ASPE
American Society of Plumbing Engineers™
BALTIMORE

Monthly Newsletter **MARCH 2019**

Upcoming Meeting

Date: **March 27, 2019**

Time: **6:00pm to 8:00pm**

Place: Olive Grove Restaurant

Topic: **Grease Interceptors**

Speaker: **Chas Tevis**

Meeting Format
6-6:30 Social
6:30-6:45 Announcements and Table Tops
6:45 Dinner Served
7:00-8:00 Speaker

MEETING LOCATION

Olive Grove Restaurant & Lounge

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

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In This Issue

WWW.BALTIMOREASPE.COM

2019 ASPE BALTIMORE CHAPTER
GOLF OUTING and COOKOUT

Friday, April 26, 2019
The Timbers at Troy
Columbia, Maryland
$125 / Golfer

- Prizes for Team Play
- Door Prizes
- Longest Drive Prizes
- Closest to the Pin Prizes

SCHEDULE

7:30 AM	Registration/Check-In/Breakfast		
8:30 AM	Shotgun Start Scramble Format "Captain's Choice" Mulligans Available	1:30 PM	Cookout (Hamburgers, Hot Dogs, etc.)
		2:00 PM	Awards & Prizes

Sponsors and Participants, please contact:
David K. Goodell
dgoodell@jamesposey.com
James Posey Associates
11155 Red Run Boulevard
Baltimore, MD 21117
Phone: (410) 265-6100
Fax: (410) 298-9820

Make checks payable to ASPE Baltimore Chapter.
Reservations will be confirmed when check and participant information is received.
PLEASE RETURN COMPLETED FORMS BY APRIL 12, 2019.

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Name_____ Phone No._____

No. of Golfers _____@ $125 each Total for Golfers: $_____

Sponsorship Level: _____ Total Sponsorship: $_____

Refer to attached sheet.

Total Amount: $_____

2019 ASPE Baltimore Chapter Golf Outing
Sponsorship Levels

○ **Tee Marker (with Foursome)**	**$125.00**
○ **Tee Marker (without Foursome)**	**$150.00**
○ **Drink Cart Sponsorship** (Includes tee maker and cart sign)	**$600.00**
○ **Cookout Sponsorship** (Includes tee maker and cookout sign)	**$600.00**
○ **Cart Sponsorship** (Includes tee maker and cart signs for each cart)	**$600.00**

All proceeds from the Golf Outing will benefit future Chapter events and activities.

Please make checks payable to: **ASPE Baltimore Chapter**

Mail registration and payment to:

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Baltimore, Maryland, 21117

Jeffrey W. Edwards, CPD ,GPD
President

President's Report

Last month's meeting was a huge success. The almost 50 attendees were presented a great technical presentation on laboratory compressed air & vacuum systems by Niki Patel of Sherman Engineers. Niki had some issues with her voice and could barely speak but she played hurt as they say, and she did a wonderful job.

Speaking of Niki Patel, I'm excited to announced that Niki has joined our chapter board to become the chapter's AYP liaison. Niki has already presented some new and exciting ideas for our chapter moving forward and some of her ideas have already been implemented with having our chapter now part of Linkedin and FaceBook social media sites. You can now connect to these sites using our home webpage. Hopefully you've seen a number of her submissions already on LInkedin from a many of our chapter's events.

On February 15th, eight members of our chapter board presented Plumbing Engineering to about forty high school students at the Engineers Club for Engineers Week. The event was fantastic. ASPE National has complimented us for a job well done plus this week, myself, Chuck and Chris were interviewed by PME magazine to describe how our chapter developed this presentation that was a huge success. Please refer to the article this month by Chris Imhof for additional information of this event.

Last month we passed out ten-year membership tenure awards. This month we will be passing out twenty-year tenure membership awards. Hopefully the seventeen eligible members who received invites will join us. Please plan on attending this month's meeting to be a part of this special event.

If you want to speak with me regarding our chapter, technical presentations, newsletter or anything else, please feel free to contact me.

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

ASPE Baltimore welcomes you to follow our page on LinkedIn and Facebook!

