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## Bathroom Remodel Disaster Narrowly Averted

BY JERRY GOULD FOR CONTRACTOR

No contractor is ever all that surprised to find out that, in the face of the realities of a job, the architect's plan was not going to work- and this case was a doozy. During a recent remodel job for a conference center Hotel in Atlanta alcove tubs were being replaced with walk-in showers. Pre-formed Acrylic shower bases were specified. The old alcove tubs, of course, had drains at the end of the tub. **➤ Turn to Bathroom, page 18**

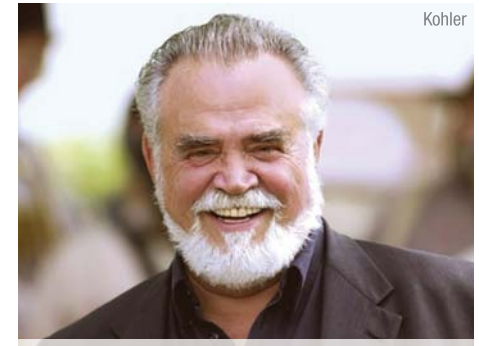


Side view of shower pan showing the side discharge shower body with brass pipe attached.

## Herbert V. Kohler, Jr. Dies at 83

SPECIAL TO CONTRACTOR

KOHLER, WI – Kohler Co. Executive Chairman Herbert Vollrath Kohler, Jr. passed away on September 3, 2022, in Kohler, Wisconsin. He was 83. His leadership transformed the plumbing products manufacturer founded by his grandfather into a global and diverse family of businesses. His efforts in the hospitality side of the company put Wisconsin on the map as a global golf destination, culminating with the Ryder Cup in 2021. "His zest for life, adventure and impact inspires all of us. We traveled together, celebrated



Herbert Vollrath Kohler, Jr.

➤ Turn to Kohler, page 10

## Jackson, MS, Faces Municipal Water Crisis

SPECIAL TO CONTRACTOR

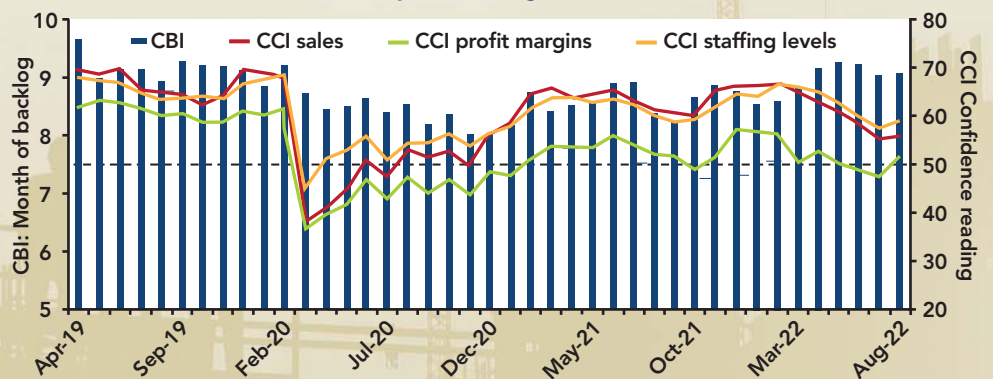
JACKSON, MS — On August 27th, Mississippi Governor Tate Reeves issued a State of Emergency in anticipation of flooding from the Pearl River due to excessive rainfall. The flooding threatened not only property damage but seemed certain to overwhelm the city's two water treatment plants. "My administration, including MEMA, is monitoring this **➤ Turn to Jackson, page 58**



Jackson, MS Skyline with flooding Pearl River in the foreground in August 2022.

### CONTRACTOR INFOCUS

#### ABC Construction Backlog Indicator, Construction Confidence Index Apr. 2019 - Aug. 2022



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# Pfister to Continue 'American Plumber Stories' for a Third Season

■ SPECIAL TO CONTRACTOR

LAKE FOREST, CA — Pfister Faucets, a leader in the plumbing industry since 1910, is publishing its third season of *American Plumber Stories*, a popular docuseries that features the lives of plumbers throughout the US. The first two seasons have garnered millions of views by plumbers and tradespeople in just over a year.



*American Plumber Stories* aims to promote the plumbing trade to the next generation of professionals. The show highlights the stories of plumbers around the nation including how they got started in the plumbing trade and the passion they have for their profession. These stories show how they built a career that

➤ **Turn to Story, page 54**

# Applewood Plumbing Helps Provide Sanitary Bathrooms in Nepal

■ SPECIAL TO CONTRACTOR

Reaching far beyond the communities they have served for nearly 50 years in Denver, Boulder and Longmont, Applewood Plumbing Heating & Electric is making sanitary bathrooms a reality for rural families in Nepal.

“This is our first effort to provide assistance beyond Colorado,” said Josh Ward, owner of Applewood Plumbing Heating & Electric. ➤ **Turn to Applewood Plumbing, page 54**



**New homeowner Sabita T. taking a break on her job site with NIVAS Program Coordinator in Nuwakot, Nepal.**

# Midea to Provide 20,000 Electric Window Heat Pump Units for NYC Public Housing

■ SPECIAL TO CONTRACTOR

PARSIPPANY, NJ – New York City is leading the charge to advance building decarbonization and improve occupants' comfort with a unique public-private initiative called the “Clean Heat for All Challenge” spearheaded by New York City Housing Authority (NYCHA), New York Power Authority (NYPA) and New York State Energy Research and Development Authority (NYSERDA). ➤ **Turn to Midea, page 62**



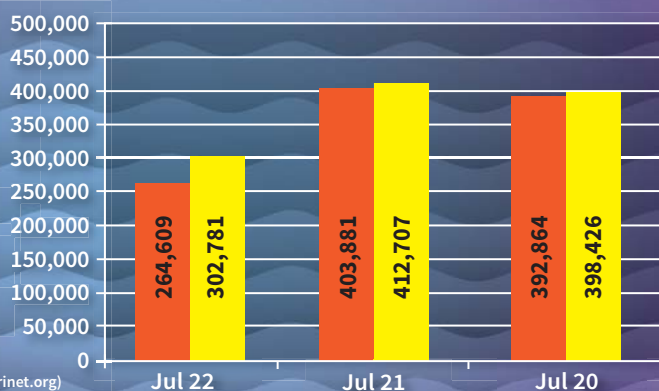
**Midea President Kurt Jovais and NYSERDA President and CEO, Doreen Harris.**

## CONTRACTOR INFOCUS

### U.S. SHIPMENTS OF RESIDENTIAL STORAGE WATER HEATERS

Jul 2020 - Jul 2022

■ Residential Electric  
■ Residential Gas



SOURCE: AHRI (ahricommunications@ahrinet.org)

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In Brief

**Oatey Co.**, a leading plumbing manufacturer, was recently recognized as the Best Company to Work in the Monadnock Region of New Hampshire by the *Monadnock Shopper News Readers' Choice Awards* for the second consecutive year. According to Director of Operations Jessica Wilson, it's the company's commitment to an associate-focused culture that sets it apart as a top workplace.

**Danfoss** has announced the creation of five new global Employee Resource Groups (ERGs), alongside 10 new Regional Inclusion Councils, where employees can come together based on shared characteristics, life experiences or interests. The new Danfoss ERGs and Inclusion Councils reflect the company's ambition to take a leading position on diversity and inclusion.

*The Minneapolis St. Paul Business Journal* has named John Reutter, vice president, Finance, **Uponor North America**, as one of its 2022 CFO of the Year honorees. This annual award recognizes outstanding financial executives in the Twin Cities, and it is the first time Reutter has been named an honoree.

**Duravit North America** has appointed Courtney Forson as Vice President, eCommerce and Digital. After overseeing the brand's digital strategy in this market for the last three years, Courtney's promotion underscores the brand's continued focus on growth and performance across key digital channels.

**Herkowski Stickler & Associates**, a Milwaukee-based business that serves as a plumbing industry manufacturer's representative of leading brands for architects, engineers, wholesalers, and mechanical contractors announced it has been selected by **Bradford White Water Heaters** to represent the company's residential and commercial products in the greater Chicago, northern Illinois, and northwest Indiana markets.

During its general assembly on September 1st and 2nd in Munich, Germany, the **VDMA Valves Association** elected a new board. Axel Weidner, Mankenberg GmbH, was again elected chairman of the association. The new vice chairman is Oliver D. Gessert, KWC Aquarotter GmbH.

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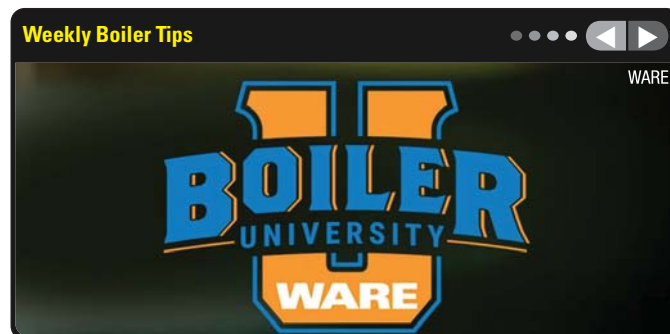
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## Top Stories

- UMC Announces Employee Promotions
- ASSE International Publishes New LEC for Legionella Reduction Devices
- US Green Building Council Celebrates the 2022 Class of LEED Fellows
- Dept. of Labor, Stakeholders Call on Employers, Workers to Combat Surge in Construction Worker Suicides

## Videos & Media Galleries



For the latest news on the federal and local response, code and regulation developments, opinions and best practices from industry experts and more, bookmark CONTRACTOR'S Coronavirus News Page: [www.contractormag.com/covid-19](http://www.contractormag.com/covid-19).

## How Much Do You Know About Water Conservation?

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## INDUSTRY PERSPECTIVES

- ▶ Want to know what is on the mind of Ed O'Connell, business coach and consultant?
- ▶ Want to know about how to get the flow rates right in hydronics from master trainer Steve Swanson?
- ▶ Want to know what the 14 characteristics are of a professional plumbing company? Matt Michel will tell you.

If so, our Industry Perspectives page is the place for you! Visit Industry Perspectives today at

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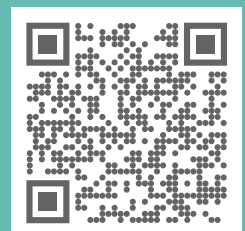
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# IAPMO Opens 93rd Annual Education and Business Conference

SPECIAL TO CONTRACTOR

CHARLOTTE, NC — The International Association of Plumbing and Mechanical Officials (IAPMO) on Monday, September 12th, opened its 93rd annual Education and Business Conference, the association's first in-person conference since 2019, at the Sheraton Charlotte Hotel.

## State of the Association

IAPMO CEO Dave Viola delivered the annual State of IAPMO report, and the keynote address was delivered by the International Water, Sanitation and Hygiene (IWSH) Foundation, updating IAPMO membership on recent initiatives in Lowndes County, Alabama, and the Navajo Nation to solve pressing issues affecting residents' access to clean drinking water and safe sanitation systems.

## Elections & Officers

**David Gans**, chief building official, Oceanside, California, was reelected president and **Steve Panelli**, chief plumbing inspector, city and county of San Francisco, was reelected vice president. **Rex Crawford**, retired chief plumbing inspector, Lincoln, Nebraska, will serve as secretary; **Rick Moreno**, Astro Mechanical Contractors president, will serve as director at large, contractor; **Steve Fernlund**, St. Paul, Minnesota, plumbing inspector, **Keith Bonenfant**, California Department of General Services plumbing and mechanical inspector, and **Allen Becker**, combination plans examiner III, Henderson, Nevada, will serve as district directors.

**Larry Batson**, business agent from UA Local 421 in Charleston, South Carolina, served as conference host and **Perry "Skip" Howard**, Local 421 retired



The Charlotte, NC skyline.



Shabbir Rawalpindiwala, Kohler Co. (retired) manager of Codes and Standards receives the President's Green Oval Award.



Tim Collings, retired senior building inspector, city of Salt Lake, receives the President's Green Oval Awards at the 93rd annual Education and Business Conference.

business manager, served as conference chair.

## Awards

During the conference's opening session, IAPMO honored numerous individuals with awards recognizing unique contributions and long-standing support from members and industry allies. The awards and their recipients include:

- **Legislator of the Year:** U.S. Rep. Norma Torres (D-Calif.) from California's 35th district
- **President's Green Oval:** Shabbir Rawalpindiwala, Kohler Co. (retired) manager of Codes and Standards; Tim Collings, retired senior building inspector, city of Salt Lake



Rex Crawford, retired chief plumbing inspector, city of Lincoln, NE.



Jaime Valdivia, retired Piping Industry Progress and Education Trust Fund (P.I.P.E) director.

