

THE WHISTLE

FLORIDA HEALTHCARE ENGINEERING ASSOCIATION



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THE PRESIDENT'S CORNER

Lamar Bragg, *CHE, CHFM*

At the time of this script, we are already in September, and all I can say is “unbelievable.” This idea that the best things go by quickly and are over before one knows is proof positive of this past year.

FHEA has had a very exciting year up until this point, with more in store as we approach our 60th year celebration. To our valued partners, members, board, and staff, I trust that your true source for expectations and fulfillment of all things FHEA has been nothing short of a positive experience.

Once again, I would like to thank the board and our staff for their continued support - it is an absolute pleasure to work with this team and their guidance throughout the year is a true testament to the future of FHEA.

I would also like to thank FHEA for allowing me to attend the ASHE 2022 Annual Conference, July 17th/20th in Boston, Massachusetts. By estimates, there were close to 3k attendees for this gathering.

It was truly an honor to represent the FHEA as the State of Florida President at this widely respected platform. The conference seminars, networking, and the trade show are world class. I would highly encourage any and everyone to make this a sought-after venue for educational learning.

At the conference, FHEA was awarded the Affiliated Chapter Platinum award and it was my honor to accept this recognition on behalf of the state. The entire team should be very proud of this award.

The FHEA organization is defined as promoting educational opportunities to the healthcare engineering segment at the State level. The FHEA and District 3 just hosted an excellent class, the FHEA NFPA 99 Certification Course, August 18 – 19 and the event was sold out. Our Presenting Sponsor was FIRST ONSITE.

(Continued on next page)

PRESIDENTS MESSAGE (CONTINUED)

We would like to say Thank you to our Supporting Member Sponsors:

- Presenting Sponsor: FIRST ONSITE
- Lunch Sponsors: Rose Paving; SOPREMA
- Happy Hour: McKim & Creed; STRUCTURAL
- Break Sponsors: ATI Restoration
- National Firestopping Solutions
- Remediation Specialists
- Summit / Fire and Life Safety America

Thank you to Jordan Smith District 3’s President and our FHEA management team for a job well done.

Another item of note is our continued focus to develop our organization’s membership with the Membership Development Committee, chaired by Felix Robinson. Some the actions coming from this group are below:

Simplifying the membership approval; Communications, such as LinkedIn, links to the ASHE YouTube website, etc. Noted during the ASHE conference, the FHEA team has placed a national level ask with ASHE to align its organization with the armed forces network regarding retiring and/or leaving the service veterans and using the ASHE platform as a pipeline to service members interested in the healthcare field. More information will follow soon.

Be sure to set aside important FHEA dates on your calendar:

Achieving 60 (1962-2022) years as the premier organization in the State of Florida, the FHEA will celebrate October 24th-26th with the Fall Expo and Educational Conference. This remarkable event will be head at the Renaissance World Golf Village in St. Augustine, and as a special educational session, the FHEA will offer the CHC course and the opportunity to take the exam.

Please visit the FHEA website for more pertinent information surrounding this event, <https://www.fhea.org/2022-fhea-fall-meeting>

In closing, I want to paraphrase my first true administrator and great friend who is now chasing a following sea. Thank you to each and everyone involved with FHEA for your commitment and dedication to service excellence.

As I approach the end of my year, I know the hard work that was put in by others to allow me to be whom I am does not go unnoticed.

Thank you, enjoy your fall, and I hope to see you in October in St. Augustine!

Lamar Bragg, CHFM, CHE
FHEA President

**FHEA RECEIVES
ASHE AFFILIATED CHAPTER
PLATINUM AWARD**

Pictured from left to right:
Kevin Daniels, Larry Peterson, Lamar Bragg, Adam Mayle, & Bobby Baird



MEMBER FEATURE - RUSS SCHILLING



Retirement, for those of us fortunate enough to get there, is both a big step and a proud moment. As a healthcare engineering leader, it is the culmination of all the projects completed, departments managed, relationships formed, people mentored, and patients treated because a mission-oriented leader got the job done. Retirement is even more meaningful when you have had a career like that of FHEA's State Treasurer, Russ Schilling.

Russ's healthcare career spans 35 years and he has served in leadership roles for the last 34 of those years. He started working in clinical engineering back when it was called "biomed" before utilizing some of that same skillset to transition into the field of facilities management. Those that know Russ won't be surprised to know he quickly gained a reputation as an honest and reliable person and was promoted to his first facilities director position in 1994. This is the same year that Russ recognized the value and resources that the Florida Healthcare Engineering Association can provide to healthcare engineering leaders and he became a member. The organization only had 66 active members at the time.