If you have a story or photo you would like to share on our Facebook or LinkedIn page, let us know! We are proud to support our chapter members

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We encourage our members to share their experiences with our chapter on social media with the hashtags:

#ASPEBaltimore
#AYPBaltimore
#WOABaltimore

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Jason J Eagles
VP Affiliate, Scholarship Chair, Newsletter

Dedication is defined as a solemn commitment of your time to a cherished purpose. It is a loyalty or allegiance to a cause. I cannot think of a better term that defines many of the members of the Baltimore Chapter of ASPE. Being a member of this society is a choice and often involves hours of time devoted to the local chapter. We certainly hope the Baltimore Chapter has supported your technical knowledge and allowed for networking opportunities with other plumbing professionals. Without the dedication of its members, we would not be as strong as we are today. Speaking on behalf of the board, we wish to thank and honor you for that dedication. This year we will be celebrating those with 10 Years or more of being an ASPE Member. This program is long overdue and I am proud to be a part of it. We will be handing out over 50 awards during the next several meetings. Anyone receiving an award is welcome to attend that meeting paid by the Chapter. Please spread the word and join us as we celebrate these milestones. Please see the following pages for the members being recognized.

Award Presentations

20 Year Award – March 27, 2019

30 & 40 Year Award – April 24, 2019

See pages 9-11 for award recipients and additional information

20 Year Awards – March 27, 2019

Robert E. Ruskey
Cory S. Colassard
David S. Crutchfield
Robert A. Weaver II
Michael J. Purtell
Steve C. Trageser
Kirby W. Slear
Sherry A. Abbott-Adkins
Kathleen M. Dwyer
Daniel M. Booze
John D. Stitz
Robert J. Allen
David R. Spencer
Neil P. Stabley
David Charles Van der Vossen
Igor Z. Knizhnik
Michael Kevin Hunt

If you are receiving an award and attending this meeting, please RSVP on the website www.baltimoreaspe.com.. The Baltimore Chapter would like to cover this expense to further show our appreciation. Please RSVP for the meeting online and use the bypass payment option when prompted. You will need to click on Member Ticket $35 and follow the steps to payment where you can bypass payment.

30 & 40 Year Awards – April 24, 2019

30 Year Awards

Charles E. Kozlowski
Roy D. Ebersole
Jeffrey W. Edwards
Michael A. Brame
Richard C. Goins
J. Thomas Federline Jr.
Jerry W. Rutkowski
Frederick Koelber
Daniel J. Gardner
Michael P. Nelson
Aaron L. Mullenax
David R. Hoffman

40 Year Awards

Donald F. Steiner
Stephen Hudson
John Richard Wagner
Robert J. Stryiewski

If you are receiving an award and attending this meeting, please RSVP on the website www.baltimoreaspe.com.. The Baltimore Chapter would like to cover this expense to further show our appreciation. Please RSVP for the meeting online and use the bypass payment option when prompted. You will need to click on Member Ticket $35 and follow the steps to payment where you can bypass payment.

