

**Cleveland Chapter of The American Society of Plumbing Engineers**  
**November 2016**

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**From the President:**



I would like to thank Vince Scriboni with Green Turtle / Zurn for being our guest speaker at the October Technical Meeting on the topic of Total System Approach for Grease Management.

I would also like to thank our table top presenter; Tom Campbell with Campbell Equipment Company.

Congratulations to Marlon Wright, our newly appointed AYP Liaison, Cleveland Chapter of ASPE. Please keep a look out for future AYP Group events!

The November Technical Session will be on the topic of Siphonic Roof Drain Systems, presented by Bill Shockley with Wade Drains. The meeting will be held on the evening of November 9, 2016 at Harry's Steakhouse. Please RSVP by November 4, 2016 with Kevin Noble at [knoble@sbmce.com](mailto:knoble@sbmce.com).

Let us know if there are any specific topics or field trips you would like to see our chapter sponsor. We are always looking for new ideas. Remember, without membership and participation, there is no local chapter.

Regards,  
John A. Varga, P.E.  
President, ASPE Cleveland Chapter

# Alfred Steele Scholarship

Want some help getting your degree in engineering?  
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This scholarship is named in honor of Alfred Steele, PE, a long-time member of the American Society of Plumbing Engineers and a visionary and pioneer in advocating education and professional development for plumbing engineers and designers.

**2016-2017 ASPE Meeting/Plumbing Class Schedule  
November 2016**

<u>Date – Time – Place</u>	<u>Agenda</u>	<u>Speaker</u>	<u>Exhibitors</u>
<i>September 14, 2016 – 6:00 PM Cleveland Yachting Club</i>	<i>Clam Bake Topic – Social Event ASPE Cleveland Chapter</i>	<i>N/A</i>	<i>N/A</i>
<i>October 12, 2016 – 6:00 PM Harry's Steakhouse  Cost: \$26.00</i>	<i>Topic – Total System Approach for Grease Management</i>	<i>Vince Scriboni Territory Manager Green Turtle / Zurn</i>	<i>Campbell Equipment Co.</i>
<b>November 9, 2016 – 6:00 PM Harry's Steakhouse  Cost: \$26.00</b>	<b>Topic – Siphonic Roof Drain Systems</b>	<b>Bill Shockley  Wade Drains</b>	<i>TOTO RepSource</i>
<i>December 14, 2016 – TBD Harry's Steakhouse  Cost: \$26.00</i>	<i>Topic – Plumbers Local 55 Training Facility Tour</i>	<i>Plumbers Local 55 Staff</i>	
<i>January 11, 2017 – Noon TBD  Cost: \$26.00</i>	<i>Topic – Cast Iron Soil Pipe Systems: Applications, Economics and Advancements</i>	<i>Pat McQuillan National Sales Manager NewAge Casting</i>	
<i>February 8, 2017 – Noon Harry's Steakhouse  Cost: \$26.00</i>	<i>Topic – Domestic Water Booster Pump Systems</i>	<i>Jason Kresner Application Engineering Manager Syncroflo</i>	
<i>March 8, 2017 – 6:00 PM Harry's Steakhouse  Cost: \$26.00</i>	<i>Topic – PP-RCT Piping Systems</i>		
<i>April 12, 2017 – TBD TBD  Cost: \$26.00</i>	<i>Topic – Tour TBD</i>		
<i>May 10, 2017 – 6:00 PM Harry's Steakhouse  Cost: \$26.00</i>	<i>Topic – Acorn Vacuum Plumbing Systems</i>	<i>Ron Mims  Acorn Engineering</i>	

**2016-2017 ASPE Meeting/Plumbing Class Schedule  
November 2016**

The above is the meeting/plumbing class schedule for the 2015-2016 ASPE year. Updated information will appear in subsequent newsletter issues. All meetings will be at Harry's Steakhouse, 5664 Old Brecksville Road, Independence unless otherwise indicated. The meeting/plumbing class, including dinner, is \$26.00. Reservations are required. A mini product show will be held before each meeting/plumbing class highlighting some of the materials discussed in class or products that will assist the engineer in understanding what they are designing or specifying. All plumbing classes will qualify for 0.1CEU hours and will assist in preparation for the ASPE CPD examination.