Russ Schilling has been and continues to be a loyal servant of the FHEA and its members. He was first elected to the position of district president in 2001 before being elected state vice president in 2002 and state president in 2003. Russ returned to the role of district president again in 2012 before being asked to serve as the state treasurer in 2013. The state treasurer is a position that is expected to be held for multiple years in order to ensure continuity and guidance and Russ still holds this position today. He served with such integrity that his peers were inspired to select him as the FHEA State Engineer of the Year in 2017. Russ's experience continues to be valuable at every meeting as he can impart specific knowledge of the FHEA history that helps with the board's decision making today.

As the saying goes, "all good things must come to an end" and Russ is bringing his tenure with FHEA and our profession to an end so he can enjoy a well-deserved retirement. Russ will soon fill his days with airboats, sunsets, and gator hunting instead of water leaks, power outages, and everything else that can go wrong in a hospital. We wish him well in all of his new endeavors. Thank you Russ for a lifetime of service to the field of healthcare engineering and the Florida Healthcare Engineering Association.

FHEA FALL MEETING

October 24 - 26, 2022

"TIME TO CLIMB: INTEGRATE, INNOVATE, AND MOTIVATE"

RENAISSANCE WORLD GOLF VILLAGE ST. AUGUSTINE, FLORIDA



- FHEA Healthcare Engineer Members (\$65.00)
- FHEA Certified Engineers (CHE) (\$55.00)
- FHEA Life Members (Complimentary)
- FHEA Supporting Members (\$200.00)
- Non-member (250.00)
- CHC Course (Member) - \$50
- CHC Course (Non-Member) - \$100

» REGISTER NOW!



Renaissance World Golf Village
 500 South Legacy Trail
 St. Augustine, FL 32092

RESERVE YOUR ROOM

Use the link below to make your room reservation at the Renaissance World Golf Village in St. Augustine and receive the FHEA group rate.

» BOOK YOUR ROOM

FEATURING KEYNOTE SPEAKER

Alan Mallory

Keynote Sponsor:



FALL MEETING SCHEDULE



ALL SYSTEMS GO: INNOVATE, INTEGRATE, AND MOTIVATE

*ASHE CE – 7 hours Pending
 FL Architect CE – 3 hours Pending
 Interior Design CE – 3 hours Pending

Monday, October 24, 2022

9:00am – 5:00pm
CHC Exam Review

2:30 – 5:00pm
Board Meeting

6:00 – 7:00pm
Informal Welcome Reception

Tuesday, October 25, 2022

7:00am - 2:00pm
**Golf Tournament at Slammer & Squire (8am
 shotgun start)**

8:00am – 12:00pm
CHC Exam

2:30 – 2:45pm
**Welcome to the Conference by President
 Lamar Bragg**

2:45 – 4:45pm
Keynote Address: Reaching New Heights
Speaker: Alan Mallory
 • FL Engineer - approved 1 CEU

5:00pm - 7:00pm
Expo Reception

Wednesday, October 26, 2022

7:00am
Exhibits with Continental Breakfast

8:00am - 9:00am
How NFPA 70E & 70B Effect NFPA 99
*Speaker: Marty Perrone, Everything Arc Flash,
 LLC*
 • FL Engineer - approved 1 CEU
 • FL Architect - approved 1 CEU
 • FL Interior Design - approved 1 CEU

Wednesday, October 26, 2022

8:00am - 9:00am
Cyber Ready: Hospital Operations Preparedness
*Speaker: Michael Sheerin, TLC Engineering
 Solutions*
 • FL Engineer - approved 1 CEU

10:00am – 10:30am
Networking Break in Exhibit Hall

10:30am – 11:30am
Remote Monitoring for Critical Systems
*Speaker: Steve Burriss and Craig Hulings, Fuel Tank
 Optics*
 • FL Engineer - approved 1 CEU

11:30am – 1:30pm
Lunch and Exhibit Hall (Exhibits end at 1:30pm)

1:30pm - 2:30pm
**Facilities Manager or Magician: Conjuring Energy
 Efficiency During a Pandemic**
*Speaker: Michael Soforenko and Kevin Gombotz,
 Envinity*
 • FL Engineer - approved 1 CEU
 • FL Architect - approved 1 CEU
 • FL Interior Design - approved 1 CEU

2:30pm – 3:30pm
**Wake Up Call: Minimizing the Impact of
 Retirement on Your Facility Team**
Speaker: David Trask, ARC Facilities
 • FL Engineer - approved 1 CEU
 • FL Architect - approved 1 CEU
 • FL Interior Design - approved 1 CEU

3:30pm – 4:30pm
**The Building Department Ain't Your Quality
 Control**
*Speakers: Julie Johnson, Burns Engineering,
 Arlene Zavoki Stewart, AZS Consulting
 Doug Harvey, St. Lucie County, FL*
 • FL Engineer - approved 1 CEU

THE FHEA RESERVES THE RIGHT TO CHANGE SPEAKERS, TOPICS, AND
 OR SCHEDULING DUE TO UNFORESEEN CIRCUMSTANCES.