- **Joseph Kneidinger Sustainability Professional of the Year:** Doug Bennett, conservation manager, Southern Nevada Water Authority
- **Bruce Pfeiffer Committee Member of the Year:** Rex Crawford, retired chief plumbing inspector, city of Lincoln, Nebraska
- **American Flag Award:** Jaime Valdivia, retired Piping Industry Progress and Education Trust Fund (P.I.P.E) director
- **Industry Person of the Year:** Ray Levangie, retired business manager, UA Local 398
- **Government Person of the Year:** John Nielsen, Plumbing and HVAC program manager, state of Idaho
- **George Kauffman Lifetime Achievement Award:** Dave Mann, retired business representative, UA Local 342

The association also introduced a new award, the IAPMO Fellow, to honor both longtime and more recent contributors of distinction. The inaugural class of inductees are: **Bob Adler, Jim Anderlik, Denver Boney, Ken Carlson, Tim Collings, Bob Courtner, Rex Crawford, Dan Daniels, Mike Durfee, Larry Facer, Pennie Feehan, Doug Frederickson, Tom Gugino, John Halliwill, Gary Hamilton, Sherry Hernandez, Gary Hile, Chuck Kirby, John Koeller, Bill Laub, Ray Levangie,**

➤ Turn to IAPMO, page 56



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# Myco Mechanical Stays Ahead of the Curve with Augmented Reality

■ SPECIAL TO CONTRACTOR

TELFORD, PA — Myco Mechanical is a progressive mechanical contractor that employs a hands-on philosophy both on the job and in the office. A stop at Myco's website will quickly reveal a core tenet of its business philosophy: "The Right People. The Right Results. Redefining Responsible."

By staffing every project with highly skilled managers, mechanics, and administrative professionals, both the firm and its clients can be assured that each project will be given the utmost attention. This philosophy, along with an expert staff, ensures a high quality of work, which contributes to the success of each project.

## On the Cutting Edge

As a mechanical contractor for commercial projects including schools, libraries and other government facilities, Myco Mechanical strives to be on the cutting edge of construction technology. Tim Libman, Virtual Design & Construction Manager at Myco Mechanical is always on the lookout for new technology to stay ahead of the curve. The company uses innovative solutions from Trimble including Trimble X7 3D Laser Scanners, Trimble Robotic Total Stations, and Trimble SysQue MEP design software.

Myco is always focused on providing employees and customers with the most innovative technology and services. Solutions like augmented reality help bridge the gap between virtual design and real-world construction, which promotes healthy collaboration as well as on-site safety. Libman wanted to integrate augmented reality technology into the company's day-to-day activities and when Trimble introduced its Trimble Connect AR augmented reality app earlier this year, Libman downloaded the app and started using it immediately.

## Leveraging Augmented Reality

With Trimble Connect AR, Myco Mechanical can leverage augmented reality, field-oriented construction



A Myco Mechanical technician verifies equipment placement using the Trimble AR system.

workflows and constructible 3D models from different sources to transform daily work such as assembly and inspections. It works alongside the



Myco using AR to image a future roof drain (brown) just left of a garage door (white).

visualize 3D BIM models in the real world to make complex situations, such as design reviews, issue resolution, and health and safety matters more intuitive and collaborative. To position the model quickly and easily

**With Trimble Connect AR the company can leverage augmented reality, field-oriented construction workflows and constructible 3D models to transform daily work such as assembly and inspections.**

Trimble Connect for Mobile app that integrates with Trimble Connect, a cloud-based collaboration platform that empowers collaboration among teams involved in the design, construction, and operation of buildings.

According to Libman, "Historically, when verifying install for pipe and duct work against the model, we would have the 2D drawing and the dimensions and would need to hold up the paper and take a measurement to compare. What amazes me about Trimble Connect AR is how easy it is to load in the 3D model and start interacting with it."

Myco Mechanical's project managers and superintendents now can

in the real world, a network of QR code markers is generated in Trimble Connect and can be placed around the job-site using either a Trimble Robotic Total Station or a manual method. Users can then accurately compare as-built construction to the digital design, which speeds up QA/QC inspections and enables immediate decision making by project stakeholders.

## Visualizing the Model

Myco Mechanical used the technology on a project with a local school that has a large mechanical room. They placed a few QR codes in the room to be able to verify equipment placement and pipe

location. Superintendents and project managers all have iPads in the field, so all they needed to do was download the app and begin using it. Instead of going from room to room with a drawing and verifying it, they can now upload the whole model and then determine what parts they want to see.

"The first time we rolled it out, we had a lot of success and the people in the field really liked it. It is much more engaging than looking at a 2D drawing, it makes it fun," said Libman.

Myco Mechanical is also using it for shafts where they have a lot of duct risers or pipe in compact spaces. These spaces get crowded very quickly so using this augmented reality helps them more easily conduct field reviews.

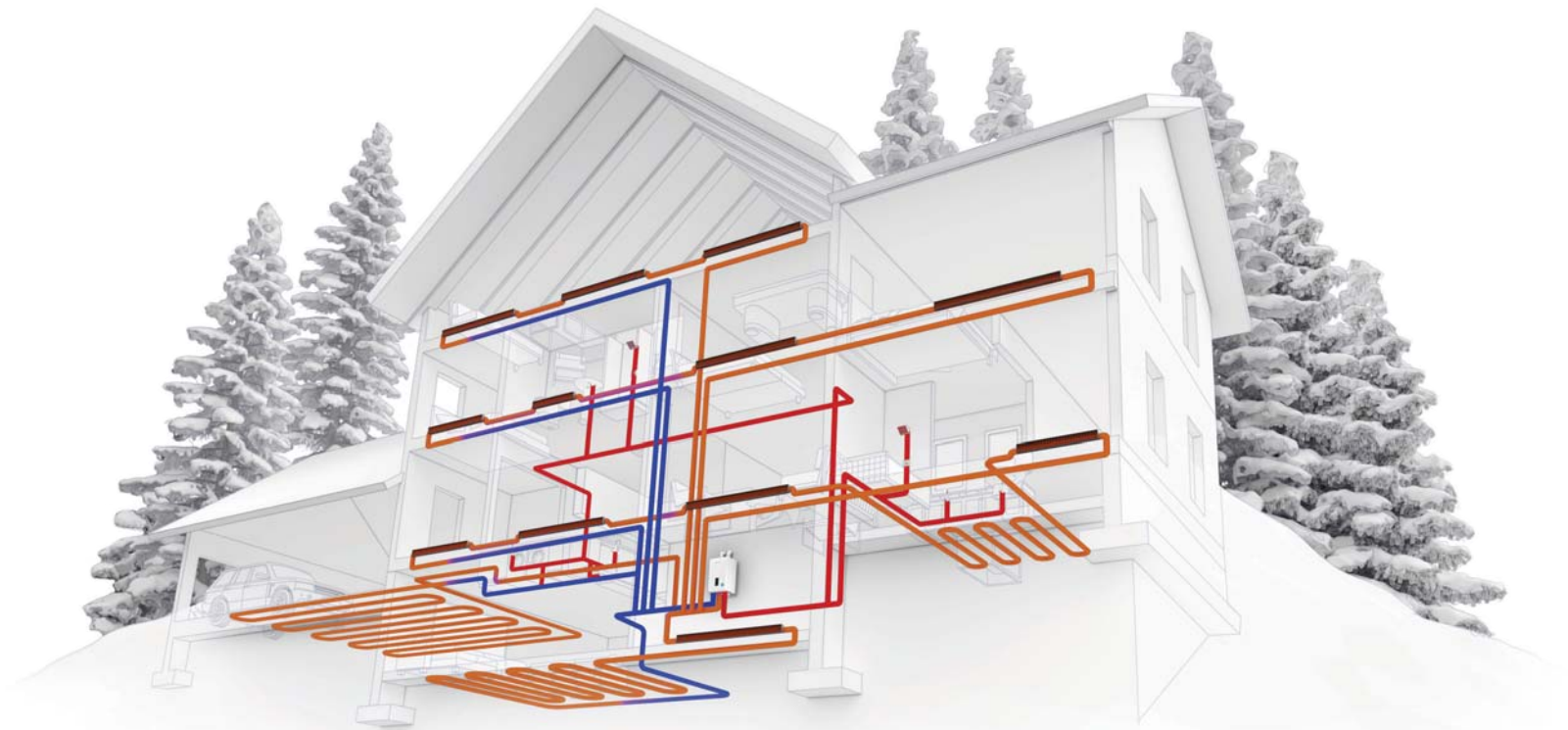
## Increased Efficiency and Accuracy

Overall, Libman has been very satisfied with his experience using augmented reality technology. It provides a quick visual of the model that makes sense to the person in the field. One of the main benefits that Myco Mechanical has experienced is the ability to review something before they get to the point of installation. This allows them to understand and visualize what they will be building and catch anything that doesn't line up with the model to avoid costly rework later in the process.

"The whole visual aspect is my favorite feature. If we are taking a measurement off the wall and the wall in the model happens to be two inches further away than it is in the field itself, we can quickly know something happened. Based on where the QR code is, we can tell where things went wrong and avoid going back and forth to determine why it happened," added Libman.

In the future, Libman wants to create an augmented reality station in the company's prefab shop where they prefabricate the pipe that gets sent to the field. Using Trimble Connect AR, they will be able to precisely bring the virtual models into the shop to verify their work in 3D. **C**

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# Herbert V. Kohler, Jr. Dies at 83

## ► Continued from page 1

together, and worked together. He was all in, all the time, leaving an indelible mark on how we live our lives today and carry on his legacy," said his family in a statement.

He was admired by many as an accomplished, dynamic leader and independent-minded entrepreneur. "If I sell you a bathtub, there has to be something about it that gives you pleasure not only at the time of the transaction. Years later, we want you to think this is one of the best buys of your life," Kohler once said in an interview. "The same applies with everything we provide—an engine, generator, toilet, table, hotel room, spa service, golf course, you name it. If you think about it five years later and, inwardly or outwardly, it makes you smile and we can do this consistently, then we're living up to our mission."

## Early Life

Herb Kohler—who preferred to use his first name but was so respected by Kohler Co. associates who addressed him as "HVK" or "Mr. Kohler"—was born in Chicago on February 20, 1939. His father Herbert V. Kohler, Sr., son of Kohler Co. founder John Michael Kohler, served as Board Chairman and CEO of Kohler Co. from 1940 until his death in 1968. His mother Ruth De Young Kohler was a historian and former women's editor of the Chicago Tribune.

Kohler was educated at the Kohler schools in Kohler, WI, and at Choate Rosemary Hall in Wallingford, CT. As a young man, he spent many summers as a laborer on the Kohler farms and in most of the manufacturing divisions of Kohler Co. After serving with the U.S. Army Reserve, studying at the University of Zurich in Switzerland, and launching a brief acting career at Knox College in Illinois, he completed his education at Yale University, graduating with a Bachelor of Science degree in industrial administration in 1965.

He rejoined Kohler Co. full-time as an R&D technician shortly after graduation. He became a Director of the company in 1967, and when his father died a year later, he became Vice President of Operations. He was named Executive Vice President in 1971, was



Herb Kohler at work in his office in the 1970s.

## Kohler Co. Executive Chairman transformed the plumbing products manufacturer founded by his grandfather into a global and diverse family of businesses.

elected Chairman of the Board and CEO in 1972, and President of the Company in 1974—at the age of 35. In 2015, he became the company's Executive Chairman, with son David taking the helm as President and CEO. He served Kohler Co. for 61 years.

## Creative Passion

In 1967 Herb Kohler initiated "THE BOLD LOOK OF KOHLER." More than a slogan, it was an effort to bring high-end design elements and higher quality craftsmanship to the American kitchen and bathroom, all supported by imaginative consumer advertising. Under Herb Kohler's watch, it went beyond a corporate promotion to become a new guiding spirit for the company and its associates.

During his 43-year span as CEO, he transformed his family-owned company into a world leader, with more than 40,000 associates and dozens of manufacturing facilities on six continents. The National Kitchen and

Bath Hall of Fame inducted him in its founding year of 1989, followed by the National Housing Hall of Fame in 1993. Ernst & Young named him National Entrepreneur of the Year in Manufacturing in 2002, and Junior Achievement inducted him into its U.S. Business Hall of Fame in 2006.

"We have the people, the products, the focus, the resources, and the passion to pursue our mission and compete successfully," Kohler once told associates.

During his tenure as CEO, Kohler kept to three primary guiding principles. One, live on the leading edge of design and technology of product and process. Two, have a single standard of quality above the norm with everything the company does. And three, invest 90 percent of Kohler Co.'s annual earnings back into the company.

Under his leadership the company invested in state-of-the-art manufacturing technologies, revitalized the company's tradition of product innovation,

and launched bold brand-awareness advertising campaigns geared toward consumers.

Always a hands-on executive who was full of ideas for improving products and processes, he involved himself in design decisions to a degree that was uncommon among CEOs. He thoroughly enjoyed the creative process—from reviewing 30-second television commercial storyboards to testing new products personally by soaking in a whirlpool bath or sampling a decadent piece of KOHLER chocolate. He designed many of the company's products himself and held more than 200 design and utility patents.


## Expansion and Diversification

Herb Kohler invested in new designs, products, manufacturing facilities, and distribution strategies. Realizing the opportunity to compete in the changing world marketplace, he gave the company and the KOHLER brand new global perspective and greater presence by adding production, distribution and marketing in Mexico, United Kingdom and Continental Europe, North Africa, India, Middle East, Latin America, Brazil, and the greater Asia Pacific region, including China, Thailand, South Korea, Australia, and New Zealand.

Kohler took the company into new businesses with more than 48 acquisitions over his tenure.

## Celebrating Herb's Legacy

The family plans to host a private service. At a date to be determined, Kohler Co. will host a tribute to Herb Kohler for associates, past and present.

Kohler Co. will soon establish a tribute website for those who wish to learn more about Herb Kohler's many contributions, his dynamic life, business impact and well-deserved accolades. Information regarding ways to honor his memory will be detailed on the website. 

