

# ASPELA TIMES

The News of the Los Angeles Chapter of The American Society of Plumbing Engineers

[www.aspela.com](http://www.aspela.com)

May 2024

Volume 24 Issue V

## PRESIDENT'S REPORT

**Thura Zin CPD, GPD**

**President**



**April speaker:**  
By Elizabeth Abell, ASSE 6060  
Medical and Laboratory Gas Consultant  
PATTONS MEDICAL

At the last month meeting, members had the privilege of hearing from Elizabeth Abell, a renowned expert from Pattons Medical, whose presentation left a lasting impact on attendees. With her extensive experience and insightful perspectives, Elizabeth Abell's presentation was a highlight of the event. The positive response from attendees reflected the impact of Elizabeth Abell's presentation. Members were not only inspired but also equipped with valuable insights to apply in their respective roles. In conclusion, Elizabeth Abell's presentation was a testament to the quality of speakers ASPE LA brings to its meetings, offering members unparalleled opportunities to learn from industry experts and enhance their professional growth.

Because of her presentation, the April meeting attendance went up to 45 members. This is the best after we started in person meeting last year.

**I want to remind our members, for this month's May 8th meeting which will be held at the LADWP La Kretz Innovation Campus.** The meeting will start early and there will be two facility tours. The topic will be "Peak Water Demand Calculator" presented by Christoph Lohr - Vice President of Technical Services and Research, IAPMO. Without RSVP we are not able to let you in, due to the limited space at LADWP's facility. Please RSVP early to get your seat.

*please continue reading on page 21*

## May Meeting

**Date:** **May 8, 2024**

**Time:** Check-in will start at 4:30pm. Presentation to begin at 6:30 pm (see p. 2)

**Place:** **LADWP La Kretz Innovation Campus**  
525 South Hewitt Street  
Los Angeles CA 90013

**Program:** **Water Demand Calculator**

**Speaker:** **Mr. Christoph Lohr P.E.**  
CPD, LEED AP BD+C Vice  
President of Technical  
Services & Research  
IAPMO

**Future events include:**

- Fishing Trip! TBD
- Golf! (tentative) 6-14-24

*See inside for Details...*



inside...

President's Report

page 1

Legislative Report

page 6

Meeting Info

page 2

Membership Report

page 17

CADD/BIM Training Schedule

page 3

Admin Secretary

page 23

Technical Report

page 5



AMERICAN SOCIETY OF PLUMBING ENGINEERS LOS ANGELES CHAPTER

**May 8, 2024, Meeting**  
**“Water Demand Calculator”**  
**By Mr. Christoph Lohr P.E. CPD, LEED AP BD+C**  
**Vice President of Technical Services and Research**  
**IAPMO**

**WHAT YOU WILL LEARN:**

Using the IAPMO Water Demand Calculator for new residential construction significantly reduces water aging, delivers hot water faster, generates significant construction cost savings, reduces the carbon footprint of the structure, and subsequently saves on water- and water heating-related energy utility bills for the entire life of the plumbing system.

**MEETING LOCATION:**

In Person:

*LADWP La Kretz Innovation Campus  
 525 South Hewitt Street Los Angeles CA 90013.*

**MEETING SCHEDULE:**

4:30 pm – Check in.  
 5:00pm – Facilities tour (First group)  
 5:30pm – Facilities tour (Second group)  
 6:00pm – Dinner served.  
 6:30 pm – 8:30 pm – Presentation

**COST: Pay at door only**

Meeting Fee:  
 RSVP - \$55 and Retired BOD: \$30

**RSVP Online:**

[RSVP](#)

**By: May 6, 2024**

**No entry without RSVP**

**THE SPEAKER:**



Christoph Lohr is IAPMO’s Vice President of Technical Services and Research. As part of his duties he provides industry leadership through participation in strategic industry initiatives, and provide technical support to all IAPMO’s business units as needed. Christoph has over a decade of experience in designing plumbing systems and has a reputation as a results-oriented expert, particularly in the realm of balancing waterborne pathogen prevention and water sustainability. He consistently looks to find long-term, holistic solutions that positively impact public health and safety of plumbing systems and improving strategy development. Christoph shapes the industry by regularly sharing his thoughts via speaking engagements and writing. He is a distinguished graduate from the Virginia Military Institute, with a Bachelor of Science in Mechanical Engineering.