FHEA FALL MEETING SPONSORS

KEY NOTE SPEAKER - PRESENTING SPONSOR



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MEET N GREET SPONSORS



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SPONSORSHIPS STILL AVAILABLE



MONDAY, OCTOBER 24TH

- CHC Review Course Sponsor @ \$500
We will have an 18" x 24" sign with your company name on an easel placed near a high boy for your materials and/or promotional items; your company will also be listed in the conference program.
- "Meet n Greet" Reception @ \$750
Your company will be printed on event signage and will be listed in the conference program.

TUESDAY, OCTOBER 25TH

- Afternoon Break @ \$500
Your company will be listed in the conference program.
- FHEA Expo Reception @ \$750
Your company will be printed on event signage and will be listed in the conference program.

WEDNESDAY, OCTOBER 26TH

- Continental Breakfast @ \$1,000
We will have an 18" x 24" sign with your company name on an easel with a highboy placed nearby for your materials and/or promotional items; your company will also be listed in the conference program.
- Morning Break @ \$500
Your company will be listed in the conference program.
- Networking Luncheon @ \$2,000
We will have an 18" x 24" sign with your company name on an easel with a highboy placed nearby for your materials and/or promotional items; your company will also be listed in the conference program.

FHEA FALL MEETING TRADE SHOW EXHIBITORS

Abatement Technologies
ACF Standby Systems / GENERAC
Acoustiblok, Inc.
Advanced Roofing, Inc
Airmax HVAC Cleaning
Ajax Building Company
Andrews Filter & Supply Corp.
ARC Facilities
ASHBERRY WATER CONDITIONING
ASSA ABLOY Door Security Solutions of Florida
ASSA ABLOY Entrance Systems
Barclay Water Management, Inc.
BioControls, Division of RGF Environmental Group, Inc.
BMS CAT
Boiler Technologies Unlimited
BRAND SERVICES
Commercial Products
CREF Global Corporate Real Estate & Facilities
Cummins, Inc.
Envinity, Building Energy Solutions
Environmental Health & Engineering
EOLA Power
ETS-Lindgren Inc.
Evcor USA LLC
Evoqua Water Technologies LLC
Exeter Architectural Products
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First Onsite
Fluid systems and Controls
Freysinet Inc
GF Piping Systems
Gold Coast Environmental Solutions Inc.
Green Air Environmental
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Hilti
Homeyer Consulting Services, Inc.
Jantech Services, Inc.
Lamphier & Company
Medical Technology Associates, Inc.
MediTrac by Omegaflex

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Performance Roof Systems
Phigenics
Powerex
Premier Water & Energy Technology, Inc.
Prime Power Services, Inc.
PRS - Pipe Restoration Solutions
Pureflow Inc.
Raymond
Remediation Specialists
Ring Power Corporation
SESCO Lighting
Smith Seckman Reid, Inc.
SOPREMA
Specified Technologies Inc
Stan Weaver & Co
STARC Systems, Inc.
Stark Tech / MC²
Sutter Roofing
Tremco
TriDim Filter
United Laboratories, Inc.
USA Coil & Air
Valcourt Building Services
Victaulic
VPS, Inc.
Waco Weatherproofing Technologies Inc.

VIEW TRADESHOW FLOORPLAN



NFPA 99 Certification

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Summit / Fire and Life Safety America





ASHE NEWS

Larry Peterson, CHE, CHFM, CHSP; ASHE Region 4 Liaison

The first full in person ASHE Annual Conference and Technical Exhibition, since the start of the Covid pandemic, was held in July in Boston, Massachusetts. This was my first opportunity to visit Boston and I will certainly try to go back. It's a great city and I enjoyed my time there. The event was well attended with over 3000 attendees and a full trade show. There were inspirational keynote speakers, educational sessions, the trade show, and of course, a chance to connect with counterparts from around the country. I saw a number of FHEA members at this year's event and hope you will make plans to attend next year's conference, August 7-9, 2023, in San Antonio, Texas.

It is almost time to elect new ASHE Officers, so please be sure check out the candidates and vote when elections open on September 19, 2022 and close on October 17, 2022. This is your opportunity to help decide who leads ASHE in 2023.

Be sure to read the August edition of Health Facilities Management Insider magazine. There are several interesting articles, particularly the article on using reliability-centered maintenance for hospital equipment. Let the experts dispel RCM myths and offer best practices for those new to the process.