The following times will be enforced as strictly as possible.

Make your reservations a minimum of two days before the meeting/class and try to be on time.

- Mini product show 5:00 to 6:00      Dinner 6:00
- ASPE business 6:30                      Plumbing Class 6:45 to 7:45



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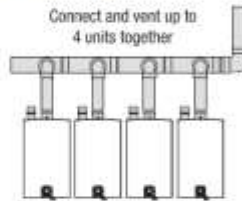
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### EDUCATION

	Name of Institution	Course or Major	From	To	Graduation Date	Degree/Diploma
High School						
College/University						
Technical School						
Others						

### PROFESSIONAL EXPERIENCE

(This section must be completed as it affects membership grade classification. List chronologically, beginning with the present. Work description must be clear and concise: e.g., plumbing, piping, fire protection, HVAC, etc. Use additional sheet as necessary.)

Date(Mo/Yr)	From	To	Firm Name and Address	Class* (see below)	Title	Description of Work	Degree of Responsibility

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Name	Address	Telephone

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The undersigned certifies that all statements made herein are correct and, if elected to the Society, agrees to adhere to the Society's Bylaws and accept the Classification conferred by the Society. Upon becoming a member, the applicant will endeavor to advance the objectives of the Society and the plumbing engineering profession.

Signature of Applicant \_\_\_\_\_ Date \_\_\_\_\_

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\* Contributions to ASPE Education (create education programs for membership) and Alfred Steele Scholarship (to award college scholarships) Funds are Strictly Voluntary and are not deductible as a charitable contribution but may be deductible as an ordinary and necessary business expense.

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Member Type	Amount	Amount Due (Enter Amount)
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## Immediate Member Benefits

**The Plumbing Engineering Design Handbook:** The most definitive collection of general plumbing practices in the field of plumbing engineering. The ASPE Handbook consists of forty-seven chapters divided into four volumes. New members receive one of four volumes immediately upon joining and the revised volume thereafter.

**Plumbing Engineer Magazine:** Members immediately begin receiving *Plumbing Engineer* magazine. This monthly magazine covers a wide spectrum of topics important to the profession and to daily practices in the field.

**The ASPE Report:** The Society's bimonthly newsletter, incorporated within the *Plumbing Systems & Design* magazine, keeps members abreast of Society activities and issues impacting the profession.

**Publication and Education Program Discounts:** All publications, education programs, and other services and products of the Society are offered at special discounted rates to ASPE members.

### Collegial Interaction and Networking

Every ASPE member not only belongs to ASPE worldwide, but has the opportunity to belong to one of 62 Chapters organized throughout the United States and Canada. Chapters sponsor seminars, conduct monthly technical meetings, publish newsletters and offer special peer-to-peer and professional-to-professional interaction and networking opportunities.

### Professional Growth and Development

**The ASPE Biennial Convention and Engineered Plumbing Exposition (EPE)** is the premier educational and professional development event for plumbing engineers and designers. The Convention features a comprehensive program of educational, technical and professional development presentations and seminars designed to enhance professional knowledge and foster awareness of new techniques. The concurrent EPE is the largest Exposition dedicated entirely to the field of plumbing engineering.

**The ASPE Technical Symposium** is offered in non-Convention years and provides a unique forum for the most comprehensive and intensive half-day and full-day plumbing engineering design seminars and workshops available anywhere. The "hands-on" workshops provide the plumbing engineer with information about new developments in the industry and new techniques for practical implementation in the field.

**Technical Seminars and Workshops** sponsored by ASPE offer one- or two-day programs conducted by leading industry professionals. Each educational program focuses on a specific area of plumbing engineering.