If you have additional questions or needed information on his presentation, you can reach him at: [Christoph.Lohr@iapmo.org](mailto:Christoph.Lohr@iapmo.org)

For more information, visit our website [www.aspela.com](http://www.aspela.com).

## 2024 State-Funded Online CADD/BIM Training Schedule

Our new schedule has just been released. Make sure you reserve your seat today! Below is our latest State-Funded BIM/CADD training schedule.

For Seat Reservations **Please Contact Barry at (949) 393-8866** or email me at [barry@ach.edu](mailto:barry@ach.edu) or [barry@westech.edu](mailto:barry@westech.edu) for registration.

See you in training!

### **Location: Online**

Class: Revit (MEP)

Day: Monday & Wednesday

Time: 5:30 pm - 9:30 pm

Meeting Dates: \*JANUARY- 24, 29, 31 \*FEBRUARY- 5, 7,12, 14, 21, 26, 28

\*MARCH- 4, 6, 11, 13, 18, 20, 25, 27 \*APRIL- 1, 3, 8, 10, 15, 17, 22

### **Online Training**

Live Instructor (Virtual) / Interactive

Location: Online

Class: Revit (Architectural)

Day: Tuesday & Thursday

Time: 5:30 pm - 9:30 pm

Meeting Dates: \*JANUARY- 23, 25, 30 \*FEBRUARY- 1, 6, 8, 13, 15, 20, 22, 27, 29

\*MARCH- 5, 7, 12, 14, 19, 21, 26, 28 \*APRIL- 2, 4, 9, 11, 16

### **Location: Online**

Class: AutoCAD

Day: Tuesday & Thursday

Time: 5:30 pm - 9:30 pm

Meeting Dates: \* JANUARY- 23, 25, 30 \*FEBRUARY- 1, 6, 8, 13, 15, 20, 22, 27, 29

\*MARCH- 5, 7, 12, 14, 19, 21, 26, 28 \*APRIL- 2, 4, 9, 11, 16

\*\*Schedule is subject to change

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# Leak Detection & Water Submetering Solutions



## LEED Platinum-Certified Apartment Building Uses Submetering to Dramatically Reduce Water Consumption

### PROJECT BACKGROUND

A 32-story, new construction, 500-unit apartment building known as 360 State Street in New Haven, Connecticut, wanted to install an innovative submetering system to track the residents' water & hot-water heating data while providing tenants with an easy-to-use web portal to access and manage their utility data.



H2O Degree delivered a submetering system consisting of a 1,000 dual point-of-entry water meters (hot & cold) and 591 thermostats. The battery-powered wireless water meters communicate with the thermostats. The thermostats act as transceivers, a unique feature of H2O Degree's wireless network, which results in substantial savings compared to using traditional wireless repeater networks. When considering the minimal wiring it took to set up the radios and ZigBee mesh network the system uses, the system was the most cost effective option for the building.



### PLUMBING CONFIGURATION

The dual point-of-entry submetering at 360 State Street means that the plumbing is configured so that one riser branches into the apartment for cold water. A second



riser delivers domestic hot water created centrally by recovering heat from a CHP system. Water enters the apartment in the utility closet and there are two water meters in each apartment, one for cold and one for hot water.

### WATER & ENERGY CONSERVATION SAVINGS

Typical 1-2 bedroom apartments at 360 State Street average 45 to 55 gallons of water use per day. This is almost half the national average of 70-90 gallons per day. This savings is the result of billing tenants for water and proactive water leak detection. Another energy-savings benefit came from billing tenants for electricity and providing thermostat controls resulting in heating & cooling costs being 10 to 20% below apartments without submetering.