*For much more on the extraordinary life of Herb Kohler, including his passion for and investment in the game of golf, and his company's and family's many charitable and civic contributions, visit [www.contractor.com](http://www.contractor.com) for our extended coverage.*

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# 'American Plumber Stories' to Get Third Season

► **Continued from page 3**

allows them to lead financially rewarding and fulfilling lives.

Over the past year, the docuseries built up a large following in the plumbing industry who passionately support the mission that Pfister Faucets, the creator of the docuseries, is pursuing. From plumbing businesses, plumbing product manufacturers to industry associations, many were inspired to join forces to turn *American Plumber Stories* into the movement it has become today.

**Power in Partnerships**

Leading plumbing tool manufacturer, RIDGID, has partnered with Pfister Faucets to distribute *American Plumber Stories* episodes on its high-reach social media platforms and helps promote the docuseries at its trade show booths across the country.

"It's always our goal at RIDGID to support and celebrate the work of skilled trade professionals whenever and however we can," said Becky Brotherton, Director of Marketing – RIDGID.

of the rewarding careers in the industry," said PHCC—National Association President Joel Long. "The real-life stories shared by the people spotlighted on the series—including several PHCC

in the episodes will also appear in a series of podcasts that aim to go into more depth of each of the inspiring stories in Season 3.

While Season 1 entertained with a look into the lives of ordinary plumbers with sometimes extraordinary lifestyles, Season 2 emphasized education in the trade and the opportunity this rewarding profession has to offer. Season 3 will highlight some of the most inspiring stories, told by plumbers whose lives were changed forever by the trade.

New episodes of *American Plumber Stories* can now be watched on [www.AmericanPlumberStories.com](http://www.AmericanPlumberStories.com).

Interested plumbers who would like to share their own story can do so here: <https://www.americanplumberstories.com/pages/i-am-an-american-plumber>. **C**

## Season 3 will highlight plumbers whose lives were changed forever by the trade.

The Plumbing-Heating-Cooling Contractors—National Association (PHCC), the premier trade organization for plumbing and HVAC professionals, has teamed up with *American Plumber Stories* and supports its message on a national level to its members, as well as in state and local chapters throughout the country.

"We are delighted to support this important initiative to raise awareness

members—are an inspiration not just for those considering a career in the trades, but for all of us who have chosen this path and never regretted it."

Mechanical Hub, the largest independent plumbing-focused online resource platform, is collaborating with Pfister Faucets to distribute *American Plumber* episodes through its media platforms to over 150,000 social media followers. Plumbers who are featured

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# NKBA Reports a Q2 Slowdown

BETHLEHEM, PA – The National Kitchen & Bath Association (NKBA) has released its Kitchen & Bath Market Index (KBMI) for Q2 of 2022. The quarterly report, which assesses the overall health of the kitchen and bath industry, indicates that the sector is seeing signs of a cooldown, with industry leaders anticipating decelerated growth through the rest of the year.

Key takeaways include:

**More Inventory:** Manufacturers say they are receiving inventory and products faster than in previous years.

**Better Value:** Kitchen and bath designers are value engineering projects for customers, choosing what is available now at affordable margins and price points. They are also reporting smaller backlogs in Q2 vs Q1.

**Future Challenges:** Current guidance from the industry suggests



flat or declining revenue growth in 2023, particularly in consumer-facing segments such as retail sales.

Statistics from the Q2 Kitchen & Bath Market Index show the following:

- Full year 2022 kitchen and bath sales are expected to increase by 9.4 percent, down from the 15.1 percent reported three months ago.
- Kitchen and bath sales grew 6.9 percent from Q2 2021, marking the second consecutive quarterly

deceleration in year-over-year sales growth.

- 59 percent of design firms and 82 percent of building and construction firms report either cancellations or postponements of projects.
- Although Q2 construction project completions rose 6.2 percent year-over-year, supply chain issues and inflation will remain a challenge for the rest of 2022.
- Softening demand for remodeling projects has contributed to a second successive quarter of easing in capacity constraints, with 36 percent of manufacturers reporting that inventories have increased.

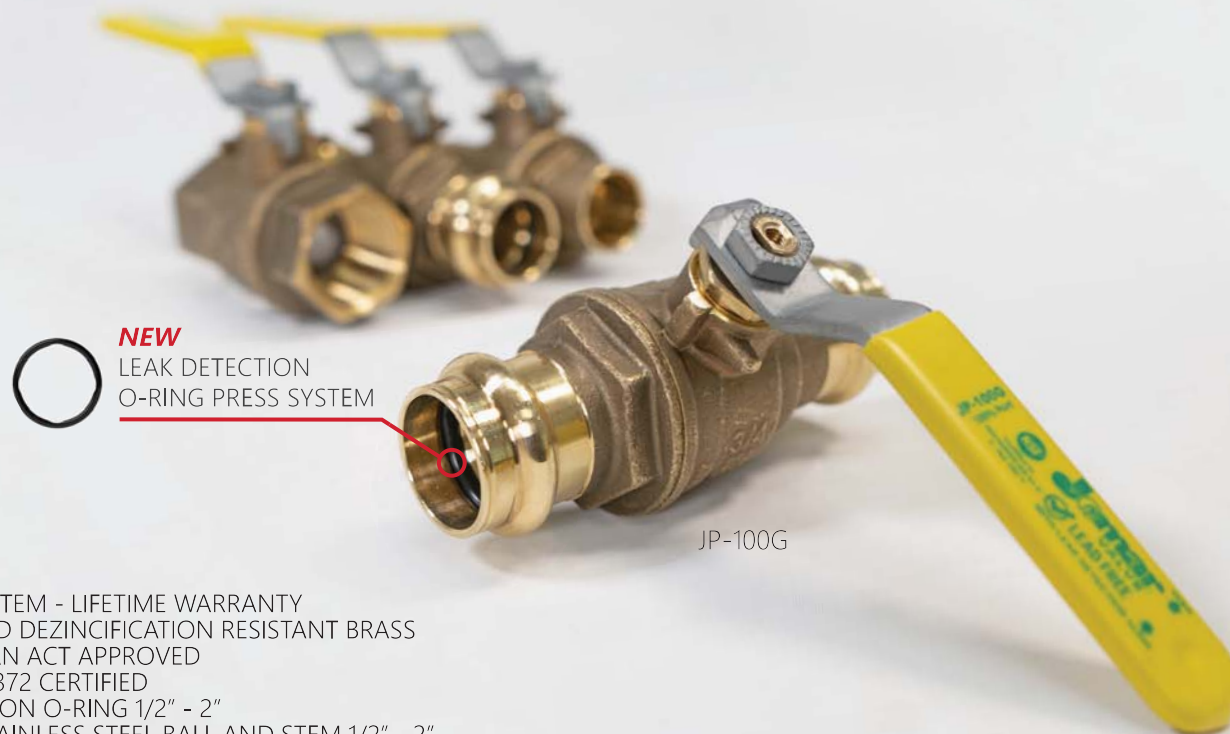
Kitchen and bath industry professionals say demand is steady but there are early signals the market is

cooling. As reported in the KBMI, ratings above 50 indicate industry growth, while ratings below 50 indicate slowing activity. The overall KBMI for Q2 was 70.4, the lowest it has been since Q4 2020. The report findings also rated future business conditions at 61.8 on a 100-point scale. This remains well above the midpoint, but down from 78.6 in Q1, demonstrating heightened concern about the year ahead.

“While it’s encouraging to see some initial signs of easing in supply chain and inventory concerns, it’s clear that macro-economic volatility is having some initial impact on demand,” said Bill Darcy, chief executive officer, NKBA.

To request the full report, contact Brittany Loeffler at [bloeffler@whitegood.com](mailto:bloeffler@whitegood.com).

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# Fifth Annual RIDGID Experience Trip Held

ELYRIA, OH — RIDGID®, a part of Emerson's professional tools portfolio, recently hosted their fifth annual RIDGID Experience trip, a VIP event that invites select members of the skilled trades to gather for fun, camaraderie and hands-on experiences. The event also serves as a "thank you" to the trades for the role they play in building and maintaining our country's infrastructure.

The contest, which draws entries from tradespeople across the country, concludes with RIDGID treating nine guests to a three-day, all-expenses-paid trip to RIDGID headquarters. The highlight of the visit is a factory tour that invites each guest to build their own iconic RIDGID customized pipe wrench.

Guests also received a sneak peek at the latest RIDGID tool innovations and provided their opinions on product that is currently in de-



Experience Trip winners at the end of the factory tour, each holding their customized wrenches.

velopment. Evening events included treating the guests to a preview of the company's 100 Year Anniversary celebration plans, set for 2023.

Guests also had the opportunity

to network with guests of Greenlee® Experience, a similar contest hosted by professional tools brand Greenlee®. The two concurrent events created a full-scale celebration of the electrical,

mechanical and plumbing trades.

"My favorite part was meeting the people behind the brand because that's what makes the brand," said Armando Ramos, a service plumber in Phoenix, Arizona. "Now that I think of RIDGID I think of family. Thanks for the opportunity!"

"I can't say enough about how amazing the past few days were. I'm so grateful to have had the opportunity to go to the RIDGID Experience 2022 and meet so many fantastic people, check out the headquarters and go on some pretty awesome outings," said Mary-Anne Bowcott, owner of Westcom Plumbing and Gas in Sooke, British Columbia.

Details on the 2023 RIDGID Experience Contest will be announced early next year.

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# Bathroom Remodel Disaster Narrowly Averted

► **Continued from page 1**

The waste and overflow on the outside of the tub vessel putting the existing waste pipe connection out of line with the end drain shower pan as was specified. With the waste pipe a few critical inches away from the shower pan drain it was left for the plumber to make the adaptation.

The architect's plan had been to cut an extended slot or hole in the concrete underneath the shower drain location and re-plumb the waste pipe below the floor. As it turned out, this plan quickly became impossible. As the contractor started to cut the floor, they found a steel rod was in the way. The concrete slab floor could not be cut because the tension rods that kept the floors stable ran crosswise to the cut. All work on the bathroom was halted immediately.

**Land-Ron**

Ryan Hilliard, Senior Project Leader for the General contractor Land-Ron of Orlando, Florida was on the job when the first cut was attempted. He immediately recognized that the plans they had been given for the work on the floor were wrong. There were important obstacles of concern in the concrete. As Hilliard put it, "Tension bars were running every which way in the concrete". This meant that making the cuts that were needed for the installation of all the showers in the building could seriously destabilize the building.

This was a nightmare scenario. The installation of 155 showers in 155 hotel rooms was stopped cold, stalling the work on all those bathrooms. Hilliard had the shower pans and all the pipe fittings on hand. His crews were on site and now, those crews were more or less idle.

It seemed that any quick resolution would require big changes to the approved plans, extraordinary expenses or both. Caught between a serious hazard and a costly construction delay, Hilliard needed the help of others in the company and he needed it immediately.

Fortunately for Hilliard, he works within a company that has a lot of expertise on board. Since it's founding in



Side view of shower pan showing the side discharge shower body with brass pipe attached.



Top view of shower pan showing drain cover installed- Cover palte is polished chrome but still has plastic protection sheet on it.

**A combination of experience, quick thinking and innovation manages to save more than \$22,000 in unforeseen expenses and get the job done on schedule.**

1993 by Ronald Karpiuk, Land-Ron has specialized in interior finishes for the hospitality industry. As Hilliard began to look for ways to push his project forward safely, his first move was to talk with one of his colleagues.

Eliud Garcia, Land-Ron's senior estimator, is a great internal resource for his knowledge of both the products and (most importantly) the people who can help solve problems. Teamwork, asking questions and sharing information are just as important as mechanical skills in situations like this. You need to know who you can rely on for timely and helpful information.

**Enter OS&B**

As soon as Hilliard informed Garcia about what was going on he went to work. A computer search led Garcia to the web site of the Canadian company OS&B where he found The Side Discharge Shower Drain, a low-profile drain body that looked as though it might be just t6her solution needed. Garcia found his local OS&B rep Anthony Blanda of GTS Sales who put

Garcia in touch with Greg Gillespie, OS&B's VP for the U.S. market, and things rapidly fell into place from there.

Because it actually combines what would usually be two fittings into one (a drain body with an integrated ninety degree elbow) it is so compact that the SD372 side discharge drain body was able to fit under the acrylic shower pan without altering the floor. The low-profile ninety degree outlet made the connection to the existing waste system easy. It was a seamless solution!

The icing on the cake was that, as Garcia made it clear that serious delays and expenses could start to pile up, Gillespie stepped in to help on the timing. From the time of the first call to him on Thursday, the first 30 pieces (exactly what was needed to keep construction on schedule) were released and shipped the next day—less than 24 hours later. That emergency order was delivered to the job site the next Monday, a turnaround of only two working days. The balance of the order for 155 pieces was shipped within the week.

**On Time, On Budget**

The bottom line benefit here was not just saving the job from delay with all the attendant labor and financial costs. Ryan Hilliard stated unequivocally that cutting the floors as had originally been planned would have been much more costly than running the pipes with the OS&B fitting. He estimates that not having to do the cutting the floors alone was a savings in excess of \$20,000.00.

Add to that, the roughly \$2500 that would have been spent for the floor x-rays that would have been required and its obvious that using the OS&B Side Discharge Shower Drain from the outset would have been much less expensive and better design. But its not just those costs that were saved! Teamwork, fast response and open-mindedness saved much more.