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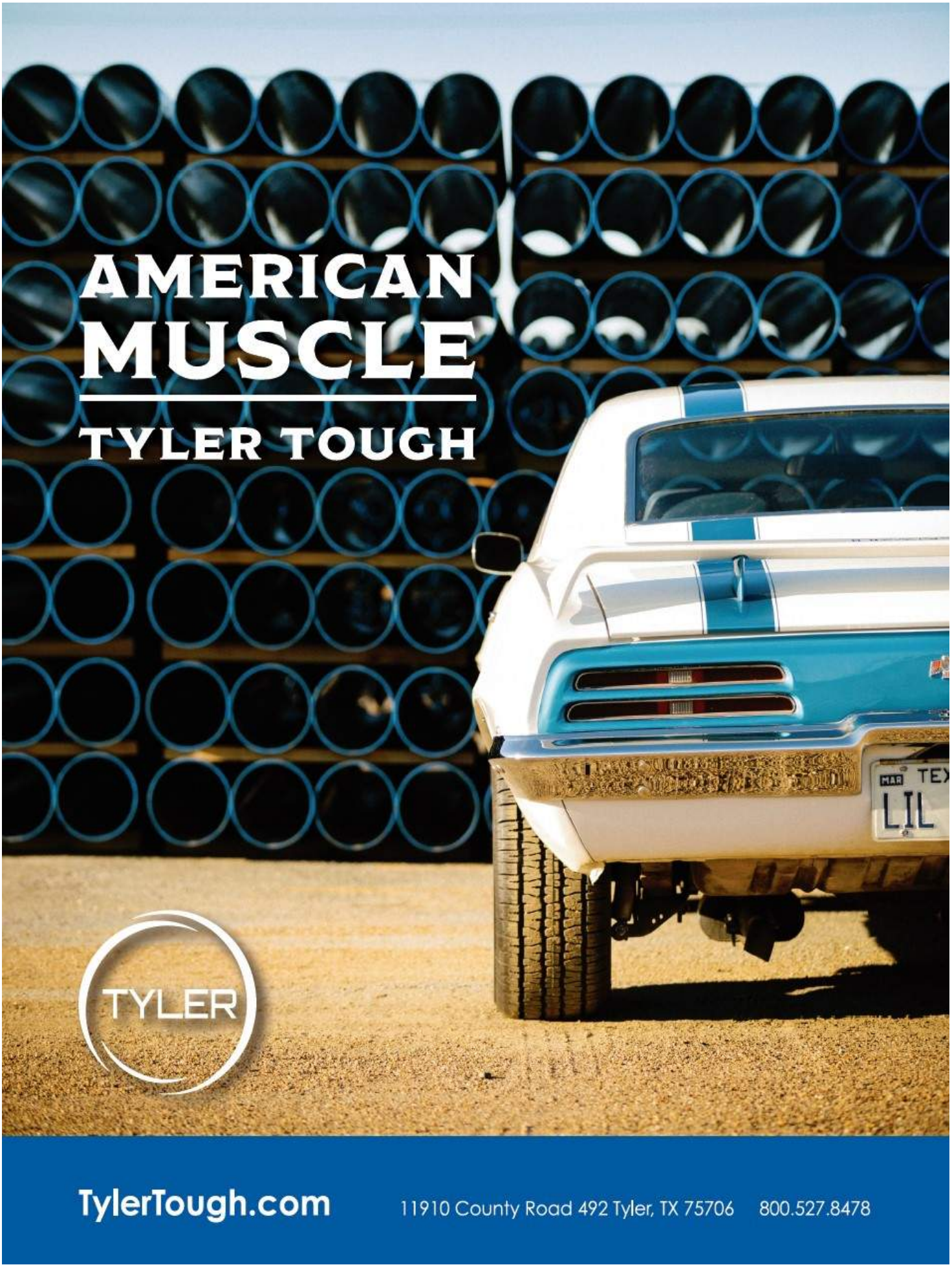
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ADVERTISING

Newsletter Advertising:

- As a paid advertiser you will have your advertisement in the newsletter for either a full year (11 editions) or on a monthly bases.
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- Ads for the year will begin in the September issue and run through the June issue
- Advertisements starting mid-year will be billed on a monthly basis.
- All ads must be paid in full prior to the advertisement being included in the newsletter.
- Advertiser must provide ads in high resolution, and must one of the following formats: PDF, TIFF, PNG, Bit-map, Windows Metafile.

•Cost per advertisement size is as follows:

Size	per Year	per Month
Full page	$750	$75
½ page	$500	$50
Bus. Card	$250	$25

Please Contact Jason Eagles or Jeff Edwards

Make checks payable to Baltimore Chapter of ASPE. Please contact the chapter Treasurer with any questions.

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

Technical Report

February turned out to be an exciting month for the Baltimore Chapter. We had our first independent presentation for Engineer's Week, where the chapter hosted high school students at The Engineer's Club on Friday, February 15th. Please look for the article from Chris Imhof, our Education Chair, **later** in the newsletter. We also had our first award ceremony at the February Meeting, where we awarded our members who have been with us for 10 years or more. This month, we will award out 20 year members and in April, we will award our 30 and 40 year members, so look to your emails for your invites.