Read the full case study on 360 State Street by visiting H2O Degree's website at [www.h2odegree.com/aspela.php](http://www.h2odegree.com/aspela.php)



To request information on H2O Degree leak protection and submetering solutions contact our local representative Keyline Sales at (562) 904-3910.

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**TECHNICAL REPORT**

Vahan Margaryan CPD, GPD  
V.P. Technical

We had such a great turnout for our April meeting – we were just a bit shy from 50 attendees. The Medical air and vacuum presentation by Elizabeth Abell from Pattons Medical brought a huge group of engineers and affiliates. Also, it was great to see a big group of attendees from Murray Co. Special shout out to our April presenter, Elizabeth Abell. Her great presentation, and visual slides were keeping attendees very engaged and passionate to learn about medical/lab air and vacuum systems. Also, something to highlight is that just before our meeting it was announced that Pattons Medical has become an Affiliate Partner of ASPE! ASPE’s Affiliate Partner program was created to help ASPE members design the most technologically advanced plumbing systems, and Pattons Medical joins more than 50 of the industry’s top manufacturers to achieve this goal. Well done Pattons Medical!

It is that time of the year again – our ASPE LA Chapter May 8th meeting will be held at the LADWP La Kretz

Innovation Campus – courtesy of ASPE LA longtime supporter Amir Tabakh and his Team! RSVP is required for this event - please keep in mind that there will be no entry without RSVP. So act accordingly and reserve your spot. Facility showcasing multiple hi-efficiency research rooms, innovative strategies and emerging technologies. Two tours (at 4:30pm and 5:00pm) throughout the facility are offered. Plan to be there on time to participate on tours. ASPE LA Borad of Directors purposely scheduled water demand calculation presentation by IAMPO’s Vice President of Technical Services and Research Christoph Lohr as we expect attendees from LADBS, LADWP, SoCal Gas and many other public agencies. Expected presentation time is 2 hours – so 0.2 CEUs will be credited to CPD/PE/CPDT attendees.

Here is the list of other upcoming ASPE LA events:

1. ASPE Golf Tournament is scheduled for June 14th at Brookside Golf Club. Flyer with additional information is already in your inbox. For sponsorship opportunities please contact Thura or me.

*continued on page 14*

# AT LAST – IT’S ARRIVED!

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**Case Study: Panorama Towers, Las Vegas, NV.**

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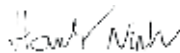
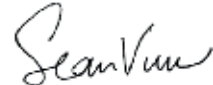


**TEST REPORT**

5001 E. Philadelphia Street  
Ontario, California - USA 91761 - 2816  
Ph: 909-472-4100 | Fax: 909-472-4243  
<http://www.iapmort.org>

Report Number: 2536-18001-002 Project No.: 29225  
Report Issued: February 26, 2018.  
Client: Aqua-Rex  
3301 Spring Mountain Road Ste 18  
Las Vegas, NV 89102 Contact: Jonny Secombe  
Source of Samples: The samples were shipped to IAPMO R&T Lab from Aqua-Rex, and received in good condition on October 11, 2017.  
Date of Testing: October 25, 2017 through December 15, 2017.  
Sample Description: Scale Prevention Device; model: Aqua-Rex WK1-E.  
Scope of Testing: The purpose of the testing is to determine the efficacy of the Scale Prevention Device per section 5 of IAPMO IGC 335-2018, entitled "Rapid Scaling Test for Scale Prevention Devices".

CONCLUSION: **When tested per Section 5 of IAPMO IGC 335-2018, Aqua-Rex WK1-E reduced scaling by 83% when applied to Las Vegas water heated to 180°F.**

Tested by, Reviewed by,  
  
Hanks Ninh, Project Engineer  
  
Sean Vuu, P.E., Manager, Specialty Projects

**LEGISLATIVE REPORT****From USA TODAY:**

USA Today News Story Offers Confusing Justification for Getting Rid of Natural Gas Cooking Appliances. In response to requests from AGA BECS Committee members, Codes and Standards staff reviewed the Monday, November 11th USA Today story, “No More Fire in the Kitchen: Cities are Banning Natural Gas in Homes to Save the Planet,” written by USA Today’s national correspondent, Elizabeth Weise. *The story presents a number of disparate, unconnected claims regarding bans of natural gas being promulgated in various community actions around the U. S., including the following:*