All in all, for this project, Hilliard's quick response in both stopping work and asking Garcia for his help was key. In addition, Garcia finding the right fitting through his personal connections with a responsive company saved much more than \$22,500 dollars—probably upwards of \$40,000—and helped bring the project in on time and on budget. **C**

*Jerry Gould is president of Gould Marketing Services. He is a widely respected independent manufacturer's representative in new England. He is also a seasoned writer. His work has appeared in many publications including House Beautiful, New England Monthly and Computer Sources.*



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# Sonnhalter Holds 13th Annual Tool Drive



Members of the combined Sonnhalter and Habitat for Humanity team.

CLEVELAND, OH — Sonnhalter, a communications firm marketing to the professional tradesman in the construction, industrial and MRO markets, partnered with Greater Cleveland Habitat for Humanity for a 13th year during its annual Sonnhalter Tool Drive, which ran the entire month of August and collected \$41,500 worth of

donations of tools and building materials. Since Sonnhalter began its efforts in 2010, it has collected \$378,000 in donations.

Organizations, businesses and residents were encouraged to donate new and gently used tools, as well as building materials, furniture and appliances, to Sonnhalter to help benefit Habitat for Humanity's cause of eliminating substandard housing and homelessness.

## Most Successful to Date

"Our 13th Annual Sonnhalter Tool Drive proved to be very lucky, as we raised \$41,500 for the Habitat for Humanity cause—the most we've raised to date," said Matt Sonnhalter, Vision Architect at Sonnhalter. "We continue to be inspired and humbled by the generosity of our clients, partners and

community members for their continued support in helping Sonnhalter raise nearly \$378,000 for this great cause."

"Every year, we look forward to the arrival of the donations that have resulted from the Sonnhalter Tool Drive," said John Habat, president/CEO of the Greater Cleveland Habitat for Humanity. "Sonnhalter's Tool Drive helps to bring awareness to areas we have no access to and provides us tools to work on our houses, in our tool shop, and to be sold to the general public."

## Industry and Community

Community participants in the 13th Annual Sonnhalter Tool Drive included Berea Recreation Center, Cuyahoga County Public Library, Berea Branch, Fear's Confections, Frangos Group, Rising Star Coffee Roasters, St. Mary of the Falls, Skidmark Garage, The Wine

Spot and many individuals living in the community.

Trade industry participants in the 13th Annual Sonnhalter Tool Drive included Buyers Products, Bill Boyadjis (Endeavor Business Media), General Pipe Cleaners, Jergens, Inc., Kapro, Lakeside Supply, Ledlenser USA, Mortar Net Solutions, NIBCO, Samsel Supply, Sutton Industrial, Winter Equipment, Wolff Bros. Supply, Woodhill Supply and Wright.

All of the donations that Sonnhalter collected benefited Greater Cleveland Habitat for Humanity. The donated items will be used for Habitat for Humanity projects or will be sold at one of the organization's ReStores, recycled building materials and home furnishings stores. Proceeds from the ReStore sales are used to help Habitat build and rehabilitate homes for those in need. **C**



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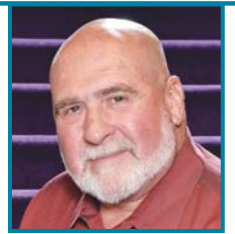
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by Al Schwartz  
PLUMBING CONTRACTOR



# Adding Value

Service shops in our industry are facing stiffer and stiffer competition. As the current state of the economy bangs you around, it seems like every third Wednesday some new shop pops up in your area cutting into your customer base and making your business work just that much harder to maintain, let alone expand. Many of these new businesses don't last very long, but while they are operating, they soak up a little of your customer base. Even if it's only one or two potential new customers that get scooped up by the new guys, that's one or two less for your business.

## Who You Are

The one thing your shop has that the new guys don't is name recognition, or at least we hope so. The other is word of mouth from your existing customers. If you have developed your business well, you have those certain customers who, when they have a problem, simply call *you*. They don't shop, they don't ask for referrals from neighbors, they just call you. If one of their friends or neighbors needs a plumber or HVAC contractor, they refer *you*. Those are the customers who can make being in our business worthwhile.

It's a simple equation, really. The customer was in need of service, they called you, you came—on time, well presented—did a good, or excellent, job with the repair and charged them a reasonable fee. Or maybe, as often happens, the problem was so easy to fix (tighten a packing nut or some other innocuous repair) that you didn't even charge them. Maybe it was because you were already in the area, or maybe it was because you were feeling magnanimous. In either case, that simple act of good will got you a customer for as long as you wanted them.

## Standing Out in the Crowd

In this column, I often comment on the internet and how business, or being in business, has changed. The ease with which people can now shop for *everything* is amazing. I'm not telling you anything that you don't already know. Trying to get the attention of



**If you have developed your business well, you have those certain customers who, when they have a problem, simply call you.**

prospective customers via the web can be an exercise in futility if you don't approach it in the right way. Your shop needs to stand out from the crowd. If not in a big way then in a special way.

One way you can do that is to offer something that few, if any, of your competitors does. I'm not talking about coupons or two-for-one specials, or anything like that. I'm talking about offering added *value* to your customers. A value perceived is a value achieved in the minds of most people.

## The Biggest Asset

What is the biggest asset most, if not all, of your customers have? The answer is, their home. Many people do not look at their homes that way, which is where changing their perspective comes in. In fact, most people do not look at their biggest asset as anything more than the place they live.

Changing peoples' perspective on this critical topic can make all the

difference between a sale, upgrade, addition and/or remodel. In the coming months, we will be experiencing a slowdown/recession. That's just the facts as they are presently seen. How we approach our businesses and customers during this time will be critical for growth moving forward.

During these trying economic times, homeowners will be more vulnerable to being coached on the value of their biggest asset than usual. While renters do not figure into this equation (primarily because they have "no dog in the fight") the owners of the rental properties certainly do. In fact, owners of rental properties have a bigger stake in seeing their property values maintained or increased. Balancing that value between passive income and passive investment is a conversation worth having with them.

## Perspective is the Key

By changing your customers' perspective on their biggest asset, you can

increase rather than decrease your visibility to them. By making the argument that, even though we are experiencing tough economic times right now, there will be a rebound down the road and any investment that they make now will be just that much more valuable then. Or, since they are living in their asset, making it more modern and comfortable while weathering the economy makes more sense. The arguments are many and varied... you choose.

Of course, every situation is different, and you will have to be the best judge of when, or even if, to bring something up. Let's face it, if your customer has just been downsized and is trying to make ends meet, common sense dictates that you don't want to tell him he needs to remodel his bath or kitchen.

Remember, your customer has come to rely on your professional opinions. This is a powerful position to be in if you handle it correctly. Bringing added value to your customer can come in many forms and not all are tangible. Keeping this in mind will make you more in tune with how, and what, your customer is thinking and feeling when you are in their home... their biggest single asset!

Reminding your customer, gently, that their home is an asset as well as their home can change the texture of your conversation and allow you to bring that added value to bear. It's an easier way to get your point across and might make them consider you their personal expert. If you can get the customer thinking in the direction you would like them to go, you've got half the battle won. **G**

*The Brooklyn, N.Y.-born author is a retired third generation master plumber. He founded Sunflower Plumbing & Heating in Shirley, N.Y., in 1975 and A Professional Commercial Plumbing Inc. in Phoenix in 1980. He holds residential, commercial, industrial and solar plumbing licenses and is certified in welding, clean rooms, polypropylene gas fusion and medical gas piping. He can be reached at allen@proquilldriver.com.*

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by **Trey Cutler**  
 BUSINESS DEVELOPMENT REPRESENTATIVE, NIAGARA



# A Plumber's Impact on Water Savings

*"When the well's dry, we know the worth of water."*  
 – Benjamin Franklin

If you read the news, it's probably no surprise to you to hear that we are in a water crisis. Just by looking at these screenshots from the US Drought Monitor, comparing the last 10 years and the progression of drought, it's plain to see that we have a huge problem on our hands. But how much impact can just one person have?

According to the EPA, the average American uses around **88 gallons** per day per person, or **10,500 gallons** a month for a family of four. That's enough water to fill up a common-sized pool every month.

Obviously, usage and cost vary a great deal across the country—you're likely to use more water in dryer climates like Arizona and use less in places where it typically rains more like in Seattle. But with fresh water



**On Aug. 16, 2022, the federal government declared a tier two water reduction on the Colorado River. This will limit the amount of water Southern Nevada will be allowed to withdraw from Lake Mead beginning in January 2023.**

per minute (GPM), and showerheads could not supply more than 2.5 GPM. Before that toilets used as much as 7 GPF, and even now the average flush can be upwards of 3 GPF. The current

watering can only cut back so far—so where else should homeowners look to save money on their water bills and stay up to code?

The answer: toilets.

of water can be saved annually, and there have even been cases where it can cut water usage by over 55% even in older buildings.

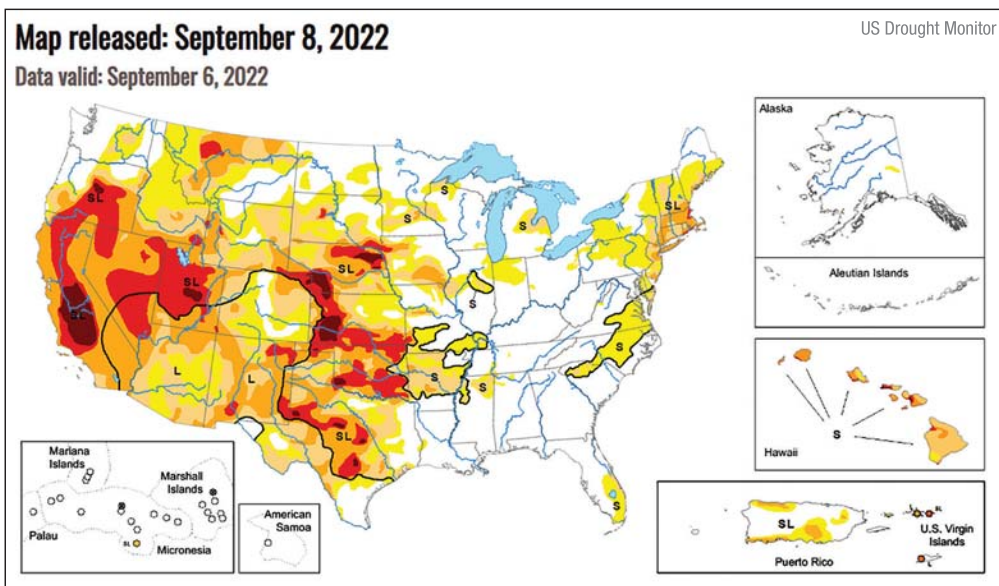
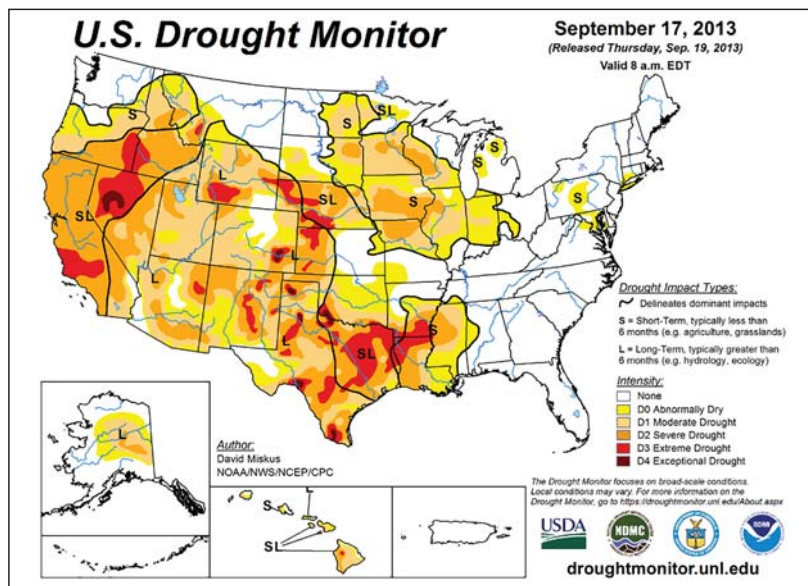
As professionals in the plumbing industry, it is our job to fully educate our clients—and anyone who will listen, really—about common toilet leaks as well as how to choose the best model to replace any non-fixable toilets.

There are three common places to look for a leak:

1. The flapper
2. The supply line
3. The fill valve

All three of these leaky spots are usually avoidable depending on the materials the product manufacturer uses. For example, if the manufacturer uses plastic fill valves, like FluidMaster's models, they're less likely to wear down over time or rust and crack.

However, if the model you keep on your truck is a flapper-style toilet,



becoming less and less available it's important to reduce clean water use as much as possible and most states have already ratified laws to ensure that water-saving products are being installed over their more wasteful counterparts.

For example, per the Energy Policy Act (EPA) enacted in 1994, new toilets manufactured in the U.S. could not exceed 1.6 gallons per flush (GPF), faucets could not exceed 2.5 gallons

baseline for an efficient toilet is considered to be 1.28 GPF, however, some toilets flush even more efficiently than this baseline.