This month, we have Chas Tevis from Highland Tanks joining us to present Grease Interceptors and the guidelines for sizing, locations and features to keep in mind when designing a grease waste system. Chas is the Division Manager for Highland Tank Grease Interceptors and was educated at the Temple University School of Engineering. He is an active member of ASPE, the Water Environmental and Technology (WEFTEC) and Plumbing and Drainage Institute (PDI). He participated in Uniform Plumbing Code Task Group for Fats, Oils, and Grease and in the 100 mg/l Task Group for Plumbing and

Drainage Institute. He helped develop the grease interceptor code development for the Canadian Standard Association (CSA B481) and assisted in the development and patent of a continuous level probe designed to measure fats, oils, and grease in grease interceptors. He routinely interfaces with pretreatment coordinators, inspectors, engineers, and facilities on grease interceptor design, sizing, performance, maintenance and compliance issues.

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Technical Manager-Mid Atlantic Region

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Kathy Dwyer
Treasurer

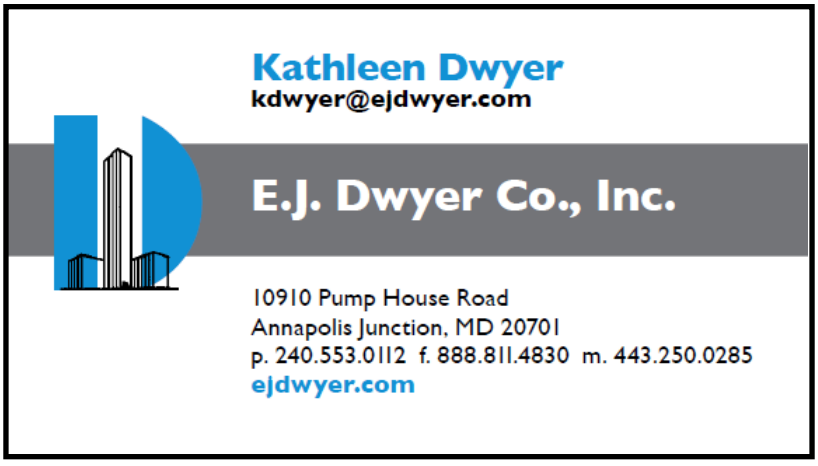
Treasurer's Report

Here we are already into our March 2019 meeting. I am sorry for those that missed our February Meeting. We had a blast giving out the 10-year plaques as well as an excellent presentation on medical gas from Nicki Patel from the Sherman Engineering group. 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. I also want to remind you that you receive extra raffle tickets by stopping by the tabletops that are presenting.

We are financially sound but couldn't be that way without your support and participation. Thanks again.

Kathy Dwyer
kdwyer@ejdwyer.com



ASPE American Society of Plumbing Engineers™ BALTIMORE

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

WOA Event Update

With spring right around the corner at this point, we have a new date for our Women of ASPE paint night, **April 2!** We will be doing a new registration for this event, so if signed up for the January event you will need to register for the April event and if you were going to miss out on the January event you now have a chance to participate in the April event! As a reminder, specific artistic ability is not a pre-requisite!

For more information on Women of ASPE please visit: https://www.aspe.org/WOA

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

Women of ASPE

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Christopher Imhof, PE, CPD
Education Committee Chair

Education Report - Engineers Week 2019

On February 15th the Baltimore Chapter of ASPE hosted their first Engineers Week event. The event took place at the Engineers Club of Baltimore at the Historic Garrett-Jacobs Mansion. A total of approximately 40 students total attended from Woodlawn High School (Baltimore County) and NAF Academy (Baltimore City). The event lasted just over 4 hours.

The chapter and local plumbing community were/was well represented with nine local professionals, including seven current board members in attendance.