- The article stresses that bans are associated with “new building codes,” when in fact they are a consequence of local legislative initiatives, not development through established code development processes.
- A “nation’s shift to carbon-neutral energy sources” is presumed by the author (inferring a “phase out” of natural gas) while admitting the growth of natural gas customers, citing an anecdote from AGA concerning customer growth.
- Natural gas emissions are cited as a primary source of carbon dioxide emissions but are referenced for natural gas power generation, not direct use in natural gas cooking or other consumer uses. In fact, direct use of natural gas for cooking would reduce carbon dioxide emissions from cooking by roughly two-thirds over electric cooking using current electrical grid supplies.
- No natural gas usage or direct carbon dioxide emissions are reported, so that presumed climate benefits from eliminating natural gas cooking are claimed or substantiated.
- No mention of consumer safety is made, while fires from residential cooking are roughly double for electric cooking when compared to gas-fired cooking.
- The article extols the benefits of electric induction cooking without accounting for direct costs of the technology, indirect costs of suitable kitchen utensils, and potential safety issues related to electromagnetic field (EMF) generation.

AGA contribution to the story involved the customer growth anecdote mentioned earlier (estimated at one new natural gas customer added every minute) and description of the costs of all-electric construction. The anti-gas cooking stories continue to emerge as partial justification for “electrification” and BECS Committee members have urged information be prepared to counter this type of confused negative, information that can be cited at model code hearings or during state or local adoptions for justifying the removal of or prohibiting new natural gas applications.

Jim Ranfone | Managing Director, Codes and Standards  
American Gas Association  
400 N. Capitol St., NW | Washington, DC | 20001  
P: 202-824-7310 | F: 202-824-9120 | jranfone@aga.org

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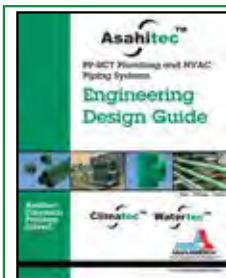


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SCIENCE

The Cooling World

There are ominous signs that the earth's weather patterns have begun to change dramatically and that these changes may portend a drastic decline in food production—with serious political implications for just about every nation on earth. The drop in food output could begin quite soon, perhaps only ten years from now. The regions destined to feel its impact are the great wheat-producing lands of Canada and the U.S.S.R. in the north, along with a number of marginally self-sufficient tropical areas—parts of India, Pakistan, Bangladesh, Indochina and Indonesia—where the growing season is dependent upon the rains brought by the monsoon.

The evidence in support of these predictions has now begun to accumulate so massively that meteorologists are hard-