October 23-29, 2022 is National Healthcare Facilities and Engineering week. This is your chance to recognize your team of caregivers for all that they do every day to take care of you, your facility, your facility staff, and your patients. It all starts with them and this is your opportunity to make sure they get recognized by you and your organization for a job well done. It's also a great time to celebrate with the FHEA for our 60th Anniversary Expo and Educational Conference, October 24 – 26, at the Renaissance World Golf Village in St. Augustine – you don't want to miss this special event! Complete details, including registration and hotel reservations, can be found at <https://www.fhea.org/2022-fhea-fall-meeting>

See you in St. Augustine!

CODES AND STANDARDS

By: John Hatfield, CHE, CHEP
Chair, FHEA Codes & Standards



CODES AND STANDARDS UPDATE: VIOLENCE PREVENTION

Statistics from the US Bureau of Labor 2018 have shown that healthcare workers experience a rate of workplace violence five times that of other occupations. Our nursing staffs are the most prone to workplace violence and more than 50% of nurses report being verbally abused or bullied by patients or patients' family members, while approximately 25% report being physically assaulted.

The numbers are probably worse than reported as most nurses think that abuse and workplace violence is just part of the job and to be expected, but we need to train our staff to report incidents of workplace violence for proper investigations and action plans to avoid it from occurring again.

To protect your staff from workplace violence and keep your workforce from changing jobs to other professions, it is vital that a hospital or healthcare facility develop and maintain a workplace violence prevention program.

Most hospitals and healthcare facilities are utilizing their safety committee members to establish a workplace violence prevention program. To have a good program, you need to have good representation of all departments, including medical staff and leadership, as not just nursing is the victim of workplace violence. Data must be obtained concerning incidents of workplace violence and a good way to achieve that is to do a questionnaire to staff with questions such as: Do you know what is workplace violence? Do you know how to report it? Have you ever been the victim of workplace violence? Was it from a patient, a family member, or fellow employee? What type of workplace violence such as verbal abuse, bullying, physical abuse, etc. to place?

(Continued next page)

CODES AND STANDARDS UPDATE: VIOLENCE PREVENTION (CONTINUED)

You need to take the safety of all inside the hospital into consideration and do a workplace violence risk assessment, looking at all possible workplace violence incidents that could potentially occur, as well as data of workplace violence incidents that have been reported and data collected from questionnaires to staff. It's important to look at the probability of it to occur, the human and business impacts, how well prepared you are for it (similar to hazard vulnerability analysis we use for emergency management), and complete to get a score to further develop your workplace violence prevention program to see if you need to do more education.



Hospitals and healthcare facilities can also take other measures to prevent workplace violence such as:

1. Installing personal panic devices
2. Designing building features such as a single-entry point to the emergency room and within ED, a secure ligature-resistant holding area for behavioral patients
3. Locating the security department near the most activity and incidents of violence (such as your emergency department)
4. Eliminating weaponizable items where possible
5. Creating an employee assistance program

We need to take actions to protect everyone in our hospitals and healthcare facilities, try to improve the safety of everyone, and in turn, improve statistics with workplace violence in healthcare and make it safer for us to work in hospitals and healthcare facilities. In addressing workplace violence, perhaps the most important consideration is the commitment and accountability of health care leadership.

EDUCATION UPDATE

By: John Crouch, Director of Facilities at AdventHealth Wesley Chapel, FHEA Education Chair



Greetings from your FHEA Education Chair. You are never too tenured to learn, what have you learned lately in your career?

NFPA Certification Classes: 44-members signed up for and participated in the NFPA 99 16-hour course that we hosted August 18 & 19. If you were there, you walked away with a reaffirmation of the complexity of facility construction and maintenance.

As dry as our comprehensive code manuals can be, it was the vigorous peer class debates with our NFPA instructor as moderator on what the code means that was the biggest win as we sought out answers for the chapter quizzes. There will be more NFPA classes offered, please take advantage of them. My advice is to register fast because this one sold out in four days.

Networking with peers and vendors was another big win! Hopefully, those who attended swapped business cards so that they can reach across the aisle to peers to lean on for ideas or connect with when in each other's town.

Vendors Making It All Possible: Please ensure that you have a 5-minute conversation with vendors at our events to learn about their services or products. They are the reason that many of our training classes are either free or at the very least, well catered events. If our vendors don't receive the social contact experiences with facility leadership, they will choose not to support us. They need us and we need them!

CHC Certification: Have you received your CHC (Certified Healthcare Constructor) certification yet? If not, consider staying competitive and a leader in your Facilities Management profession. Each year, at the annual FHEA Meeting and Trade Show, we try to host either CHC or CHFM certifications. For the October 24-26 fall conference, we are providing a CHC certification class and testing. Monday October 24th from 9:00 am – 5:00 pm is the CHC class. The exam is available to take Tuesday October 25th from 8:00 – 12:00 pm, or later at an authorized proctor test facility. This fall conference will be at the Renaissance World Golf Village in St. Augustine, FL.