Speakers:

Jeff Edwards, Mueller Associates, ASPE President

Charles Swope, Mueller Associates, ASPE Vice President Technical

Jason Eagles, Bay Associates Group, ASPE Affiliate, Scholarship Chair, and Newsletter Editor

Richard Wagner, J. Richard Wagner, PE, LLC, Vice President Legislative

Andrew Cahill, Uponor, Vice President Membership

Kathleen Dwyer, E.J. Dwyer Company, Inc., Treasurer

Christopher Imhof, Washington Suburban Sanitary Commission, Education Committee Chair

Nikita Patel, Sherman Engineering

Chris Hayward, Victaulic

The first part of event consisted of a presentation with participation from students. Speakers introduced themselves, describing their background including education, experience, and current title. There was a wide variety of college education and experience. The range of experience was from less than 10 years to over 50 years. College education varied from no college degree to multiple or graduate degrees. Many of the speakers had an engineering or business degree, Nikki Patel has both an engineering degree and an MBA. The next part of presentation was a brief history of plumbing, from copper pipes in the tombs of Egyptian pharaohs to modern sensor fixtures. The responsibilities of plumbing engineers and the types of projects were explain to the students. One of the students asked about plumbing engineering and the military. Several speakers contributed to the discussion, explaining that wherever there are people there is a need for plumbing and plumbing engineers.

The next portion of presentation encouraged student participation and discussion. Some of the topics included; what does it mean to be an engineer, engineering school, what is a professional engineer, types of engineers, where do engineers work, and salary. Salary was a subject that immediately got the students attention. One student wanted specifics, asking, “what’s your salary?”. The presentation explained opportunities for non-engineers, this included sales representative, BIM/CAD technician, plumbing designer, or licensed plumber. When asked if the students had done any CAD or drafting, many were quick to respond that they had skipped 2D drafting and were already learning REVIT.

Education Report - Engineers Week 2019

The remaining portion of presentation consisted of the relationship between public health and plumbing. Some of the topics covered included Legionella, medical gas, cross connection and backflow. The students seemed very interested in the effect of plumbing on health and safety. The students seemed a bit surprised by some of the risks, but were reminded by presenters that being unaware of potential dangers was a result of well-designed and installed plumbing systems.

After the presentation the attendees were served a wonderful lunch by the Engineers Club of Baltimore. Many of the students sat with presenters and continued to ask questions throughout their meals.

For the final portion of events, the students divided into groups and rotated to multiple stations set up by some of the presenters. There were six stations,

Jason Eagles showed the students examples of solar heating tubes. Andrew Cahill assembled joints and demonstrated the thermal memory properties of Uponor PEX. Kathy Dwyer had a working gas monitoring panel, one of the students discovered he could set the alarm off by breathing on it. Nikki Patel had a digital medical alarm panel and a scale model of a vacuum pump. Chris Hayward had a manifold of piping and the students were able to use a drill to assemble joints with Victaulic fittings. Jeff Edwards and Chuck Swope had large images and brochures of Mueller Associates projects.

The event was a great success. The students stayed past their expected departure time to ask questions and their mentors were very grateful. The event was included in the February 28th edition of ASPE Pipline (https://www.aspe.org/pipeline). Plumbing Engineer magazine reached out to conduct an interview about the event. The Baltimore Chapter of ASPE is already planning to do the event again next year.

Education Report - Engineers Week 2019

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Grease Interceptor Sizing To Ensure Proper Protection Of Infrastructure

Properly designing FOG waste interceptors in restaurants by looking at grease production per meal variable.

January 31, 2019

Author James A. Richardson Jr.

Properly sizing a grease interceptor, also known as a fats, oils and grease (FOG) waste interceptor, requires an open mind and a willingness to accept that, for the most part, it has been done incorrectly. Several commonly used methods for sizing an interceptor include the Environmental Protection Agency (EPA) calculation method and the Uniform Plumbing Code (UPC) calculation method, as well as many manufacturers developing their own sizing methods, typically based on one of these two methods.

The problem with these methods is that they miss the No. 1 variable: the grease production/meal for the specific type of restaurant. This becomes clear when you analyze where most food sales occur. According to the Small Business Chronical, fast-

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

food restaurants average 50 percent to 70 percent of their overall sales from the drive-through window, with another 17 percent of sales coming from carryout sales1.

Together, it is an astonishing 67 percent to 87 percent of total fast-food sales. Other restaurant types also have significant sales volume attributed to carry-out sales, as well as catering.