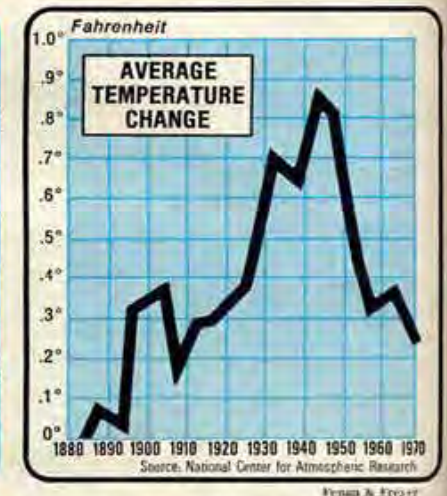
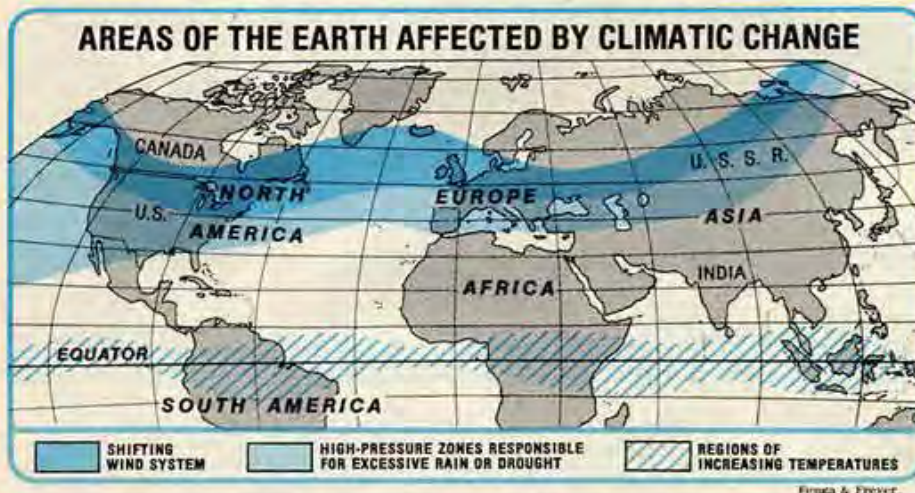
reduce agricultural productivity for the rest of the century. If the climatic change is as profound as some of the pessimists fear, the resulting famines could be catastrophic. "A major climatic change would force economic and social adjustments on a worldwide scale," warns a recent report by the National Academy of Sciences, "because the global patterns of food production and population that have evolved are implicitly dependent on the climate of the present century."

A survey completed last year by Dr. Murray Mitchell of the National Oceanic and Atmospheric Administration reveals a drop of half a degree in average ground temperatures in the Northern Hemisphere between 1945 and 1968. According to George Kukla of Columbia University, satellite photos indicated a sudden, large increase in Northern Hemisphere snow cover in the winter of 1971-72. And

ic change is at least as fragmentary as our data," concedes the National Academy of Sciences report. "Not only are the basic scientific questions largely unanswered, but in many cases we do not yet know enough to pose the key questions."

**Extremes:** Meteorologists think that they can forecast the short-term results of the return to the norm of the last century. They begin by noting the slight drop in over-all temperature that produces large numbers of pressure centers in the upper atmosphere. These break up the smooth flow of westerly winds over temperate areas. The stagnant air produced in this way causes an increase in extremes of local weather such as droughts, floods, extended dry spells, long freezes, delayed monsoons and even local temperature increases—all of which have a direct impact on food supplies.

"The world's food-producing system," warns Dr. James D. McQuigg of NOAA's Center for Climatic and Environmental Assessment, "is much more sensitive to



pressed to keep up with it. In England, farmers have seen their growing season decline by about two weeks since 1950, with a resultant over-all loss in grain production estimated at up to 100,000 tons annually. During the same time, the average temperature around the equator has risen by a fraction of a degree—a fraction that in some areas can mean drought and desolation. Last April, in the most devastating outbreak of tornadoes ever recorded, 148 twisters killed more than 300 people and caused half a billion dollars' worth of damage in thirteen U.S. states.

**Trend:** To scientists, these seemingly disparate incidents represent the advance signs of fundamental changes in the world's weather. The central fact is that after three quarters of a century of extraordinarily mild conditions, the earth's climate seems to be cooling down. Meteorologists disagree about the cause and extent of the cooling trend, as well as over its specific impact on local weather conditions. But they are almost unanimous in the view that the trend will

a study released last month by two NOAA scientists notes that the amount of sunshine reaching the ground in the continental U.S. diminished by 1.3 per cent between 1964 and 1972.

To the layman, the relatively small changes in temperature and sunshine can be highly misleading. Reid Bryson of the University of Wisconsin points out that the earth's average temperature during the great Ice Ages was only about 7 degrees lower than during its warmest eras—and that the present decline has taken the planet about a sixth of the way toward the Ice Age average. Others regard the cooling as a reversion to the "little ice age" conditions that brought bitter winters to much of Europe and northern America between 1600 and 1900—years when the Thames used to freeze so solidly that Londoners roasted oxen on the ice and when iceboats sailed the Hudson River almost as far south as New York City.