**Continuing Education Units (CEUs):** ASPE offers the opportunity to earn Continuing Education Units at selected technical program sessions at the biennial Convention, the Technical Symposium and at stand-alone Seminars and Workshops. CEUs are nationally recognized units of achievement that may be used as evidence of increased performance capabilities and for job advancement.

The Society shall be open to anyone involved in, or having a special interest in, the design, specification or drawing of plumbing systems.

**Dues:** Please choose the appropriate membership classification and remit dues with this application. In the event the membership classification is changed, a corrected dues statement (or dues overpayment refund) will be sent with your notice of election.

### Membership Classifications

Membership classification (Grade) will be conferred based on Article II of the ASPE Bylaws as follows:

**Full Member:** Eight (8) years of experience in plumbing engineering or related engineering field, a minimum of four (4) years of which must have been in a position of responsibility for the design of plumbing systems or in a position of responsibility for the design of systems and components related to, or incorporated within, plumbing engineered and designed systems. A maximum of four (4) years of experience may be waived by the Society Membership Committee for: (a) Education: one-half (1/2) year for each completed year in a curriculum related to plumbing engineering; (b) Engineering Registration: four (4) years for Professional Engineer registration in a field that includes plumbing engineering; (c) CPD certification: two (2) years. Dues: \$190.

**Associate Member:** Professionals engaged in plumbing design as consultants or engineers with fewer than eight years of industry experience. Dues: \$170.

**Affiliate Member:** Any individual involved in the production or marketing of plumbing products. Dues: \$190.

**Retired Member:** Any retired member with ten (10) years of continuous membership in the Society who has reached the age of sixty (60) years and is no longer active in the profession. Members in this category will not receive Plumbing Engineering Design Handbook materials and shall pay substantially reduced annual dues. Dues: \$40.

**Special Member:** Professionals in related fields, such as contractors, or those with a special interest in plumbing design whose professional background do not match the requirements for any of the other categories may apply for Special membership. Dues: \$190.

**Governmental Member:** Anyone employed by municipal, state, or federal governments for one of the following reasons:

- A. Checking and/or inspection of plumbing plans and installations;
- B. The formulation of codes, rules, requirements and regulations pertaining to the planning, designing and installation of plumbing systems, or any portion of a plumbing system;
- C. Research and development of plumbing systems design criteria. Exception: Persons employed by a government agency for the purpose of designing and/or specifying plumbing systems, who shall be eligible to be Full or Associate members, provided they have fulfilled the experience required as outlined for each respective classification. Dues: \$190.

**Student Member:** Any individual attending a recognized university, college, community college, vocational, or technical trade school full time or part time in a curriculum related to plumbing design. Student Members are considered to be an introductory level to the Society. Student membership shall be limited to five (5) years after which time the membership shall be upgraded to an applicable membership classification as deemed appropriate by the Society. Other member classifications shall not be permitted to downgrade to a Student Member classification. Dues: \$30.

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#### Region 2 Affiliate Report

The “Miracle in Flint”. What, how can this be? Keep reading... Many of you may have heard of Dr. Marc Edwards. He has been in the national news over the years but most recently in regards to his involvement in the Flint Water Crisis.

This past week, I was fortunate to hear Dr. Edwards speak at the Walter J. Weber, Jr. Distinguished Lecture in Environmental and Energy Sustainability series at the University of Michigan Gerald R. Ford Presidential Library in Ann Arbor. His message was the Miracle in Flint.

#### Bio

Here is a bit of Dr. Edwards’s bio from the program guide. He is the Charles Lunsford Professor of Civil Engineering at Virginia Tech, where he teaches courses in environmental engineering, applied aquatic chemistry and engineering ethics.

His research group aspires to pursue science as a public good, through laboratory work on practically important but underfunded topics such as corrosion in buildings and opportunistic premise-plumbing pathogens. That work laid the groundwork for the investigative science uncovering the 2001-2004 D.C. Lead Crisis and the 2014-2016 Flint Water Disaster.