FHEA MEMBERSHIP DEVELOPMENT UPDATE

By: Felix Robinson, FHEA Membership Chair

The Membership Development Committee met on July 13 via ZOOM. The committee continued to discuss ways to retain and increase FHEA membership.

- FHEA membership has increased this year. Here is a summary from August 20, 2021, through August 15, 2022:

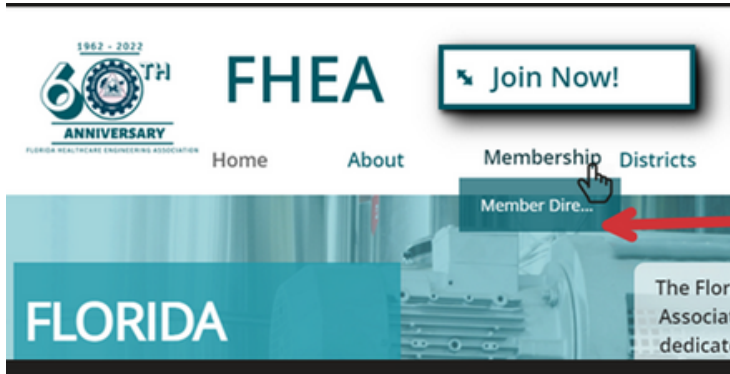
Membership levels	Active members			
	Start	End	Diff #	Diff %
Supporting	741	811	70	9.45
Healthcare Engineer	259	302	43	16.6
Life	27	27	0	—
Associate	13	22	9	69.23
Education/Student Membership	0	0	0	—
Summary	1040	1162	122	11.73

- FHEA members are encouraged to follow and post on [LinkedIn](#) and FaceBook. Links are also on the homepage of the FHEA website.
- The FHEA membership directory is available on the [FHEA website](#) for members.
- The word-of-mouth approach is most effective, so everyone is encouraged to continue to let others know about FHEA membership benefits.
- The next committee meeting is scheduled on October 13th

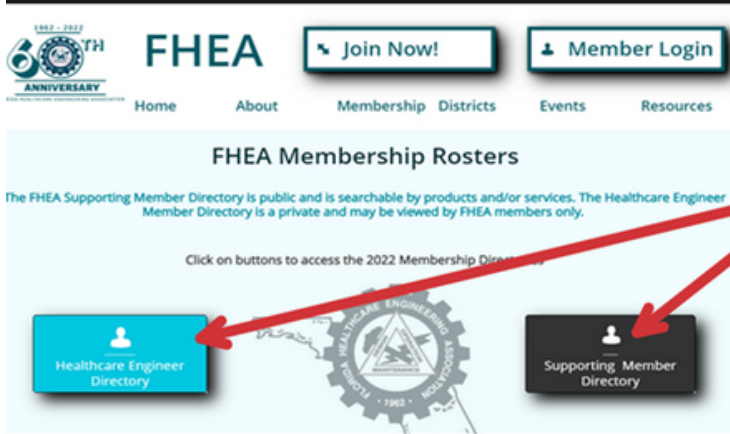
We are asking members to review your profile on the FHEA website to ensure that the data is up to date. You can access the Member Directory from [Home \(fhea.org\)](#) or this [link](#).

View website instructions on next page

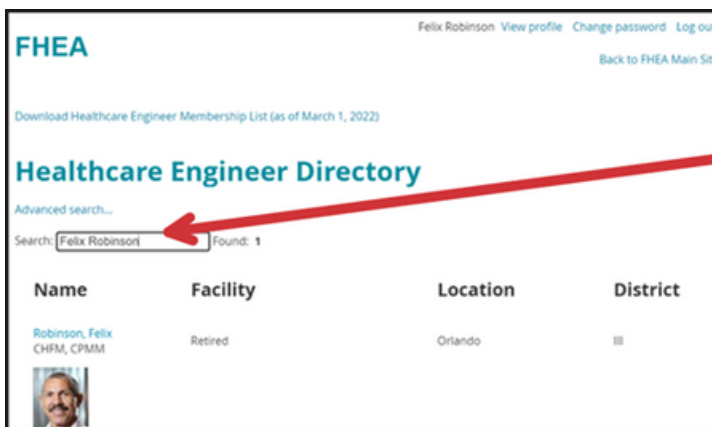
FHEA MEMBERSHIP DEVELOPMENT UPDATE (CONTINUED)