Just what causes the onset of major and minor ice ages remains a mystery. "Our knowledge of the mechanisms of climat-


the weather variable than it was even five years ago." Furthermore, the growth of world population and creation of new national boundaries make it impossible for starving peoples to migrate from their devastated fields, as they did during past famines.

Climatologists are pessimistic that political leaders will take any positive action to compensate for the climatic change, or even to allay its effects. They concede that some of the more spectacular solutions proposed, such as melting the arctic ice cap by covering it with black soot or diverting arctic rivers, might create problems far greater than those they solve. But the scientists see few signs that government leaders anywhere are even prepared to take the simple measures of stockpiling food or of introducing the variables of climatic uncertainty into economic projections of future food supplies. The longer the planners delay, the more difficult will they find it to cope with climatic change once the results become grim reality.

—PETER GWYNNE with bureau reports


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**MEMBERSHIP REPORT**

*Robert Galaviz CPD*

*V.P.Membership*

I hope this message finds you well. As we dive into the updates for April, I am thrilled to share some positive developments regarding our membership.

**Celebrating New Members**

This month, we are excited to welcome a notable uptick in new members who have joined ASPE Los Angeles. I extend a warm welcome and gratitude to the following individuals for choosing to be part of our chapter:

- Sahab Masoumian
- Brandon Pullen, LEED AP, P.E.
- Xavier Saenz
- Carla Zuleta
- Casey Wise
- Gilbert Bautista
- Alireza Momeninezhad, P.E.,
- Isai Alcaez
- Christian Martinez.

To each new member, I extend a sincere thank you for enriching our professional community with your expertise, enthusiasm, and commitment to excellence. Your decision to join ASPE Los Angeles is greatly appreciated and coincides with our goal to keep this chapter thriving for years to come.

**Continued Focus on Growth**

The increasing number of new members highlights our ongoing focus on growth and engagement within ASPE Los Angeles. As we continue to expand our membership base, we furthermore enhance the opportunities for collaboration, knowledge exchange, and professional development.

**Call to Action: Engage and Connect**

I encourage all members, both new and existing, to actively engage and connect within our vibrant community. Whether it's participating in events, contributing to discussions, or reaching out to fellow members, your involvement plays a crucial role in shaping the success and impact of ASPE Los Angeles. Let's continue to foster a culture of collaboration, innovation, and camaraderie as we strive towards our shared goals.

Thank you to our new members for choosing ASPE Los Angeles, and to all members for your ongoing support and dedication.