Additionally, southwestern state governments (Arizona, Nevada, Utah, etc.) are looking to cut their water usage by a full 25% after the most recent reports on Lake Mead and the Colorado River have shown the protracted drought in the region has reached a new point of crisis. Reducing lawn

## Looking at Leaks

Not everyone can switch to a gray water system and surprisingly the common commode is responsible for over 30% of indoor water usage, and at least 13% of all leaks. A leaky toilet can be responsible for huge amounts of water waste, mainly because it can go undetected since it is usually categorized as a "silent leak." It's been proven that if a household switches to high-efficiency models, over 4,400 gallons

you're more than likely going to have to deal with callbacks since flappers don't always seal to the flush valve and tend to be the most common thing in a toilet that needs replacing. Flapper toilets are the most common residential option on the market, but in the last ten years, vacuum-assist toilets have been gaining more popularity and have been proven to rid plumbers of time-wasting callbacks.

➤ **Turn to Plumber, page 60**

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# And It's Great to Be Back

**The in-person ASPE Convention & Expo was abuzz with positivity.**

**Special to CONTRACTOR**





Expo attendees out on the show floor.

INDIANAPOLIS, IN — It had been nearly four years since the American Society of Plumbing Engineers (ASPE) Convention and Expo convened in person. And, it was great to be back. While the numbers weren't out just yet, "the 2022 ASPE Convention & Expo in Indianapolis was one of the best shows in ASPE's history—one of, if not the best attended from a numbers' standpoint, and the interactions between exhibitors and attendees were outstanding from all accounts," said Billy Smith, FASPE, Executive Director/CEO, ASPE.

"The overall feedback from our members, other attendees and our exhibitors has been extremely positive, and we couldn't have asked for much more. Additionally, all of our social media platforms have provided glowing remarks, which is always a plus," continued Smith.

After holding the 2021 Tech Symposium in San Diego, in person, ASPE officials saw the excitement of those in attendance. With that, officials wanted to make sure the Indy show was on point with all segments—education, networking, social events, and especially the Expo. "There is only so much you can do and gain from the continuous barrage of virtual meetings. There comes a point when you just hit a wall. Being able to provide this event in person was a way to knock down those walls and remove all boundaries that the pandemic had placed on our industry," said Smith.

### Kick-Off Celebration

The biennial convention customarily kicks off with a celebration for its members. This year, the Sunday night party, presented by NIBCO Inc., was special for all who attended. "The ASPE Sunday night kickoff party felt like a reunion in the best sense," said Aaron Kilburg, Commercial Sales Manager, NIBCO, Inc. "It was wonderful to reconnect with industry friends and colleagues in a marvelous venue, dining on delicious food and enjoying amazing live entertainment. It was a privilege for NIBCO, Inc. to host the evening's festivities."

According to Smith, the Sunday night party set the bar really high for the next Convention & Expo in Columbus, Ohio. "In fact, a member of the Columbus Convention Bureau was on hand to witness the party up close, so they are already looking for ways to take a step up in 2024," said Smith.



Attendees at the Nibco Opening Party. From L to R: Brian Henry, ASPE, Billy Smith, ASPE, Aaron Kilburg, NIBCO, Inc.

### Keynote

The keynote featured Chris Stricklin, a former Air Force fighter pilot and member of the thunderbirds air show team. Stricklin told the story of his Air Force career and then later Joining the Thunderbirds at a young age.

During an air show at Mountain Home Air Force Base in Idaho, Chris was flying Thunderbird Six, a solo demonstration aircraft. At the beginning of the show, Stricklin was forced to perform an emergency ejection while performing a Split S maneuver, which he had performed successfully more than



Time on the show floor means not just learning about the latest products, but networking with colleagues.

200 times before. Chris banked the F-16 so it was heading away from the crowd of spectators and ejected when he was just 140 feet above the ground. The \$20 million fighter jet impacted the surface 0.8 seconds later and was completely destroyed, and Chris's life was forever changed.

"The tragic air show crash and his story of recovery and family culminated into a great and emotional story that brought feelings of anxiety, empathy, sorrow and patriotism," said Ron George, CPD, President, Plumb-Tech Design & Consulting Services, LLC, and 43-year ASPE member.

After the multi-year, in-person hiatus from the brick-and-mortar expo, and virtual meetings, George was looking forward to seeing new product enhancements, networking with industry friends, receiving CEU credits and attending the educational programs.

### Technical Sessions

"ASPE is the only Convention & Expo just for plumbing engineers. Attendees can choose from 30 educa-



The copper-colored Nibco racecar has become a familiar site at recent industry events.

tion/technical sessions, which helps them maintain their credentials, and the varied topics we offer connect seamlessly with their daily jobs," said Billy Smith.

Technical sessions dealt with legionella, hot water controls, carbon monoxide and plastic flue pipes, and catastrophes that can occur in plumbing systems from floods, hurricanes, chemical spills and other environmental disasters, among other topics.

"My favorite technical presentation was by Matt Freije, President, HC Information Resources Inc. Freije gave an excellent presentation on legionella and Legionnaires Disease, and how legionella can be controlled by facility owners establishing a water management team—then doing a proper assessment of the building water piping system to locate areas in the system that could be conducive to bacteria growth as part of an overall water management program," said George.

### On the Show Floor

How good was the Expo floor? "Well, one exhibitor said that on Day 1, they never looked down to see what time it was until we made the announcement that the floor would close in 10 minutes. That is impressive," said Smith.

Exhibitors were pleased with the show and attendance and it gave them a chance to show off products on the floor. "It's great to be back into this post-COVID trade show in Indianapolis, where we showed off our new tankless models with built-in circulation," said Brian Fenske, Director of Commercial Business, Navien.

Remember, the ASPE show is also a place where you can meet friends and other plumbing engineers who deal with similar projects. Having the opportunity to speak with all of the industry manufacturers, see the new and innovative products, and discuss your respective needs within the specification

market—at one location—may be the most important component of the ASPE Convention & Expo. "No other industry show has all of this in one spot: networking, social events, educational classes, and the best exhibit floor just for the plumbing engineering industry," said Smith.

### Looking Forward

Considering how well the 2022 Convention & Expo was, ASPE officials are already planning for a great event for 2024 in Columbus. At each ASPE show, exhibitors pre-sign for the next event, and it looks like a record number of pre-show booths have signed on for 2024. "An important component of Columbus is that all of the hotels are close and connect to the Convention Center just like in Indy. Columbus also has an exciting downtown area with lots of new restaurants and shopping, all in walking distance from the hotels. We are very excited about what Columbus will offer in 2024," said Smith. **C**

## Board of Directors

During the 2022 ASPE Business Meeting in Indianapolis on Sept. 18, Chapter Delegates representing society's 6,500+ members elected their new Board of Directors for the 2022–2024 term. They are:

- **President: James T. Zebrowski**, PE, CPD, FASPE
- **Vice President, Technical: W. Blair Minyard**, PE, CPD, CDT
- **Vice President, Education: Bryan L. Hutton**, CPD, MBA
- **Vice President, Legislative: Brienne N. Hall**, PE, CPD, LEED AP BD+C, GGP
- **Vice President, Membership: Jason S.A. McDonald**, CPD, FASPE
- **Vice President, Affiliate: Thomas P. Sharp**
- **Treasurer: Vincent Falkowski**, PE, PMP, CCM
- **Region 1 Director: Paul Freeman**, PE, CPD
- **Region 2 Director: Steve J. Kormanik**, CPD, GPD
- **Region 3 Director: Curtis A. Ray Jr.**, CPD, FASPE
- **Region 4 Director: Gwynne M. Morrison**, CPD, GPD, LEED AP
- **Region 5 Director: Nicholas Hipp**, CPD



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by Patrick Linhardt  
HYDRONICS MANAGER AT CORKEN STEEL PRODUCTS CO.



## Air Eliminator for Steam

**W**hether you have a hot water system or a steam system, you want to get rid of the air. In a hot water system, if enough air accumulates in one place in the system, it can stop water circulation. It could be the piping, radiation, pump, etc. It is an annoying problem when it happens, so the modern way to control it is with an in-line air eliminator on the supply pipe leaving the boiler, with the expansion tank connected to the bottom, and the circulator(s) “pumping away” from the expansion tank connection.

If you have any questions on that, my column, “Location, Location, Location,” for the April 2020 issue explains the importance of the pump to expansion tank location in further detail. You don’t have to retrofit every job, but you want to “pump away” whenever you do a replacement. It keeps you out of trouble and the customer has a nice quiet and comfortable home.

### Not a Bucket Trap

The photo was sent to me as a text, with the question, “can this bucket trap be replaced by a 17C?” Granted, it looks something like a bucket trap, but it’s not. In fact, the name is cast in the body. They used to do stuff like that back in the day, the glory days of steam. You can’t make out the whole thing, but it says Dunham Air Eliminator. Dunham was a major player in the early days of steam. You might recognize the name from Dunham-Bush, after the merger.

Air is also a problem in steam systems. Air and steam are both gases, but they don’t mix. Where one is, the other can’t be. With that in mind, Dunham came up with a way to get rid of the air in a two pipe steam system. This was in the days of the hand-fired coal systems. As the steam started to circulate into the piping, it pushed the air out of the way, further down the pipe.

The Dunham Air Eliminator was located in the boiler room, at the end of the piping. It had a great big hole for the air to be pushed out of. They knew that



A Dunham Air Eliminator, an artifact from the early days of steam heat.

**Air is a problem in steam systems. Air and steam are both gases, but they don’t mix. Where one is, the other can’t be.**

the quicker you get the air out of the system, the quicker and more evenly the steam moved through the system. That big hole, on this example, is where somebody screwed on a Hoffman #75 main air vent, which has a tiny hole for the air to be pushed out.

### Don’t Block the Air Vent

When he first texted the photo, I immediately recognized it because I see this all the time. Whether it is a Dunham or a Trane or a Wester or a Hoffman, somebody puts that main air vent on the big hole. They all have it, and it is not supposed to be blocked by the addition of

a main air vent, because it is *already* the main air vent.

To give you an idea of how small the hole in the #75 main vent is, I had someone smarter than me calculate the difference. According to his calculations, using the actual size provided by Hoffman, it would take 64 of the #75 main vents to equal that ¾” hole in the Dunham vent. That is a huge difference and not much of a “main” vent.

For the system shown in the photo, all of the air has to pass through the tiny hole in the #75 main vent. There is a lot of air in the piping and radiation of a two pipe steam system. Typically, all the air in the steam mains pass through a radiator style steam trap, like a #17C, to the dry return, the portion of the return piping that is above the waterline. The hole in the #17C, or

other brand radiator trap, is plenty big enough.

Once in the dry return, the air moves to the generously sized open air vent on the Air Eliminator, or in this case to the tiny hole in the single #75 main air vent. This is also the hole that all the air in the radiators has to pass through. This air is also using the dry return to find its way out of the system, so the steam can take its place and heat the building.

### Suffering in Silence


The reason that someone installs the vent on top of the vent is usually the

same. The radiator traps on a few radiators start failing to close off at the presence of steam. This allows the steam to enter the dry return, go through the giant hole in the Air Eliminator, and show up in the ceiling of the boiler room. The Air Eliminator does not have a thermostatic element inside to shut off to the presence of steam.

The #75 main air vent does have a thermostatic element. When installed on the Air Eliminator, it keeps the steam from escaping, but vents very little air. Not to mention the fact that the traps need to be repaired or replaced. The whole system is suffering in silence—but there isn’t any steam coming out, so that someone packs up his tools and goes to the next job.

My response to the text was a shortened version of this column. First I told him that it wasn’t a trap and then I told him to take off the #75 and fix the traps. With all the traps working to keep the steam out of the dry return, the air passes freely out of the system to allow the steam to follow quickly to provide even heat.

The Air Eliminator does have a float inside to prevent the water from the system to push out if the steam pressure gets too high. I will discuss that issue in an upcoming column about the ever changing water level in the return piping of a steam system.

In the United Kingdom they celebrate a holiday that we could copy. It is “Boiler Switch on Awareness Day,” the Monday of 3rd full week of October. This year it is October 17th. If you have a newsletter or customer contact email list, urge your customers to prepare for the upcoming heating season like our British friends. God save the King! 




*Patrick Linhardt is a thirty-seven-year veteran of the wholesale side of the hydronic industry who has been designing and troubleshooting steam and hot water heating systems, pumps and controls on an almost daily basis. An educator and author, he is currently Hydronic Manager at the Corken Steel Products Co.*




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Caleffi 548 Series Separator (Shown Mounted)





## Steps to Safety: Restarting Boilers After Summer Shutdown

BY ROBERT FERRELL, STAFF ENGINEER, NBBI

It's that time of year when heating boilers should be prepared for the heating season.

Before moving the boiler power switch to the 'ON' position, *survey the scene*. I've taken that command from my first aid training. It means, "Before rushing in to help a victim, ensure you're not the second victim." Survey for potential hazards created by an improperly operating boiler or improperly stored material in the boiler room.

Your survey should ask the following questions: "What is the condition of the boiler system," and "Has any work been performed on or near the boiler during the summer shutdown?"

If work has been done on or near the boiler, perform a system inspection



© Dmitry Kalinovsky | Dreamstime.com



© Alexxey | Dreamstime.com

**Don't just start up the system and walk away—be sure to verify the shut-down cycle as well. After restart, monitor throughout the day.**

tracing fuel lines, feed lines, steam and blow off piping, stack, and regulator vent lines. Check controls and control panels for evidence of damage and changes or loose connections. Inspect

mechanical assemblies such as burner linkage and safety valve springs for paint, dirt, and rust accumulation which wouldn't allow easy movement. Check all ventilation and combustion air

openings are clean and free from debris.