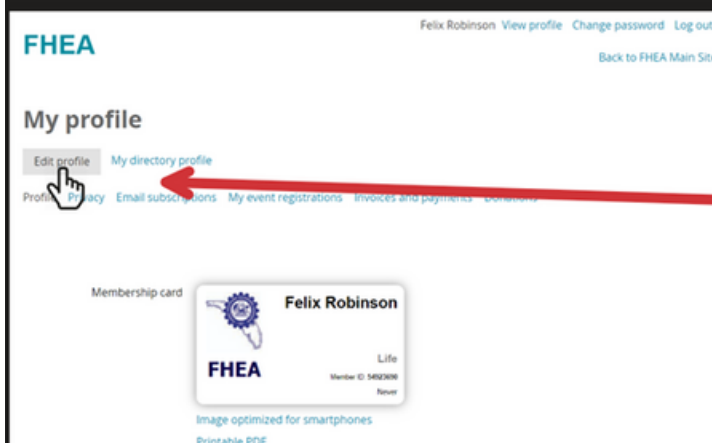
Click on Membership and choose Member Directory



On the Directory page choose your membership type



On the next page search for your record



On this page you can edit your profile or view your directory profile

DISTRICT HIGHLIGHTS



District II Happenings

President Paul Hamilton, CHFM, CHC



As I look back at how much FHEA has grown, I immediately think of the positive experiences that FHEA has presented to me. If everyone would take a moment and reflect, I believe we would see things such as: Networking, Education, Hints about inspections, Codes, Problem Solving, and Friendships. These tools are needed to accomplish our passion of Healthcare Engineering. FHEA offers these tools for all of us to use. These may not be the kind of tools that fit inside a tool belt or box, but these tools can be used daily to do the work that we are so compassionate about.

The Healthcare Engineers of today, as well as the next generation of Healthcare Engineers, need each tool that is mentioned above. Our facilities are becoming more complex every day. There are only so many hours in our day. To get the most of these hours, we need to use every tool available.

Take a moment and imagine if 90 percent of all Healthcare Engineers were FHEA members. Not just members, but active members, members taking advantage of the tools that FHEA offers. Our facilities would benefit tremendously from the Networking, Education, Hints for inspections, Codes, Problem Solving, and Friendships. I challenge you to help sign up a Healthcare Engineer. Those in Leadership roles, I challenge you to sponsor someone for the first year. The tools will benefit the engineer and the facility.

FHEA DISTRICTS

Become more involved in the FHEA by taking part in District activities. To learn more, visit the District pages on www.fhea.org. You will see the Florida counties included in each, as well as District leadership and meetings.

[District I](#)[District II](#)[District III](#)[District IV](#)

DISTRICT HIGHLIGHTS

**District III Message****President Jordan Smith, CHFM, CHC, CHE**

FHEA's first state-wide, stand-alone conference is in the books. What a success! We kicked things off with a great golf tournament at Falcon's Fire golf club. Dr. Dale Henry amazed us with his story telling, and advice to never say "that's not my job." Jessica Lynch had us on the edge of our seat as she told us her experience of being wounded, captured, and subsequently rescued by our US Special Operations Forces in 2003. We also had the opportunity to learn about the latest trends from TJC, NFPA code updates, and best practices in Infection Prevention - to name just a few.

One education session near and dear to my heart was led by Steven A. Call, PhD,. He spoke about strategies to improve recruitment, retention, and succession planning in Healthcare Facility Management (FM). Any FM reading this article knows how difficult it is to recruit talent into a healthcare FM role. It's tough to take someone with developed commercial FM experience, and (economically) teach them the clinical things they need to know in a healthcare environment. Conversely, it's also difficult to take a person with a clinical background and teach them how large buildings and campuses work. Dr. Call highlighted this silo effect in his presentation.

I experienced firsthand the value of investing in people during this conference. On the morning of the very first day of our conference, I got that call from the CEO's Administrative assistant. For those of you that don't know, you usually don't get a call from this person at 8AM in the morning. It usually only means one thing... AHCA or TJC is in your lobby, and they are asking for the facility manager! My mind instantly started racing. I'm in Orlando, how long is it going to take me to get back to Tampa (morning traffic on I-4... FOREVER!)? How am I going to cover this?... Do I have any troubles on my fire panel?... Wait, I can't leave Orlando, I have obligations here too... Do I have an AdventHealth Colleague I can call to help? – NO, they are all here with me in Orlando!...

Then it hit me. I have a team! A team I've sent to FHEA and ASHE educational classes. A team studying for their CHFM and CHC certifications. But are they ready?... Are they going to have the projected confidence needed to assure the inspector we had our act together... That we knew what we were doing?... That we were keeping patients safe. Well, there was only one way to find out.