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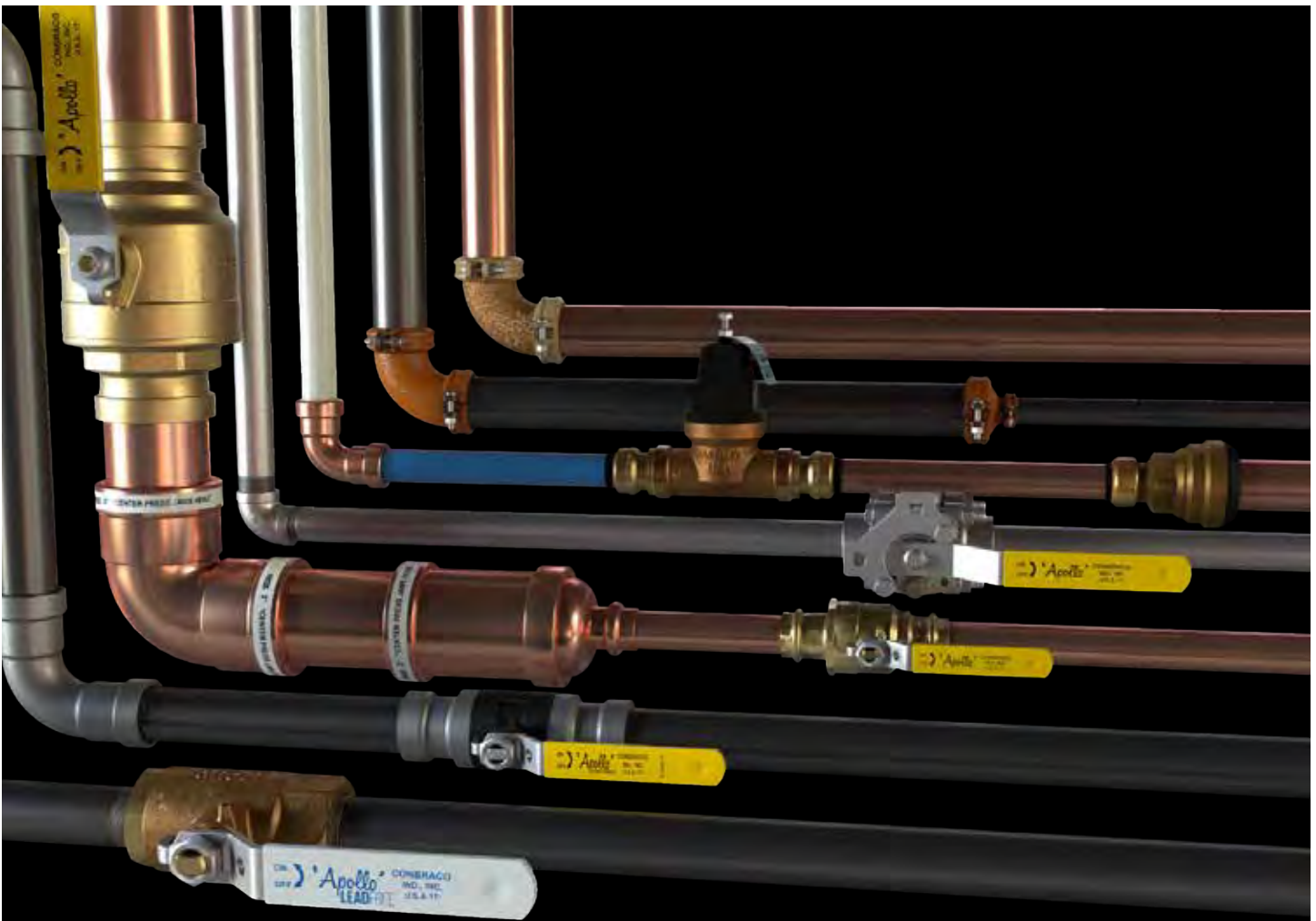


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PRESIDENT: continued from page 1

As all you know this year is our 60th Anniversary of the founding chapter and we will celebrate for that.

We were not able to do the election last month. There will be an opening for the Vice President Legislative position. If you are ASPE member with good standing and interest to join us as VP leg, please let us know. We encourage our members to participate in the chapter election and joining the board is a great initiative for bringing fresh perspectives and energy to the organization.

Our next golf tournament will be tentatively on June 14, 2024. Our members and friends will be getting the mail blasting for the golf tournament two times a week. Please contact me and David Kelley or any board members for this. I'll post the up-to-date golf sponsor at our LA Website.

The 2024 ASPE Convention and Expo in Columbus, Ohio, registration is open and if you are planning to attend, book your hotel as soon as possible. The event is scheduled for October 18 through 23.

We will start selecting the chapter delegates for the Convention to present our chapter. Same as every convention the selection of delegates based on the attending record of active participation in monthly meetings. We are having a total of 9 delegates, along with one alternate and one young professional, demonstrating a thoughtful approach to representation.

Encouraging members to share specific topics or ideas for events shows a commitment to making the anniversary celebration meaningful and engaging for everyone.

If you have any suggestions to learn the subjects, please let us know.



**DONALD F. DICKERSON GOLF TOURNAMENT**  
**60<sup>TH</sup> ANNIVERSARY LA CHAPTER**

Friday June 14, 2024

**Brookside Golf & Country Club**  
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**Team Best Ball Format**  
**Shotgun Start @ 8:00am**  
**Check in Begins @ 6:00am**

**WHO Showed up?**  
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The total number in attendance was

**45!**

plus our speaker!

