million gallons. Most of it comes from rainwater (87 percent), and the dollar savings translate into a three- to four-year payback on the equipment.

One of the factors that made the business case attractive was that the original engineering for the building included the assumption that a very large cistern would be needed to satisfy local storm water requirements. The rainwater proposal, although added later in the process, was able to piggyback on this advantage.

Asked about the cooling towers and Legionella, Argento explains that the water from the Wahaso system would meet the NSF 350 standard, and that a rigorous regimen of periodic maintenance is a modern requirement.

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The water harvesting trade is stabilizing

Humans have probably always collected rainwater. The Romans built their courtyard-style homes to do just that; but not so long ago in North America, the field may have seemed a bit like the wild west.

Even today, not surprisingly, manufacturers each think their equipment is vastly different and superior, but these case examples demonstrate that certain technological best practices seem to be manifesting themselves. Add to this a healthy outlook for fast-growing demand, improved training and certification; and the water harvesting trade can be described as becoming more stable every day. Engineers and contractors looking for new revenue streams might consider expanding into harvesting rainwater, grey water, and condensate for flushing, irrigation, and cooling towers.

Perhaps it's not a moment too soon to be welcoming in our approach to rainfall. Centuries ago, Edmund Waller was a little less wistful than Longfellow and possibly more visionary when he wrote: "Vexed sailors cursed the rain, for which poor shepherds prayed in vain."

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Karen Schulte, PE, CPD, LEED AP BD+C
AYP & WOA Liaison

Attention AYP members:

SAVE THE DATE: DEC 20, 2018

Event details to follow at November monthly meeting and separate email blast!

Reminder if you are an ASPE member 35 years and younger, you're automatically a member of the Baltimore chapter AYP special interest group. If you're wondering "I'm not an ASPE member yet, can I still come to the AYP event?" Yes, we welcome you to attend the AYP events, meet your colleagues in the plumbing field, and find out more about ASPE including how to become an ASPE member!

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Contact Karen Schulte for more information on the Baltimore Chapter AYP and WOA at kschulte@muellerassoc.com



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Stephen Hudson, PE, CPD
Historian

INSTALLING PLUMBING SYSTEMS IN HISTORICAL STRUCTURES

Registered historic structures are generally structures that are at least 50 years old and have some level of historic significance. Once established, you were working on a registered historic structure so you needed to know what part of the structure fell under and who's final review and what guidelines, if required, were followed. A structure located in Annapolis on Church Circle that was built in 1747 known as Reynolds Tavern, was renovated in 1985. The building before the renovation never had a plumbing or heating system in its 240 years of life. Heating was provided by fireplaces and later with a steam line fed from the Maryland State House with a few cast iron radiators on the floor. Plumbing was via two privies (toilets) in the back of the building for most of the years and then later the townhouse next door that was built in the early 1900's, allowed office workers at Reynolds to use their toilet facilities. The townhouse was not or planned to be a registered historic structure. Reynolds Tavern is owned by the National Trust of Historic Preservation (NTHP) who over saw and reviewed all changes to the building. The NTHP appointed Maryland State Historic Society to review the overall changes to the exterior of the structure and grounds meeting their guidelines. The NTHP appointed Historic Annapolis Society to review all changes and modifications to the interior of the structure. The structure was being renovated to a full tavern and a commercial kitchen in the basement, a restaurant with dining terrace on the first floor, four hotel rooms with bathrooms on the second floor, and a suite on the third floor with bathroom. The guidelines required no mechanical and plumbing system components to be visible, other than inlets and outlets that could not be concealed. The guidelines also required that all systems could be removed from the structure with minimal disruption to the original fabric of the building.

With the historic restrictions known, the plumbing systems required several "out of the box" solutions in order to meet today's code requirements. Below are just a few of the items used in the design that are applicable to many historic renovations.

- Since many times there are no structural drawings from the time the building was construction, the plumbing engineer had to know where spaces were available to run utility piping. By the end of the project, the plumbing engineer will know how the building was built as well as the structural engineer that is involved in the renovation.
- The floor of the tavern in the basement was the original a lay-in-place brick floor installed during construction of the original building. Plumbing piping needed to be installed under the floor. Since George Washington and other patriots stayed at this building, the floor was required to remain in appearance as it was originally installed. We placed in the contract that the contractor had to make an as-built drawing of how each brick was installed and label each brick being removed, so they could be reinstalled back exactly like it was in 1747. Archeologists were brought in to dig the piping trenches. During exaction, they uncovered several artifacts that were placed on display, which include a few coins and two whole wine bottles.
- The townhouse that was built up against the tavern, which was where the plumbing and mechanical systems were installed. The piping for the bathrooms located on the second floor were installed horizontally within new walls that were installed over top the existing walls so the original walls were not damaged.
- All sanitary vent piping for the plumbing systems in the historic structure were installed up to the small gable roof area where they were connected together into one main vent pipe. Since there were no plumbing systems in the 1700's, you cannot install vent pipes through the roof where they could be seen. The original fireplaces in Reynolds Tavern were no longer being used, so the main vent pipe was installed into the fireplace flue and then extended up through the stone capped chimney top and sealed. Since it was high enough about the roof line, the pipe was cut short so that it could not be seen any place on site.