One thing to keep in mind: cooking does not create the need for an interceptor. It is the washing of cookware, serving pans, utensils, flatware and plates that creates the requirement. Sewer overflows associated with blockages caused by FOG waste is on the rise because the need for an interceptor is based on the FOG waste entering the sanitary drainage system.

Any restaurant that serves with dishes and flatware also will have a slightly higher rate of FOG discharge to the drainage system, compared with restaurants that serve with disposable containers and flatware. Every one of these variables is important to consider when sizing an interceptor. Unfortunately, no sizing methodology has ever included every variable discussed.

Types of Food Service Operations

The 2011 Brown Grease Supply Study2 sampled more than 60 restaurants of varying types in real-world operation. The information obtained in the study established grease production per meal values. This study provided very accurate values because it included the human element often ignored in laboratory testing. The study also allows us to classify food service operations (FSOs) into several categories based on their grease production/meal value.

Variables do exist to increase the FOG production values, such as FSOs serving with flatware, or using a grease hood or fryer. Any restaurant that has a grease hood or fryer is automatically moved up one classification.

The classifications breakdown is as follows (for specifics on these classifications, refer to the 2011 Brown Grease Supply Study2):

- Low FOG production;
- Low FOG production with flatware;
- Medium FOG production;
- Medium FOG production with flatware;
- High FOG production;
- High FOG production with flatware;
- Very high FOG production; and
- Very high FOG production with flatware.

I did my own research over two years regarding sales volume for the different types of FSOs, which allowed me to establish an average for the meals sold/hour3. From this, I

took the different classifications and averaged the numbers for those FSOs. I also identified several FSO types that stood out because of their simplicity and low FOG production values.

Based on the Brown study and my research, I made several assumptions: full-service restaurants would serve with flatware; fast-food/quick-service restaurants do not serve with flatware; these two groups make up the most significant portion of FSOs; and most other FSOs would require additional details to size an interceptor properly.

The benefit of combining this information is that I was able to establish an average number of meals served per hour for the different FSO classifications as follows (the first four are "stand-alone" FSOs, and the classification "Other FSOs" has FSO types requiring more detailed design methodology and each one has a specific FOG production value):

- Convenience stores (averaged 50 meals/items sold/hr.);
- Child daycare centers (maximum number of children x meals served/ day);
- Hotel breakfast bars (total number of rooms x 2 (assume double occupancy));
- Pizza restaurants (average number of pizzas sold per day/4 (assumes large or extra-large shared by four people));
- Fast-food/quick-service restaurants (40 meals/hr.); Full-service restaurants (50 meals/hr.); and
- Other food service operations (check out at www.jrscidt.com).

A 30-day period for FOG waste production/service interval was selected based on industry data that suggests this is the longest storage period designers should use because the waste turns septic beyond this time frame. For example, a fast-food/quick-service Asian food restaurant that is open 12 hours per day and has a grease hood/fryer would have a FOG production assumption equal to 835 lb. over 30 days.

Here is what the calculation would look like:

Hours x meals sold/hour x grease production/meal value x service interval = lb. of FOG

12 x 40 x .058 x 30 = 835.2 lb.

Several years ago, the average weight of FOG waste was listed at 6.4 lb./gal. Today, however, that number is closer to 7 lb./gal. due to the industry using more oils for cooking than lard. If you base the storage capacity on 7 lb./gal., you end up with a storage capacity requirement of approximately 119 gal. If you elect to use the 6.4 lb./gal., the resulting storage capacity requirement is 130.5 gal. I prefer to have a little buffer, so I use the 6.4 lb./gal. figure.

Hydromechanical vs. Gravity

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

The designer should establish a reasonable grease production assumption. This is the first and most important value because without it, you have no foundation for any further logical decisions. Using the example of the fast-food/quick-service Asian food restaurant with an average of 12 service hours/day, it will look similar to this:

FOG waste production: 835 lb./30 days = 131 gal. (rounded up)

Hydromechanical interceptors. For a hydromechanical unit, the only other step is to select an interceptor with an appropriate storage capacity; otherwise, it will result in excessive maintenance costs. Some design professionals have included three-compartment sink discharge calculations in their designs. This is not required for a hydromechanical unit because regardless of the size of the three-compartment sink, the flow through the interceptor is regulated by the flow control.