I called my Manager, who was traveling to the conference from Tampa, and turned her around (first time I was thankful for someone being stuck in I-4 traffic). I called my Supervisors and turned them around too. I told them this was their big day, that they were going to cover this announced AHCA life safety inspection themselves, without the safety net of their director.

How did it turn out? Stay tuned to the next addition of the D3 Punch List to find out.

PLUMBING AUTOMATION LABOR SAVINGS

EDWIN GONZALEZ, CPD, GPD, ASSE 12080, GF PIPING SYSTEMS.

Effective Water Management Plan Compliance During a Labor Shortage And Beyond

Finding skilled workers has been an issue business have dealt with for years. But companies have been surprised to find that despite many new job openings, applications have been slow in coming. Businesses are posting more job openings than ever, but hiring isn't keeping pace, leading to concerns among many employers about their ability to find workers. Leaving existing employees overworked while employers are facing declines in efficiency, quality, performance, and production. In healthcare, efficiency and performance are vital to protecting the lives of patients, nurses, doctors, and staff.

Worker shortages affect WMP compliance and increase liability

At the recent ASHE PDC summit in New Orleans, attendees, facility managers, and engineers, were asked how they were handling the water management plan (WMP) requirements. In most of their responses, they stated that these tasks are performed manually. However, with the shortage of skilled labor, some critical processes can get overlooked, such as temperature monitoring, routine flushing, and properly documenting the system status. This type of neglect is common with most tasks assigned to humans.

Inconsistent implementation of key control measures or monitoring of control limits leads to increased liability. When tasks are not performed at scheduled times, it increases the risks associated with building water systems.

Add to that, poor documentation, and a facility could find itself shorthanded during legal proceedings.

Automating key WMP requirements guarantees consistency and labor efficiency.

As detailed in the article [How Building Automation Is Changing Healthcare Facilities Management](#), the healthcare industry has used innovation in automation to improve building management and operations. Building automation is currently used in many facilities to manage HVAC and lighting systems; building security and access control; video surveillance; intercom systems; mass notifications; and even fire systems, which can monitor temperatures and provide early notifications when a fire occurs. Missing from this article is any mention of automation in plumbing systems. However, with the continued rise of Legionnaires' disease outbreaks, growing requirements to implement an ASHRAE-188 compliant water management plan, and labor shortages, the demand for plumbing systems automation has never been higher.

By increasing automation, a facility can increase efficiency without the need to increase staff. Simply put, automation means taking routine and repetitive tasks and making them automatic so that the extra time saved in the process can be diverted elsewhere. The initial costs associated with installing an automated system are offset by the added value they bring. The system cost is also static, whereas operational costs associated with the increased labor cost of repetitive tasks are not.

(Continued next page)

PLUMBING LABOR AUTOMATION SAVINGS (CONTINUED)

Automation to improve temperature consistency, water and energy efficiency.

Domestic hot water (DHW) systems, a dynamic system, can be one of the most inefficient systems in a building due to their imbalance. In an unbalanced system, the hot water circuits farther away from the heat source (i.e., water heater) will struggle to meet or maintain the desired temperature, while the hot water circuits closest to the heat source may consistently maintain the desired temperature. The reason is that water takes the path of least resistance. Such temperature inconsistency can create an environment for bacterial growth in the system.

In order to balance a system, balancing valves are installed on each hot water return circuit to create resistance. This resistance encourages water to choose an alternate path while still allowing enough flow through the circuit to overcome heat loss. A properly balanced system will maintain and deliver hot water quickly and consistently throughout the building. As such, there are multiple balancing valve technologies on the market designed to improve system balancing. However, most of the balancing valves are static, meaning they are set at the time of installation to balance the system based on flow or temperature and are never adjusted again, even though the DHW system is dynamic, always changing based on demand and system conditions. Any additions or renovations made to the DHW system with static balancing valves will increase the system's inefficiency.

Because traditional balancing valves work independently from each other, they operate to control the flow or temperature in each circuit, and although that operation affects the other circuits, each valve's function is to address the flow or temperature within its circuit, not the system as a whole.

Electronically Actuated Balancing Valves (EABV) or Digitally Actuated Balancing Valves (DABV) are dynamic balancing valves that are connected to one another via a cable that carries data and low voltage power to a control panel that sends data to and from each valve to make up a fully integrated, state-of-the-art hydraulic control and water management system, making adjustments as required to achieve a hydraulically balanced system. These adjustments are made throughout the DHW system's operation, directing each valve to adjust based on the system's demand.

These systems can also handle additions and renovations to the DHW system. Whenever new circuits are added to the DHW system, the new Electronically Actuated Balancing Valves (EABV) are recognized, causing all the valves in the system to re-adjust and balance the entire DHW system. Maintaining the DHW system's optimal performance and efficiency.