Review the Manufacturer's Operation, Maintenance, and Instruction Manual for operation instructions. Become familiar with the timing sequence

of the automatic controls. Then do a start-up check:


- Verify water level in the boiler, and test the low water fuel cutoff;
- Verify the fuel train valve position;
- Clean the flame scanner;
- Verify peep sights on the burner and boiler are clean;
- For steam boilers, verify operation of the feed/condensate system;
- For water boilers, verify there is air in the expansion tank and make up water is available;
- Verify electrical power is available to both the blower (power burners and induced draft) and control circuit.

Start the boiler by moving the power switch to ON. Reset all manual reset switches, low-water fuel cutoff (LWFC), fuel pressure switches, and pressure or temperature limits switches. Observe the start-up sequence. It may be necessary to isolate the boiler from the system to warm it up slowly.

Verify the flame conditions in the combustion chamber.

On gas fired non-condensing boilers, a cold start may produce condensate leaking from the gas pass covers and casing. Once the boiler water temperature exceeds 150° F, the condensate should stop.

Once the unit has warmed, turn power switch to 'OFF'. Verify the shut down cycle. Then restart. Let it come up to full firing rate and open isolation/stop valves to put it into the system. Monitor it throughout the day, looking at the flame, stack outlet, controls, and linkage. Verify gasket tightness for both water side and fire side.

If any abnormal condition occurs during start-up, turn the power switch to 'OFF'. Investigate cause before restarting the boiler. 

*Based in Columbus OH, Robert Ferrell has more than 35 years of industry experience and a degree in mechanical engineering technology. He joined NBBI in 1999, where he serves as a senior staff engineer in its training department.*

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## Navien Now Doing Business in Canada as Navien Canada, Inc.

VAUGHAN, ONT — Navien, a leader in condensing technology, has officially incorporated their business in the country of Canada under the name Navien Canada, Inc. Navien business in the United States, Canada and Mexico had been operating as Navien, Inc. since 2006. Now, the American territories will be split among the three separate corporations, with the United States still operating as Navien, Inc. and Mexico operating as Navien Mexico, S.A. de C. V.

**The American territories will be split among the three separate corporations.**

“Our business in Canada has grown exponentially over the previous 16 years, making Navien the number one selling manufacturer of tankless water heaters and wall-hung boilers in the country,” said Scott Lee, CEO of



Left to Right - Adam Wills - Ryan Shin - Scott Lee and Eric Moffroid Officially Open the New Navien Canada Distribution Centre with a Ceremonial Ribbon Cutting.

Navien Canada, Inc. “By incorporating our business in Canada as Navien Canada, Inc., Navien is demonstrating

its commitment to providing nimble, personal and more localized services.” Navien commemorated the official

announcement of Navien Canada, Inc. on August 29 in Surrey, BC with the grand opening of their first Canada distribution centre and the launch of a new website dedicated to Canada, *navieninc.ca*. Several Navien distributors, contractors and sales representative partners attended the grand opening, along with key executive members of Navien, including Canada National Sales Manager, Adam Wills.

“Even though our supply chain capabilities have far exceeded industry averages over the last two years, we knew more was needed as customer expectations continue to evolve,” said Wills. “That is why this facility, the new Navien Canada distribution centre, has come online. Now we can offer industry leading products, accessories, and parts locally in Canada. For our partners, this means faster deliveries, greater product accessibility, dedicated inventories of add-on components, and improved profitability.”

For more information about Navien Canada, Inc. and their products, visit [navieninc.ca](https://navieninc.ca).

## Bradford White to Serve as Strategic Partner with PHCCCONNECT2022

AMBLER, PA — Bradford White Corporation, an industry-leading manufacturer of water heaters, boilers and storage tanks, will serve as strategic partner for PHCCCONNECT2022, the premier annual conference for plumbing, heating and cooling professionals, in Charlotte, N.C., in October.

PHCCCONNECT2022, scheduled for Oct. 5-7 at the Charlotte Convention Center, is hosted by the Plumbing-Heating-Cooling Contractors—National Association (PHCC).

During the event, Bradford White Water Heaters will introduce innovative new high-efficiency technology at its exhibition booth. In addition, Bradford White representatives, including Bradford White Corp. President and

CEO Bruce Carnevale, will share industry and company insights at multiple scheduled presentations throughout the conference.

“Bradford White and PHCC share a commitment to the professionals who make up the foundation of our industry, and we’re honored to support this important event,” said Carl Pinto, Jr., senior director of marketing communications for Bradford White.

- Representatives from Bradford White will be available during the event’s Product and Technology Showcase in Booth 700 to provide information about Bradford White’s full line of products, including the new Infiniti® Tankless GR and the AeroTherm® Series

Heat Pump Water Heater.

- Carnevale will deliver a State of the Industry report at the opening breakfast on Thursday, Oct. 6, at 8 a.m.
- Carnevale will participate in a keynote panel discussion about challenges facing the industry on Friday, Oct. 7, from 11 a.m. to 12:15 p.m.
- Tom Kelly, Bradford White’s technical sales manager for specialty products, will lead a seminar on tankless water heaters on Wednesday, Oct. 5, at 9 a.m. in room E217.

For more information about Bradford White Water Heaters, visit <https://www.bradfordwhite.com>.

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## Intellihot Rolls Out Mobile Training Vehicle

CHICAGO, IL — Intellihot, a designer/manufacturer of built-environment systems is bringing its popular training program to contractors, reps and distributors across the U.S. starting this Fall with the introduction of its first mobile training vehicle.

The custom outfitted MT55 Freightliner is the first mobile training vehicle in the US market with a functioning commercial tankless water heater plus six other units that can be completely disassembled for in-depth, hands-on training. The ability to disassemble a unit in training is critical for teaching troubleshooting, component replacement and more. Models on board include iQ251s, iN199s, iN401s and an iQ1001 (which is for display only).



Exterior and interior views of the new Intellihot training vehicle.

The first phase of Intellihot's mobile training tour will begin in the Fall of 2022 with stops in the Midwest, South and Western US. The second phase begins in the Spring of 2023 with stops throughout the Northeast. A more detailed schedule will soon be posted on the Intellihot website. Contact your Intellihot regional manager for mobile or in-classroom training opportunities.

**New vehicle is the first in the US featuring a live-fire commercial tankless water heater plus other Intellihot units that can be disassembled for in-depth, hands-on training.**

The vehicle, operated by a two-person team including a trainer and full-time driver, augments and mirrors Intellihot's popular classroom-based training classes, which are conducted weekly at the company's Vernon Hills, IL, headquarters. Post-training feedback at the Vernon Hills facility shows most graduates found the training to be extremely or very helpful and would strongly recommend the training to a colleague.

"By bringing our proven training program to contractors and reps we're helping them keep their key people close to their customers and making them more productive," said Intellihot CEO Sri Deivasigamani. "Plus, by reducing trainee air travel to Chicago, we're together reducing our impact on the environment."

Contractors who want to become an IntelliPRO—a certified Intellihot contractor—can find more information at <https://intellihot.com/intellihot-contractor/>.

## ROP Toward Development of 2024 USHGC, USPSHTC Available for Online Download

ONTARIO, CA — The International Association of Plumbing and Mechanical Officials (IAPMO®), developer of the *Uniform Solar, Hydronics and Geothermal Code (USHGC®)* and *Uniform Swimming Pool, Spa and Hot Tub Code (USPSHTC®)*, has posted online the 2022 Report on Proposals for the 2024 editions of these prospective American National Standard-designated model codes.

No hardcopy editions of these publications will be printed or distributed. Interested parties are encouraged to download the documents at the following URLs:

**USHGC:** <https://codes.iapmo.org/docs/2024/USHGC/2022%20USHGC%20Report%20on%20Proposals.pdf>

**USPSHTC:** <https://codes.iapmo.org/docs/2024/USPSHTC/2022%20USPSHTC%20Report%20on%20Proposals.pdf>

IAPMO will begin the Call for Comments on these documents on Oct. 7, when all suggested code amendments/additions/deletions published in the ROP will be available for public review. The deadline for submission of comments is Jan. 13, 2023, at 5 p.m. PST.



The USHGC and USPSHTC are model codes developed by IAPMO to gov-

IAPMO urges its members and other interested parties to get involved in the development process to ensure effectiveness in preserving the public health, safety, and welfare. Manufacturers, potential users of the standard, installers and maintainers, labor representatives, design professionals, enforcing authorities, and consumers all benefit from a cooperative effort in developing codes and standards.

**No hardcopy editions of these publications will be printed or distributed; interested parties are encouraged to download the documents.**

ern the installation and inspection of solar energy, hydronics and geothermal energy systems, as well as swimming pool, spa, and hot tub systems, respectively, as a means of promoting the public's health, safety, and welfare. The 2024 edition of each code is being developed through a process accredited by the American National Standards Institute (ANSI).

For specific information about the USHGC Technical Committee, please contact Taylor Duran at 909/218-8126 or e-mail your question to [taylor.duran@iapmo.org](mailto:taylor.duran@iapmo.org). For specific information about the USPSHTC Technical Committee, please contact Enrique Gonzalez at 909/230-5535 or e-mail your question to [enrique.gonzalez@iapmo.org](mailto:enrique.gonzalez@iapmo.org).



# Where the Shark Swims

In Wet Lines

Behind the Wall

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by Patti Feldman  
COMPUTER AUTHORITY



# Medley of Software Solutions

**EDS Load Calculator Software** (Energy Design Systems, [www.eds.tech](http://www.eds.tech), 877/EDS-TECH) is a residential heat loss/heat gain block load calculator designed to be used both as a tool as part of the sales process and to firm up in-house block load calculations. The solution, which runs on all devices, utilizes data from Google Earth, Zillow, and real estate databases along with a series of algorithms and equations to size equipment in the home and verify adequate airflow.

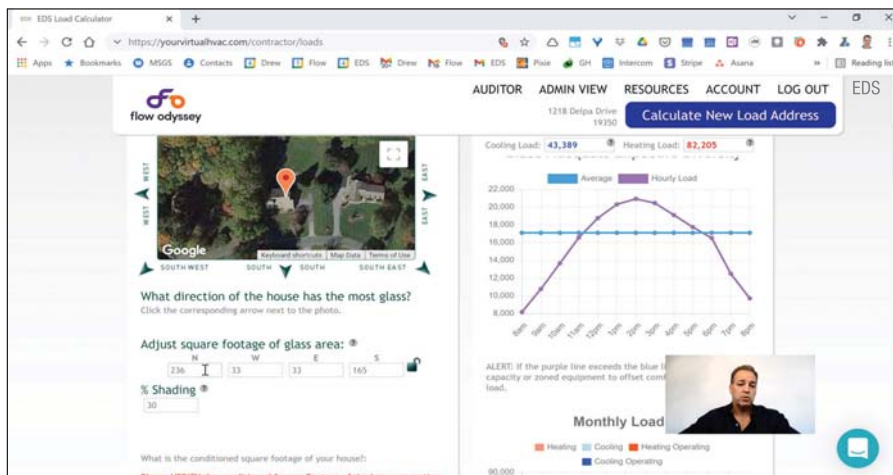
*How it works:* The contractor using the software makes basic assumptions of factors which can be inputted before a site visit, based on information from Google Earth and proprietary interface to third party online resources based on the home's zip code, with these inputs requiring verification and tweaks with onsite in-house measurements to arrive at the accurate block load.

Once you input the address of the home and google it, you see an image of the home and weather data and construction protocols on the screen (no software app to download).

With the software, the user can design and configure multiple design conditions (e.g. summer indoor design temperature, summer outdoor design temperature, winter design temperature, winter outdoor design temperature, Grain moisture difference, Number of residents, Duct loss, Duct gain, Cooling Infiltration Rate, Heating Infiltration Rate) and can configure and define attic, walls, and glass measurements.

The calculations are displayed in clear, easy-to-digest format suitable for customer presentation as well as internal records. Every time a change is made in the software, the load adjusts live.

Once calculations are complete, you can email, download, and print a load report. There are two types of reports: a contractor report and a homeowner report, each of which displays information as charts, graphs, and details of the heating and cooling loads. The Contractor report will contain details on the calculations while the Homeowner report contains additional documentation and marketing materials.



A screenshot from the EDS video demonstration.

## Reviews of EDS Load Calculator, Orcatec home service software, Wave invoicing software, and the CraftJack lead generation service.

*Pricing:* yearly fee or monthly/per user, free 14-day trial

**Orcatec** software for home service contractors ([orcatec.com](http://orcatec.com), 858/284-4310) features both web cloud capabilities and a mobile app for iOS and Android.

Web features include the abilities to generate professional looking, brandable proposals and estimates, scheduling of field personnel, dispatch field technicians, and generate invoicing and accept payments.

The mobile app enables field workers to view and manage their time-slotted schedules, along with details of each task/job; generate proposals for new work in the field; and process credit card payments.

Optional modules include equipment ordering using an integrated equipment database with your own uploaded pricing and parts lists; the ability to create and track recurring appointments and jobs, including service agreements; GPS tracking and technicians and mapped route optimization; and accounting with tracking per job expenses, labor hours, and profits.

*Pricing:* free for one user, fee/month for each additional user.

Optional modules carry additional fees.

**Wave** invoicing software for small businesses, available for free ([www.waveapps.com](http://www.waveapps.com)), provides unlimited customizable professional-looking invoicing with the user's choice of templates and send frequency (e.g. once, or recurring). By enabling Wave Payment, customers can click *Pay Now* on an invoice and pay instantly via credit card or secure bank payment (ACH/EFT, with per transaction fee).