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**ADMINISTRATIVE SECRETARY**

Jeff Atlas

*Administrative Secretary... and your newsletter editor*

We had a fantastic meeting in April. 45 members and our speaker were in attendance. After the pledge of allegiance, the meeting was called to order and everyone introduced themselves. We had several first timers and many of the regulars. If you read this newsletter, please come to the meetings. We really need to straighten out our industry! Both ASPE and ASHRAE are all in... hook, line and sinker.

Below is an article from a website sympathetic to the prevailing "wisdom" of taking away your gas appliances in the name of saving the planet from climate change... as though CO2 were a bad thing... unless it's a refrigerant where it gets a GWP score of only 1. Questions: Did the Earth only make oil once? What exactly is "sustainability"? Does truth come from authority?

<https://earth.org/lithium-and-cobalt-mining>

**The Environmental Impact of Lithium**

Lithium is typically mined through a process called brine mining, which involves extracting lithium from underground saltwater reserves. The risks in polluting local water sources arise here, with examples in Salar de Uyuni and Salar de Atacama. This process involves pumping saltwater to the surface, where it is evaporated to remove the lithium and other minerals. Despite being relatively energy-intensive, this remains one of the most cost effective ways to mine lithium nowadays. Unfortunately, these toxic metals can contaminate water sources, threatening not only humans but also animal biodiversity.

Furthermore, some of the metals contained in EV batteries are highly damaging even in small quantities. Since a large majority of them are disposed of in landfills, leaks of environmental contaminants are quite frequent. Often, these leaks lead to underground fires, which release even more pollutants into the atmosphere. When particles of hazardous metals contained in batteries – like arsenic, cadmium, chromium, cobalt, and copper – enter the human respiratory system, they can cause a variety of health problems.

In a paper published in the journal Nature, Gleb Yushin, a professor at the School of Materials and Engineering at Georgia Institute of Technology with co-author Kostiantyn Turcheniuk argued that new battery technology needs to be developed using more common, environmentally-friendly

materials. As reserves of lithium and cobalt will not meet future demand, suggested elements to focus on instead include iron and silicon.

**The Environmental Impact of Cobalt**

Cobalt is mined through surface and underground mining. Surface mining is the process that involves removing the top layer of soil or rock to access minerals or metals, while underground mining involves digging tunnels and shafts to access minerals or metals located deeper below the surface.

Unlike Lithium where the supply is plentiful, there is more of an effort to meet the demand logistics for cobalt. The Democratic Republic of Congo (DRC) produces 60-70% of the world's Cobalt output. However, the conditions of the mines in which Cobalt is produced has generated significant controversy in the media and abroad. Still, the average, daily \$3+ wage for miners is significantly more than the average wage in the country (where 73% of the population live below \$1.9 a day). A main reason why workers will continue to mine in these fields is the above average pay and thus the associated economic incentives resulting from artisanal mines. It is currently estimated that between 140,000-200,000 people work as artisanal miners in the DRC.

Nonetheless, *the risks of cobalt mining on the human population in Congo is well documented, where mines are often operated in dangerous and polluted conditions.*

The mining and refining processes are often labor-intensive practices and are associated with a variety of health problems as a result of accidents, overexertion, exposure to toxic chemicals and gasses. Ontop of all this, violence is common throughout centered around racism, discrimination, and worker abuse. The miners, known locally as creseurs, are so economically reliant

on this informal economy that these dangerous conditions cannot afford full consideration.

The environmental costs of cobalt mining activities are also substantial. Southern regions of the DRC are not only home to cobalt and copper, but also large amounts of uranium. In mining regions, scientists have made note of high radioactivity levels. In addition, mineral mining, similar to other industrial mining efforts, often produces pollution that leaches into neighbouring rivers and water sources. Dust from pulverised rock is known to cause breathing problems for local communities as well.



*When particles of hazardous metals contained in batteries – like arsenic, cadmium, chromium, cobalt, and copper – enter the human respiratory system, they can cause a variety of health problems.*



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