Automation simplifies WMP compliance, reduces the risk of liability and reduces labor

Systems with EABV offer numerous flavors of automation, ranging from intelligent automation (which involves the use of machine learning) to monitor and control the system, to pseudo-automation (which turns pen-and-paper tasks into digital ones) by logging and documenting the processes automatically with little or no human interaction.

One of the biggest requirements of any WMP is the requirement to monitor, log, and document the water systems. Because EABV systems are data-driven, they can provide features that automate control measures, monitor control limits, and provide detailed documentation and reporting.

Such systems may also offer thermal disinfection capabilities without the need for hard piped by-pass at each valve. A thermal disinfection process can be scheduled for a specific time.

(Continued next page)

PLUMBING AUTOMATION LABOR SAVINGS (CONTINUED)

During this process, the water temperature at the heat source can be increased to disinfection levels. The EABV recognize the high temperature is part of a scheduled procedure and will allow an internal bypass during the "thermal disinfection" mode.

Once all the circuits have finished the disinfection cycle, the valves reset to normal operation. To avoid scalding, this process shall only be performed during periods of no occupancy in the building.

Systems with EABV can automatically perform maintenance on each valve to limit scale buildup, monitor the valve's operation, and advise the technical staff on preventive fixes before failure occurs.

These data-driven systems offer the option of using BACnet IP (Building Automation and Control network), or a connection via Rest API (Representational State Transfer Application Programming Interface). Data communication is through the applied interface. Both interfaces allow connection to the Building Management System (BMS).

Whether you have one facility or multiple, everything can be controlled from one location with minimal human interaction, freeing the staff to do other tasks that can't be automated. Packaging these features into one system, such as GF's Hycleen Automation System for water management compliance, is critical in today's worker shortage environment.

GF Piping Systems is committed to providing efficient, reliable, innovative, and sustainable solutions to meet the rigorous demands of healthcare water systems.

Edwin Gonzalez, CPD, GPD, ASSE 12080, is Piping System Specialist, commercial water, for GF Piping Systems. He serves as Education Chair for the Central Florida Chapter of the American Society of Plumbing Engineers and is a committee member of IAPMO Construction Task Force. Contact him at Edwin.gonzalez@georgfischer.com.

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The Changing Role of the Facility Management Professional

BY JACK RUBINGER, ARC FACILITIES



About ARC Facilities

ARC Facilities is a leading technology company facilitating instant access to Building information in the built space.

ARC Facilities serves a variety of industries including healthcare, higher education, K12, manufacturing and government facilities. Modules include Building Plans, Emergency Information, Legacy Documents, Healthcare Compliance, and O&M Documentation.

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With resignations and labor shortages continuing to impact facility management, FMs now have more responsibilities than ever before. Isn't it time for a look at the Changing Role of the Facility Professional?

Take senior executive Julie Brown from Johnson Controls, for example. Julie oversees technicians who keep buildings "healthy" through building automation and controls, fire detection, and HVAC maintenance.

Julie and her team are inside schools and hospitals nearly every day -- ensuring that environments are conducive to learning and healing and doing what's right for the planet by making sure conditions are safe and comfortable through equipment maintenance.

Samantha Howell is an HVAC problem-solver and educator.

"Not everyone is an expert in HVAC. So, it's less about the technical turning of the wrench and more about increasing HVAC performance and energy savings for their buildings," she said. "For me, it's all about talking to customers in the boiler room over the sound of pipes and helping customers create better environments for people."

Then, there's Nancy Novak, a technology visionary, facility and building expert, and advocate for women in construction and facility management.

Novak's mission is to weigh in on a lot of the people processes and innovations needed to design, build, and maintain Data Centers, buildings specifically designed for cloud service providers.

Data Centers house computer systems and components, such as telecommunications and storage systems which require sophisticated cooling and air flow systems.

Chonte Martin, from the City of Atlanta must demonstrate a thorough understanding of life safety and preventive maintenance – especially critical as she's responsible for 3.6 million square feet of occupied facilities, including City Hall and Municipal Courts.

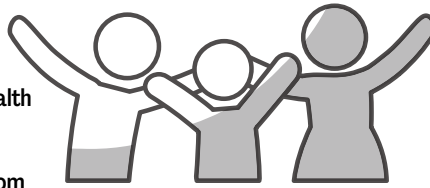
Martin's goal is understanding the dynamics of each facility to determine the types of risk mitigation steps needed to increase safety for thousands of building occupants.

There are thousands of examples of facility professionals going above and beyond. Each of these roles continue to evolve and expand – making life always interesting, challenging, and rewarding for facility professionals.

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