This assumes a direct connection from the three-compartment sink and a direct connection to the sanitary drainage system. Without a direct connection, you also would have to calculate for an appropriate length of pipe to store the FOG waste as it is metered through the flow control fitting.

Gravity interceptors. This type of interceptor requires more consideration. Though the plumbing codes typically do not provide much direction for sizing a grease interceptor, the International Plumbing Code (IPC) does state that 30 minutes of retention/separation time is needed. Calculating the gallons required for separation to occur is done by multiplying the gal./minute discharge (gpm) rate of the connected fixtures by the retention/separation time since both are expressed in minutes.

Figuring the flow rate and retention/separation is not the end of the equation. The next step is to add in the appropriate storage capacity, otherwise there will not be enough liquid capacity for separation to occur. Although for years many in the industry indicated up to 25 percent of the overall capacity could be used for storage, this line of thinking was flawed.

Consider this scenario: the FSO has a grease production rate of 835 lb. (or 131 gal.)/30 days, has a three-comp sink with bowls measuring 16 in. x 16 in. x 12 in. (30 gpm), and the design professional specified a 1,000-gal. gravity grease interceptor. Here is what the result would be:

Step 1. 30 gpm x 30 = 900 gal. required for retention/separation.

Step 2. 1000 x 25 percent = 250 gal. (a 25 percent value).

Step 3. 250 gal. – 131 gal. = 119 extra storage (if 25-percent rule used).

Step 4. 1000 – 250 = 750 gal.

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Step 5. 900 – 750 = negative 150 gal. (there is not sufficient capacity for retention/separation to occur).

Actual total capacity required for separation to occur including storage:

900 gal. (retention/separation in Step 1) + 131 gal. (storage capacity from calculated FOG production) = 1,031 gal.

Sizing a Grease Interceptor for a Strip Center

The only way to properly size a single interceptor for use at a strip center, or a "community interceptor," would be to have all the variables and apply them to the design.

Assume we have these variables for four total food service operations in a strip center, each with 12 hours of service daily: Fast-food/quick-service Asian food restaurant (with grease hood/fryer); Fast-food/quick-service deli (no grease hood/fryer); Full-service Italian food restaurant (with flatware); and Fast-food/quick-service ice cream parlor (with grease hood/fryer).

FOG waste discharge based on national averages for the FSO types and service hours breaks down like this: Fast-food/quick-service Asian food restaurant: 835 lb. of FOG waste; Fast-food/quick-service deli: 72 lb. of FOG waste; Full-service Italian food restaurant: 655 lb. of FOG waste; and Fast-food/quick-service ice cream parlor: 655 lb. of FOG waste.

The total projected FOG waste for the strip center is 2,217 lb./30 days.

A hydromechanical unit could be used with the given FOG waste assumption and most likely it would require that several would be needed in series to deal with the anticipated load. For this discussion, we will be sizing for a gravity interceptor. The first step is to calculate the total possible gpm flow rate for all FSOs: Fast-food/quick-service Asian food restaurant: 18 in. x 18 in. x 16 in. three-compartment bowls = 51 gpm; Fast-food/quick-service deli: 16 in. x 16 in. x 12 in. three-compartment bowls = 30 gpm; Full-service Italian food restaurant: 20 in. x 20 in. x 18 in. three-compartment bowls = 70 gpm + 2 gpm from dishwasher = 72 gpm; and Fast-food/quick-service ice cream parlor: 16 in. x 16 in. x 12 in. three-compartment bowls = 30 gpm.

Total possible gpm discharge for the strip center is 183 gpm. The required volume for separation/retention: 183 x 30 = 5,490 gal.

In the example strip center, four FSOs have a total FOG waste of 2,217 lb./30 days or 347 gal./30 days. There is a total possible discharge rate of 183 gpm x 30. The resulting number would be the overall capacity required for a gravity interceptor in gallons:

Total capacity required: 183 x 30 = 5,490 gal. + 347 gal. = 5,837 gal.