- One of the most challenging part of the Reynolds Tavern project was the bathroom for the third floor suite. There was a deep alcove where the townhouse connected to the historic tavern. The code required the architect to add a fire-rated exit stair. The only location was the alcove between the two buildings. This addition was not visible by the public which enabled the installation of the kitchen hood exhaust, dishwasher exhaust, general exhaust, and make-up air ductwork from the kitchen in the basement to the roof of the new stair addition. Equipment was installed so it was not visible. This also met the requirement that it could be removed, including the stairs, to allow the building to be put back to the way it was originally constructed. The only problem was the bathroom for the third floor suite. We found an exception in the building code that would allow a family that rented the entire third floor suite to exit through the bathroom into the new fire stairs in the alcove. The code authorities agreed with our code interpretation and allowed the family on the third floor to exit through the bathroom. The only thing that we had to do to meet all requirements was to provide a lighted exit light above the bathroom door.
- Domestic water and sprinkler systems were all installed using copper piping. Using copper piping, which allowed high flows through smaller piping, enabled the installation of the copper piping to fit easier through the structure with minimal or no cutting of wood members in the building. All joints were specified to be joined by electric soldering or other non-flammable joint method where space was available. The sprinkler heads used were fully recessed type with the cover plates painted at the factory to match surrounding surfaces. It is not likely they will remove the sprinkler system if the building is converted back to original.
- Another concern was what was outside on the property. On the small lot in the back of Reynolds Tavern, was an English Walnut tree, that they knew was as old as the building and assumed was brought across the Atlantic in 1747. For this reason, an arborist was brought in to set the boundary for the tree that limited where you could install below grade water and sanitary piping in the back yard.

The final design was approved by all three historic societies with only one comment on a supply register location in the dining room on the first floor. During construction the archeologists uncovered hundreds of artifacts. They also found the two original privies (his and hers) in the rear of the project backed-filled with trash from the 1700's and 1800's which included coins, buttons, a pistol, a piece of furniture, pieces of clothing, pottery, etc. Today the rooms on the second floor are used as offices, but the first floor is used as a tea room and I believe the tavern is still operating in the basement.



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Kathy Dwyer
Treasurer

Treasurer’s Report

We had our second meeting of the year and are holding steady at over 40 attendees. If there is any way for you to invite folks from your offices and try to get some more engineers out for the CEU as well as joining the community of engineering knowledge that they can tap into. I want to thank everyone who signed up to participate as speakers, meeting sponsors and table top displays. There are still some prime places left and we would love you to support your industry and sign up.

As I am sure you are aware we need to call in a head count a couple of days before the meeting and then confirm the day before the meeting. Please you need to sign up for the meetings. Also if an emergency comes up and you are unable to attend we have a 1 time grace period and then we might need to send you a bill for the dinner. We generally break even at our meetings and will be stuck for paying for your dinner whether you are attending or not. I hope you understand our predicament and would be happy to chat with anyone if there is any problem or concern that you might have.

Thanks again for supporting the tabletops because they provide the gift cards that we all enjoy winning.

Kathy Dwyer
kdwyer@ejdwyer.com

Kathleen Dwyer
kdwyer@ejdwyer.com

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CPD Review Class 2019

The Washington DC and Baltimore ASPE Chapters will be providing a Joint Baltimore-Washington, DC ASPE Chapter CPD Review Session on Saturday, February 16, 2019 at the training center of E.J. Dwyer Co. in Annapolis Junction, MD. (Note: A bad weather make-up date is scheduled for the following Saturday, February 23rd.) The session will be from 9:00 AM to 3:00 PM (or longer as needed) with a lunch break. Bagels, juice & coffee in the morning and lunch will be provided by the good people of E.J. Dwyer Co. Directions to the office in Annapolis Junction (north of Laurel) may be found on their company website at www.ejdwyer.com under Contact Us or by clicking google maps link: <https://goo.gl/maps/4nEvRNG6kEK2>

Any ASPE member interested in attending this session is required to forward an e-mail to either Kathy Dwyer or Ned Dwyer at the following respective addresses: kdwyer@ejdwyer.com and ndwyer@ejdwyer.com

Please take notice of the following:

- Registration for the CPD Exam (through ASPE) opens December 1, 2018 and closes March 22, 2019. Link to website: <https://aspe.org/CPDExam>
- Note the reference to any ASPE member, since it is generally more economical for one registering to take the CPD exam to be an ASPE member prior to registering for the exam. Please contact a local ASPE Chapter VP Membership ASAP to become a current member;
- ASPE members not classified as Full shall be subject an exam eligibility evaluation by Society that may take as many as five business days. (You may wish to take the initiative and visit the ASPE web-site and preview the requirements for Full membership to see if you would qualify for Full membership); and
- The ASPE CPD Exam is scheduled to take place April 5 and/or April 6, 2018.

Attendees to our review class are expected to bring to the review session at a minimum a calculator, writing materials, a copy of the CPD Review Manual and a hard copy of all attachments that may accompany any future e-mail follow-up responses. NOTE: CPD Review Manuals will be available for purchase (at a discount) before and following the CPD Review Session.

I look forward in seeing you at the review class.

Sincerely,

David Bailey

David M. Bailey, CPD, GPD, FASPE

DATE: February 16, 2018 from 9AM to 3PM
LOCATION: E.J. Dwyer Co. 10910 Pump House Road, Annapolis Junction, MD 20701
CONTACT: Kathy Dwyer – kdwyer@ejdwyer.com – Mobile: 443-250-0285
Ned Dwyer – ndwyer@ejdwyer.com – Mobile: 443-250-4275
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Andrew Cahill — Membership

Membership Report

Well, try as I might, my attendance record is already flawed after missing the October meeting. No elaborate parties or vacation to blame. Instead, I found myself braving the Hoboken – Jersey City circuit and all the traffic that goes along with navigating that part of the world. Though I suppose the local metro is no walk in the park either. We will see how the calendar lines up following the big turkey day and hope that I can go 2-for-3.

Nothing on the report as far as new members for the month of October. Our current standing is 113, 5th in region 1. We trail our neighbors in DC by 40 members. Lofty goal to catch them, but not impossible.

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.

I wish everyone a safe and enjoyable Thanksgiving holiday!

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: Jesse Rodriguez -Aqua Treatment Services

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