The solution gives users the ability to check invoice status (sent, viewed, paid, overdue), record and track payments, and send receipts and reminders. All invoicing and payment information automatically syncs with the free Wave accounting software included in a company's account.

Companies can also send invoices from the field with Wave's free invoicing apps for iOS and Android (downloadable at the Apple Store and Google Play).

Also available:

**Wave Payments** (Pay Per Use) implements a way for business owners to get paid faster for better cash flow (as quickly as 1-2 business days) via bank deposit, credit card, and Apply Pay for as little as 1% per transaction.

Wave Payroll (monthly fees) provides business owners with an automated payroll solution to facilitate paying themselves, their employees, and contractors while helping stay compliant.

**CraftJack** ([www.craftjack.com](http://www.craftjack.com), 866/332-7134), is a 3rd party lead generation service for

contractors that finds homeowners with specific home project needs and matches these service requests with contractors in their network who have signed up to receive leads for those particular services and in the locations of the homeowner service requests. Each contractor has a personal account manager to help set up a profile and keep leads coming in at your preferred pace.

The CraftJack Pro app (downloadable at the App Store and at Google Play) provides means for contractors to manage their lead flow on-the-go. They are notified when leads come in and can contact the homeowners directly from the app. Contractors can request reviews from homeowners they've worked with and respond to them within the app as well. All leads are phone verified and screened for quality.

CraftJack finds their leads through over 35 service category-specific websites, including LocalJunkRemovalQuotes.com, LocalLandscapingQuotes.com, LocalHandymanQuotes.com and Local HVAC Quotes.com. Homeowners submit their requests on these websites, and they are then phone-verified before being matched to up to four contractors signed up for CraftJack or within CraftJack's partner network. Homeowners are typically contacted in less than 24 hours.

*Pricing:* per lead, varies by task and service area and a discount per lead given for those contractors who respond within 30 minutes. CraftJack also offers a no-hassle credit policy for "bad" leads. **C**

*Patti Feldman writes articles and web content for trade magazines and manufacturers of building products. She can be reached at [productpad@yahoo.com](mailto:productpad@yahoo.com).*



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by Matt Michel  
MARKETING AUTHORITY



# 28 Best Practices for Fraud Prevention, Part 2

**F**raud costs the nation 5% of GDP annually. It likely costs plumbing contractors more. Most plumbing company owners simply refuse to talk about it until they learn how prevalent it is. No company is too small to fall victim to fraud, which means every business owner should take preventative measures. In this second of a two-part series of 28 best practices you can take to limit your exposure, the final 13 best practices are shared.

## 16. Use GPS

Most contractors have some kind of GPS system on their vehicles. There are numerous advantages of this. One of the most significant is reducing the likelihood that employees will use company trucks for side jobs since GPS will show vehicle location history.

## 17. Check Vehicle MPG

An old trick of dishonest employees is to meet a spouse at a gas pump and fill up a personal vehicle at the same time the company truck is topped off. Have employees record odometer readings when filling up and spot check fuel efficiency. If the miles per gallon suddenly drops off, this might reveal a technician fueling personal vehicles on the company dime.

## 18. Watch for Changes in Employees

Know your employees. Be alert to changes. If their spending seems to increase or exceeds what is possible on their incomes, this is a potential sign of fraud. If their personality seems to change, it might be guilt over fraud.

## 19. Require Vacations

There is no such thing as an essential employee. Require everyone to take vacations. Accordingly, everyone should cross train a backup. Many fraud schemes have been identified when the guilty employee was on vacation. When someone refuses or resists taking time off, it might be an indicator of fraud, not excessive dedication.

## 20. Follow Up on Turndowns

Another trick of fraudulent employees in the field is to diagnose a problem, present the repair, and suggest that they can return after hours or on the weekend to do the work for less. Accordingly, beware of plumbers with too many repair turndowns. Follow up every now and then to ensure that the repair was not made off the books.

## 21. Use a Payroll Service

Another truck of fraudsters is padding payrolls with phantom employees and/or overtime. This is hard to execute with small contractors, but as



In this second of a two-part series of 28 best practices you can take to limit your exposure, the final 13 best practices are shared.

a company grows it becomes a possibility. This risk can be reduced by using a payroll company, separation of responsibilities, and/or checking payroll several times a year.

## 22. Create a Written Company Privacy Policy

In your employee handbook, include a written privacy policy that gives you as the employer the right to search computer files, trucks, lockers, etc. Do not let employees think they can hide fraud behind a right to privacy.

## 23. Mark Tools

Tools have a tendency to grow legs and walk away. You can reduce the potential of this by painting tools a unique color that makes them easy to identify. You can also permanently inscribe the tools as company property. Finally, there are options to use RFID chips for more expensive tools that alert pawn shops and police that the tool is stolen.

## 24. Install Security Cameras

Fraud occurs when dishonest or desperate people think they can get away with it. While security cameras may seem like big brother is watching you, they are fraud prevention tools. Cameras can be used to monitor entry

outside service to conduct a forensic investigation. A fraud examiner can also look over your operation and help you minimize the risk of fraud. You can find them through the Association of Certified Fraud Examiners.

In the world of plumbing, no one is better on this issue than Mike Bohinc from Keeping Score, Inc. He can be reached at: 440/708-2583, email [mbohinc@keeping-scorecpa.com](mailto:mbohinc@keeping-scorecpa.com).

## 27. Prosecute

When fraud is found, there is a tendency to hush it up. In some cases, contractors have avoided prosecuting employees in a desire for restitution. Unfortunately, once fraud occurs, recovery is rare. Remember, this is deliberate, premeditated theft. Prosecute to the fullest extent of the law and a message will be sent.

## 28. Tell Stories

If you have had fraud perpetrated against you, caught the guilty party, and there were consequences, make this part of your company lore. Share the story with employees from time to time, but always with the message that the employee was caught, as they always are, and had to pay a price, as they always will. Good stories about the risks and consequences of fraud are some of the best preventative measures there are.

If you lack examples on your own, talk with other contractors at national meetings. Bring their examples back. Tell your team that they won't believe what happened to this other company and how it impacted the guilty employee when finally caught.

*Contracting is hard enough. Don't make it harder than it needs to be. Join the Service Roundtable and take advantage of a world of resources designed specifically for service contractors in plumbing, heating, cooling, electric, and remodeling. Learn more at [www.ServiceRoundtable.com](http://www.ServiceRoundtable.com) or call 877/262-3341 for a look behind the payroll.*

points, inventory cages, and anywhere cash might be handled.

## 25. Implement a Fraud Reporting System

The most prevalent way for fraud to be identified is employee tips. Yet, employees who are not 100% sure fraud is being performed hesitate to say anything because they don't want to make a false accusation. Others simply don't want to be seen as snitches. For these reasons, set up an anonymous system for fraud reporting.

The Service Nation Alliance created an anonymous fraud reporting hotline for members. Posters and stickers can be placed around the office alerting people to the hotline. The mere knowledge that it is available is a deterrent. There are third party hotlines available that perform a similar service.

## 26. Conduct a Fraud Audit

If you suspect fraud has occurred, but cannot pinpoint it, you might hire an

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by Shay Bloch,  
CO-FOUNDER AND CEO OF JOBOX.AI



# Why the Skilled Trades are Recession-Proof

In December 2007, The Great Recession hit, marking the beginning of the worst recession since World War II. There have been periods of economic turbulence since then, particularly at the beginning of COVID-19. The pandemic sent the country spiraling into a national health crisis and economic crisis. Now, experts say we're headed for another period of economic instability. As we brace for this, the skilled trade industry is equipped to endure the worst of it.

## Historical Resilience

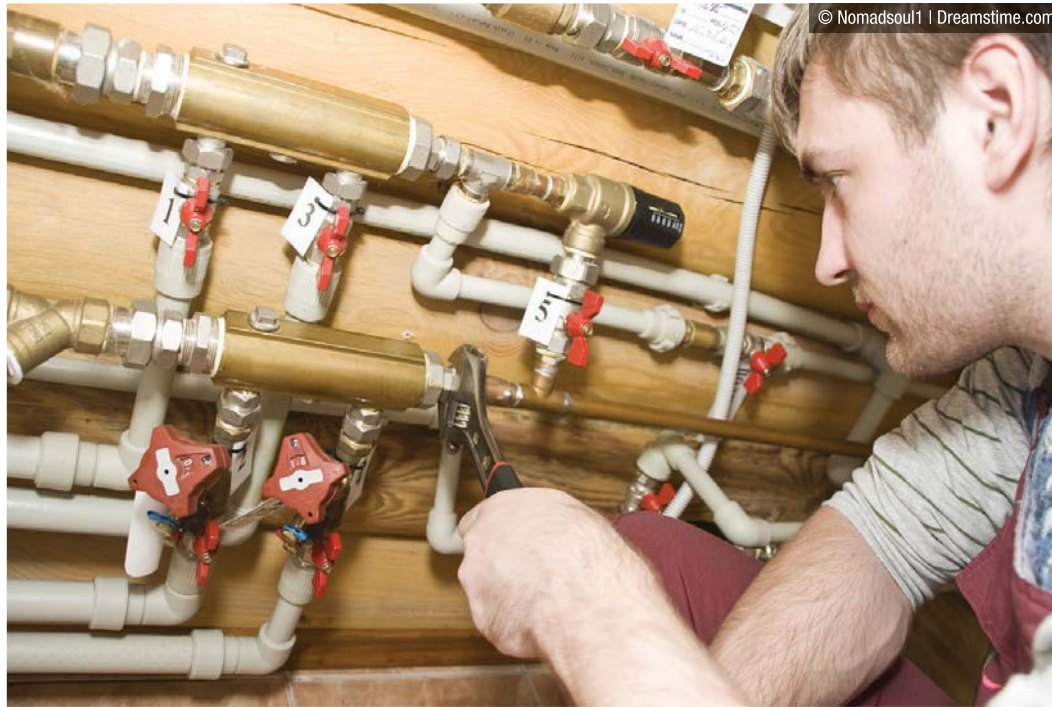
The past serves as a blueprint for understanding what the future may hold for the skilled trades as far as an economic downturn. While the industry won't be completely untouched by a recession, it can withstand economic turmoil.

Take locksmiths, for example. In 2008, mortgage lenders repossessed 46,750 homes after their borrowers couldn't keep up with their repayments. The figure marked a 68% increase in repossessions compared to 2007, when mortgage lenders claimed 27,900 homes. And what did all these repossessed homes have in common? They needed new locks. This situation created higher demand for locksmiths, while other industries collapsed.

Similarly, the current looming economic downturn doesn't seem to impact projected employment of electricians, plumbers or repair workers, for instance. The US Bureau of Labor Statistics projects the employment of electricians to grow 9% from 2020 to 2030, about as fast as the average for all occupations. In comparison, the Bureau expects employment of couriers and messengers to decline by 8% in the same timeframe.

## Demand and Consumer Spending

The skilled trades don't just have a magic wand that protects them from economic downturns. They remain



**The trades remain mostly untouched because they often solve pressing problems consumers can't afford to postpone.**

mostly untouched because they often solve pressing problems consumers can't afford to postpone. And while people are more likely to take on DIY projects during a downturn, some home improvement projects still require an experienced professional.

System replacements such as HVAC, plumbing, electricity or garage door repair are some examples of projects homeowners must complete on time. If a garage door or plumbing installation isn't working properly, homeowners don't have a choice but to replace it right away. The macroeconomic situation has little impact on the homeowner's decision to move forward.

So although home improvement spending tends to decline in a recession, this trend doesn't apply to system replacements. It becomes even more apparent as these systems gain in complexity. For instance, the growing number of sophisticated climate-control

systems is expected to increase demand for qualified HVACR professionals.

Policy and regulation changes also help neutralize the effect of economic downturns on skilled trades. For instance, the employment of sprinkler fitters is expected to increase as states continue to adopt new building codes that require using fire suppression systems. Homeowners must replace these systems and bring them up to code, regardless of the overall health of the economy.

## Steps to Maximize Stability

Even though technical and regulatory requirements limit the impact of economic downturns on skilled trades, professionals still suffer indirect consequences. Limited budgets may push consumers to ask for lower prices or out-of-scope work. The cost of administrative work related to business management may also increase. Therefore,

it is important that professionals still take steps to keep their businesses afloat and thriving during a downturn.

The first step home service professionals can take is to diversify their sources of work to guarantee a steady stream of job opportunities. Building an online presence and creating user profiles on various service marketplaces are two of the main ways professionals can create that diversification.