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Most likely a standard size interceptor of 6,000 gal. would be used. The result is an appropriately sized interceptor, with a little extra capacity, for 30 days between service intervals.

Unknown Variables

How is a community interceptor for a strip center sized if all the variables are not known? The answer to size the interceptor based on a full-flow condition for the common grease line size since a given size pipe cannot flow more than full flow. Those flow rates break down like this:

- 2-in. pipe = 20 gpm
- 3-in. pipe = 60 gpm
- 4-in. pipe = 125 gpm
- 5-in. pipe = 203 gpm
- 6-in. pipe = 375 gpm

Grease production will still need to be calculated for this example. For a strip center, assume that every tenant space could be an FSO with the highest grease production values (such as a full-service Asian food restaurant using flatware, for instance). Using that information with an average of 12 hours of operation per day, the result would be 1,080 lb./30 days for each tenant space, based on national averages.

Apply this to a different strip-center scenario: The client is requesting a design with a community interceptor but the only information they can provide for the project is there are no defined tenants for the eight-unit strip center. Since the only real way to design this will be based on full-flow conditions, the design should technically never fail.

Apply the grease production assumptions for worst-case scenario results in the following: 1,080 x 8 = 8,640 lb. of possible FOG waste or 1,350 gal. Most likely a 4-in. or 6-in. line will be chosen for the community grease waste; assume a 4-in. line is chosen in this scenario. The 4-in. pipe has a full-flow rate of 125 gpm; the code requires a 30-minute retention/separation time.

Retention/separation calculation: 125 x 30 = 3,750 gal.

Storage capacity calculation: 1,350 gal.

Total capacity required: 3,750 + 1,350 = 5,100 gal.

The discharge rate from the three-compartment sinks was not available, so the full-flow rate for the pipe has to be used. If the designer chooses a 6-in. community grease waste, it would have resulted in the following:

Retention/separation calculation: 375 x 30 = 11,250 gal.

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Storage capacity calculation: 1,350 gal.

Total capacity required: 11,250 + 1,350 = 12,600 gal.

Carefully consider the size for a “community grease waste” line since the charge for maintenance service on a gravity interceptor is based on the overall capacity of the interceptor. The cost of grease interceptor maintenance is typically never considered in business plans.

Design professionals and contractors need to do a much better job of educating their clients on these somewhat hidden expenses. With this knowledge, they can adjust their sale prices accordingly to not only cover their operational costs but also provide a profit.

I believe community grease waste is just a bad idea. The sizing methodology discussed is included in calculators at www.jrscidt.com.

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Andrew Cahill — Membership

Membership Report

Truly hoping March heads “out like a lamb”, though it appears old Punxsutawney Phil got It wrong again. The winter weather is starting to take its toll and I am very much looking forward to spring. I need to get out and sharpen my golf game for the April tournament!

Our March report shows an increase to 112 total members in the Baltimore chapter. Since mid-February we have welcomed four new additions to the roster:

Kyle Carson – Cummins Wagner
Naveen Shivanna – Setty Associates
Gregory Bates – CCG Facilities
Steve Kidwell – ROI Marketing

We welcome them to the chapter and look forward to seeing them at our upcoming meetings and events.

Please 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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J. Richard Wagner, PE
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Legislative Report

What is the Status of ASME A112.6.4 for Roof Drains?

When I checked on the status of ASME A112.6.4 in the middle of last January, I was told that the changes for requiring that roof drains have flow-tested levels of ponding wouldn't be completed by the A112.6.4 Task Group until their meeting later that month, but they then had to be finally voted on by the ASME Main Committee. I'm going to check again with the Chairman of the Main Committee to see where they are now. This all started in January 2018. What they're going to require is going to affect the way that roof drains will have to be tested by their manufacturers to establish their hydraulic heads at GPMs. When this performance data is available, it will permit the plumbing engineers to coordinate the ponding by the roof drains with the Rain Load (R) used in the structural design of the roof.

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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
Main Office – 240-553-0112

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 Pump Controller Applications

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

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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
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