Dr. Edwards’s paper on lead poisoning of children in Washington D.C., due to elevated lead in drinking water, was judged the outstanding science paper in Environmental Science and Technology in 2010.

With this background, let me share with you the title of his lecture; The Flint (2014-2016) and Washington D.C. (2001-2004) Drinking Water Lead Crisis: How Scientists and Engineers Betrayed the Public Trust.

As you read further, keep in mind, I am reporting to you what he said during the lecture series, not necessarily agreeing with or disputing anything Dr. Edwards said. In no way is this article representing the views of NSF International, ASPE, or any other organization I am involved. Again, this is report on what Dr. Edwards had to say.

I will tell you, I commend his honesty, his level of ethics, and pursuit of the truth no matter where it leads him, even to the point of losing access to vital research funding.

#### Lecture Abstract

The 2001-2004 Washington D.C. lead in drinking water crisis (and its aftermath to the present day) is a unique case study in the history of engineering and scientific misconduct. The multi-year exposure of an unsuspecting population to very high levels of the best-known neurotoxin was perpetrated by multiple government agencies whose mission was to protect the public health.

These agencies published falsified research reports, covering up evidence of harm and justifying ill-conceived interventions wasting hundreds of millions of dollars creating more harm.

Aspiring to uphold the duty of scientists and engineers to hold paramount the public good and welfare, Dr. Edwards worked alongside collaborators in the public, press, and in Congress for over a decade to expose scientific misconduct.



Those experiences raise concerns about the veracity of “research” conducted and funded by government agencies, especially in crisis situations when public harm has occurred, as well as the lack of checks and balances on agency power.

Moreover, due to our inability to learn from the D.C. disaster, a similar crisis such as that occurring in Flint, MI was inevitable, but in that case, after outsiders exposed the harm to Flint residents was acknowledged. Over \$400 million in relief money has since gone to assist in the disaster recovery and several agency employees have been criminally indicted.

Flint reminds us that academics have an important role to play in confronting misconduct and environmental injustice. If we do not do so, public trust in science will never be restored.

Dr. Edwards had to self-fund his research in Flint and it has been a strain on his personal finances. He would not have it any other way. It was the right thing to do, for all the right reasons and he would do it again if he had to.

The lessons learned in Flint are that the public, the politicians, regulators, engineers, etc. all understand our infrastructure is in great need of repair and we cannot let what happened in D.C. and Flint happen again. If we are not careful, it will.

Let us learn from our mistakes, including governmental agencies, scientists, academia, and the engineering community to not let another D.C. or Flint crisis happen anywhere else. We owe it to our profession and our personal ethics.

Best regards,

I would like to know what you think, please reach out to me:

Dann Holmes – ASPE Region 2 Affiliate Liaison  
NSF International – Building Water Health  
Business Development Manager  
[r2al@aspe.org](mailto:r2al@aspe.org) or (734) 214-6222

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## Checklist for Cast Iron to PVC VE Discussion

Item: Maximum Working Temperature (at zero psi)	YES	NO
Will system exceed 140° F by design or accident? <i>Boiler condensate, comm. kitchen, washing machine, autoclaves?</i>		
<b>Fact:</b> PVC maximum working temperature is 140° F.		
<b>Fact:</b> CISP maximum working temperature is 212° F.		
Item: Thermal Expansion	YES	NO
What is the air temperature at the time of installation?		
What is the maximum temperature of the system?		
What is the potential maximum change in temperature?		
Does contractor have expansion couplings and/or off-sets figured into bid?		
Access to expansion couplings for possible replacement/maintenance?		
<b>Fact:</b> PVC will expand 3.6" per 100' of pipe with a 100° F temperature change.		
<b>Fact:</b> CISP will expand .745" per 100' of pipe with a 100° F temperature change.		
Item: Sound Attenuation	YES	NO
Will anyone be sleeping, convalescing, studying or working in the facility ( <i>i.e., Hotels, Dormitories, Hospitals, Schools, Libraries, Retirement, Convalescing Facilities, Shared Wall Condos &amp; Apartments, Correctional Facilities, Quiet Work Areas, etc.</i> )?		
<b>Fact:</b> PVC requires added insulation wrap & isolation brackets for quiet performance required in many buildings.		
<b>Fact:</b> Cast iron requires no insulation wrap because of its natural noise-dampening qualities with consistent sound performance levels in the 25 dB range (utilizing neoprene gaskets).		
Item: Underground Installation	YES	NO
Will contractor be installing PVC with ASTM D 2321 protocol?		
Will contractor be supervised during installation of underground PVC to assure required trench width, trench bottom and proper soil compaction?		
Does contractor have proper backfill material figured into his bid?		
Will the DWV system be installed under concrete? <i>Are the consequences of an underslab failure significant?</i>		
<b>Fact:</b> As a flexible piping system PVC requires greater care in underground application. It is dependent upon the surrounding soil (soil pipe mechanism) in order to withstand an external load. PVC pipe is considered to be in a failed condition when earth or live loads have caused the pipe to deflect beyond a certain point, generally 5%. Calculating maximum burial depths for flexible piping systems is more complex and requires the use of the Iowa Formula, pipe stiffness values for the system employed and knowledge of local soil conditions. Additional information of the Iowa Formula is available within the Uni-Bell Handbook of PVC Pipe.		
<b>Fact:</b> As a rigid material CISP fails when it crushes. Rigid piping systems can be evaluated with a ring crush test, and the derived values can be used to verify that the pipe will withstand the required external load.		
Item: Hanger Spacing/Fall	YES	NO
Has the cost of additional hangers and their installation been considered?		
<b>Fact:</b> Model Plumbing Codes require PVC DWV pipe to be supported horizontally every 4 feet.		
<b>Fact:</b> CISP offers greater structural strength, significantly reducing hanger requirements and providing consistent fall. Cast iron needs to be supported within 18" of each joint and every 10 feet horizontally.		
Item: Plenum Spaces	YES	NO
Does the building utilize plenum spaces for return air?		
If wrapping PVC to meet ASTM E 84 is permitted by code, will a post cable/telecomm/HVAC installation inspection occur to make sure pipe/fitting wrap is not damaged or disturbed?		
<b>Fact:</b> PVC should not be installed in a plenum. It is classified as a combustible material per ASTM E 136.		
<b>Fact:</b> Cast iron is a non-combustible product, which can be installed in a return air plenum.		
Item: Fire Wall Penetrations	YES	NO
Has contractor added the cost of fire-stopping materials and labor or will that be passed along to another trade?		
<b>Fact:</b> PVC requires listed fire-stop devices or collars conforming to the requirements of ASTM E 814 on both sides of the fire-rated wall. The collars utilize intumescent fire-stopping materials.		
<b>Fact:</b> Cast iron requires installers to only seal the annular space between the wall and the pipe. Typically mineral wool batting and fire-resistant caulking are used to fill the annular space.		

If you answered yes to any one of these questions, please consult a Charlotte Pipe technical services rep to further discuss the best material for your project.



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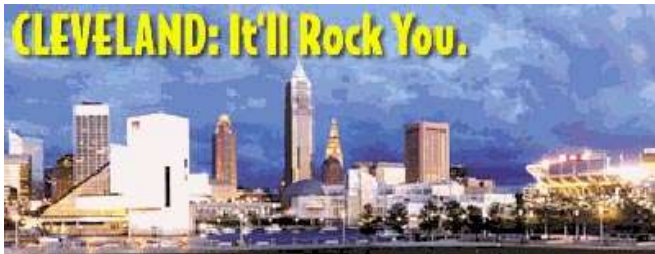
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