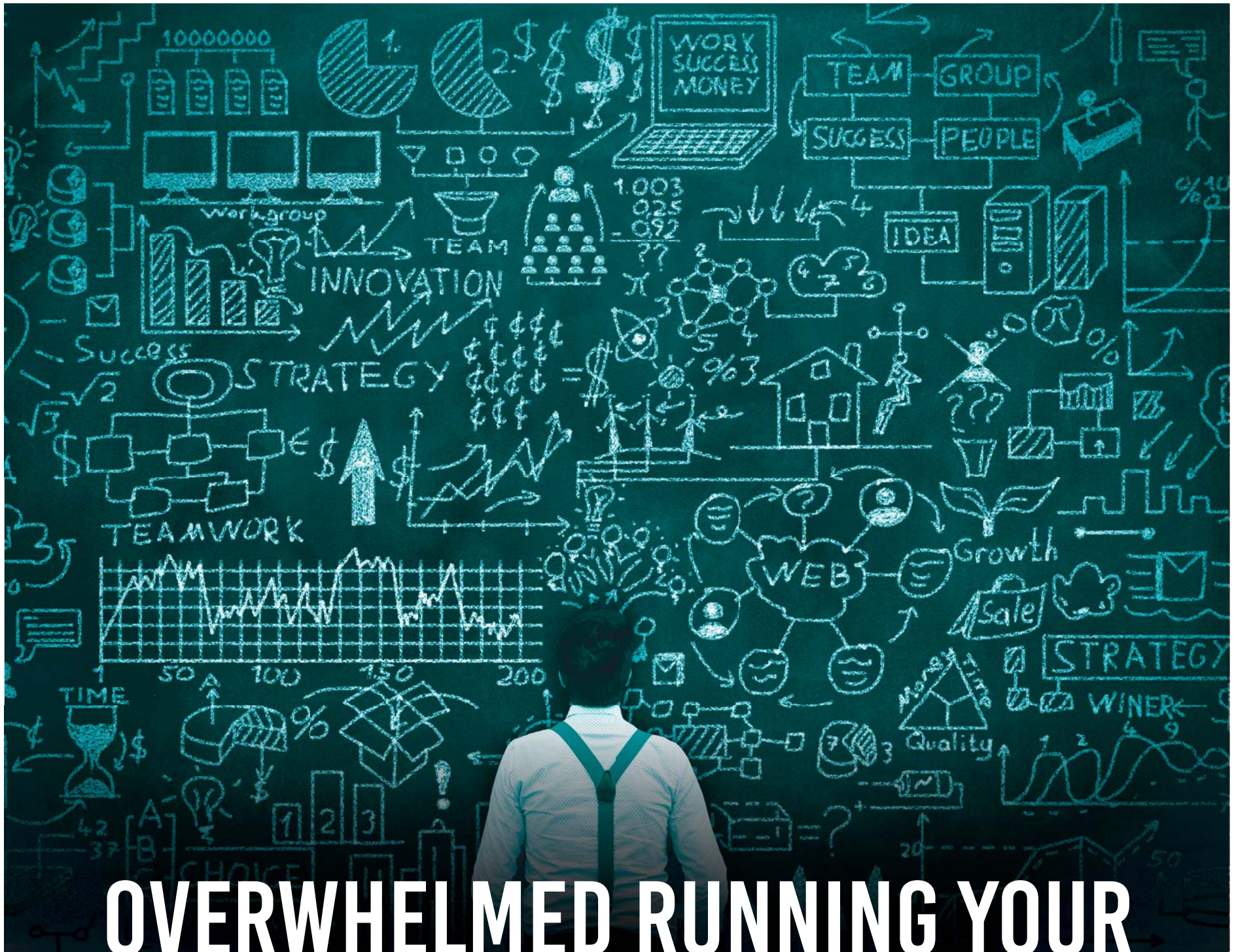
Pros can also maximize their profit by upgrading their processes. Digitizing workflows and using technology to automate administrative tasks will save a lot of time on each job. Less time spent managing a job is more revenue going to the business. This tactic will be especially useful if customers start asking pros to lower their prices.

Finally, using mobile apps can make it easier for home service professionals to manage their business on the go. Text-based communication with customers and mobile-based invoicing are tools that can minimize disputes and out-of-scope requests from customers.

## Skilled Trades are the Future

Technical knowledge, local regulations and job necessity are three major components that make the skilled trades a recession-proof industry. Although professionals must still take steps to minimize the impact of a downturn, it is likely their business will grow in the long term. As such, a career in the skilled trades is a promising opportunity for people entering the workforce. **G**

*Shay Bloch is a serial entrepreneur and product leader with over 15 years of experience. He is the co-founder and CEO of Jobox, a marketplace infrastructure for the home services industry. Shay has a Bachelor's in Psychology from the Open University of Israel and a Master's degree in Kids & Youth digital culture marketing from Tel Aviv University.*



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by Kevin Nott  
PROFIT COACH WITH BDR



# Driving Effective Lead Generation With Referrals, Marketing, and Maintenance

Yet many business owners and managers in the service contracting industry leave lead generation to chance. Instead of implementing demonstrated processes to deliver reliable, predictable results, they send out the occasional e-blast or direct mailer and wait for the phone to ring.

Some common misconceptions often prevent service professionals from taking control of lead generation. Many think it's just too hard or the effort isn't worth it. Others assume only people with a particular personality can successfully drive leads. Some mistake lead generation for cold calling.

Ultimately, successful lead generation is a process. It takes effort to set up and maintain. But the work more than pays for itself. What's more, anybody can do it. A lead generation system truly works when the whole team is involved, from sales to service technicians, support and management.

## Referrals

The best source of effective leads is referrals. That means getting customers to talk about your company to their friends and neighbors. Typically, this won't happen unless you ask them to do it.

A strong referral program rewards customers for recommending your company and is an important mechanism for generating leads. The essential elements of a strong referral program include:

- **Incentives:** Offer customers who directly refer new business to your company a reward, such as a \$100 gift card or prepaid debit card. This is an excellent investment for a potential lifetime of revenue.
- **Monitoring:** Every owner should watch lead sources regularly. It's easy and affordable to install software to determine where incoming calls come from. Additionally, ask new customers how they learned about your company.



Some common misconceptions often prevent service professionals from taking control of lead generation.

- **Buy in:** Team members who are excited about their jobs and enthusiastic about their work are effective ambassadors. Instead of simply marking off a checklist at the end of a service call, they'll engage with customers in ways to encourage them to share your company's name.

## Marketing

Too many owners and managers believe marketing is a direct pipeline to new business. In other words, thinking by scheduling an email campaign or promoting a social media post, the phone will ring off the hook.

That's not the case. Marketing is a key part of a good lead generation strategy, but you must be realistic about its purpose and effectiveness.

Marketing is about making an impression, so your company is top of mind when a customer needs service. This can be as simple as a banner at the local ballpark or your company's name

and logo on a school play program, or you can invest in more sophisticated tools such as social media posts or pay per click campaigns. Either way, ongoing marketing helps build your company's brand awareness throughout your service area. Over time, you can be confident that name recognition will drive new business in areas you've saturated with your branding.

## Planting Seeds

It takes proper timing to turn brand awareness and name recognition into new customers. The odds are slim you'll place a door hanger or send an e-blast the same day someone's plumbing springs a leak.

One way to control timing is to plant seeds. Training technicians to discuss the condition and age of the system they're working on can be a building block for planned equipment replacement.

Many customers rarely think about their plumbing systems, so giving

them a reason to associate service with your company is part of a long-term strategy for generating new business. You can jumpstart planned replacement jobs by planting seeds throughout your relationship with a customer.


## Maintenance Agreements

A company that doesn't embrace maintenance agreements as part of its culture misses a huge opportunity. Planned maintenance is one of the best, most effective drivers for lead generation. They are the hidden gem of the service industry.

Companies that connect with customers through maintenance agreements have a unique advantage. In addition to regular maintenance calls, those customers are likely to call their maintenance provider for any other service.

## Team Effort

To maximize leads, the entire team must be on board. Every team member is the face of the company to someone. Even if you're in accounts payable, the vendors in your service area are potential customers. How you treat them could plant a seed for a service call one day.

Treating customers right must be part of your culture. When a customer calls you and says, "I just got off the phone with your dispatcher. They treated me better than I've ever been treated by a service company," that's lead generation and a referral seed! That customer may have already called, but after an experience like that, they're much more likely to come back—and to tell someone who trusts them your company will take care of them. 

*Kevin Nott has been actively involved in the HVAC industry since 1992 and has been a Profit Coach with BDR since 2010. He has served as owner, general manager, CFO and controller of multiple service companies, and a territory manager for a large HVAC distributor.*

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by Mike Gembariski  
SENIOR PRODUCT LINE MANAGER AT FLUSHMATE



# More Power + Less Water = Ultra Efficiency

**H**ere's a quick history lesson: the first pressure-assisted toilet was developed in 1984 as a response to water shortage concerns.

However, if you fast forward to 2022, you'll see that these innovative systems have only become more prevalent, powerful, and sustainable since those early days, making them an attractive option over traditional gravity toilets.

While pressure-assisted toilets may look like gravity toilets on the outside, one look inside the tank will reveal some key differences. The vessel traps air, and, as it fills with water, it uses the water supply line pressure to compress the trapped air inside. The compressed air forces the water into the bowl, so instead of the "pulling" or siphon action of a gravity unit, the pressure-assist unit "pushes" waste out. This vigorous flushing action cleans the bowl, as well.

In addition, pressure-assisted toilets utilize as low as 1 gallon per flush, saving commercial buildings and homes thousands of gallons of water each year. And while improved flushing performance and water savings are the headlining advantages of pressure-assisted systems, the benefits don't stop there.

## Pressure-assisted Perks

Simply put, flushing performance is the most important factor when specifying a toilet. Engineers have indicated that multiple flushes and toilet stoppages are the most frequent complaints with other toilet technologies, but the number of these complaints is greatly reduced when facilities use pressure-assisted toilets, which help eliminate toilet stoppages, multiple flushes, and clogs for any type of project.

Using pressure creates a powerful flushing action that may keep the toilet bowl cleaner simply with the force of the flush. With a 70-gallon-per-minute peak flow rate, toilets equipped with pressurized systems maximize water delivery force to clean the bowl with a single flush. Water is contained



A view inside a pressure-assisted toilet tank.

with the vessel itself rather than the tank, which helps prevent toilets from sweating and allows the floor to remain dry.

Compared to gravity toilets, pressure-assisted systems produce a longer drainline carry, pushing waste up to 50% further than the recommendations set by ANSI. Facilities that use pressure-assisted systems in their restrooms can also earn LEED™ points and improve their sustainability performance ratings.

In addition, some pressure-assisted systems feature products that enable touchless, electronic sensor operation of existing units, and they have been shown to reduce the spread of bacteria with the added convenience of automatic flushing. As a result, the systems combine the water savings and superior performance of pressure-assist technology with the hygienic benefits of touch-free operation to create a top-line product that benefits installers, facility managers, and end-users.



A typical guest bathroom at the Sauder Heritage Inn.

## Witnessing the Difference

Today, facilities around the globe are realizing the benefits of pressure-assisted systems and installing them for their projects—from hotels and resorts to casinos and apartment buildings. One specific country lodge in Northwest Ohio—Sauder Heritage Inn—continues to choose pressure-assisted systems because of their unique ability to deliver both superior flush performance and water conservation advantages.

Sauder Heritage Inn is a unique destination for family vacations, retreats, classes, group tours, and conferences,

all while offering its signature warm hospitality. Ever since the lodge opened its doors in 1994—including an addition in 2006—the hotel has specified pressure-assisted systems in its restrooms because of their unrivaled durability, convenience, and water savings.

In total, 95 pressure-assisted toilets are installed throughout the hotel's restrooms, 34 of which were recently upgraded to a new 1.6-gpf system that offers superior flushing performance while consuming 20 to 38% less water than gravity toilets on average.

The new pressure-assisted systems at Sauder Heritage Inn have a redesigned body that is stronger and more resilient for years of service and water savings. These industry-leading pressurized vessels allow for a more powerful and dependable flush to keep toilets clean. In addition, the new systems are interchangeable with previous versions for a no-risk, no-hassle upgrade.

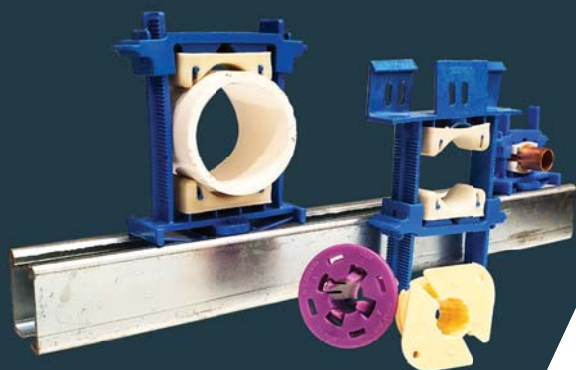
## Efficiently Leading the Charge

As the pioneer in pressure-assisted technology, Flushmate®-equipped toilets conserve water and preserve natural resources without sacrificing performance. Available in 1.0-, 1.28-, and 1.6-gallon-per-flush systems, Flushmate-equipped toilets install in the same manner as other fixtures.

As facilities continue to search for restroom solutions at the intersection of efficiency and sustainability, Flushmate pressure-assisted systems are answering the call by providing cutting-edge performance benefits and low water consumption, saving money and simplifying maintenance now and in the future. **G**

*Mike Gembariski is Flushmate's Senior Product Line Manager. For over 35 years, Flushmate has set out to build an environmentally conscious company by producing systems that deliver superior performance while conserving more water. Today, Flushmate is the preferred choice of installers and users around the world for pressure-assisted systems.*

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by Sean Spisak,  
DIRECTOR OF OPERATIONS, ZELUS



# Digital Twins Raise the Bar on Quality Control

The use case for digital twins in construction is ever-expanding and the market is expected to grow from \$6.9 billion in 2022 to more than \$73 billion by 2027. There's even now talk about expanding this into markets that have historically relied heavily on antiquated documentation to improve construction communication and processes. Despite the growth, however, there are still areas of construction where the benefits of digital twins—or digital as-builts—are widely overlooked.

These highly accurate replicas of built assets, and more specifically, the point cloud data used to create them, can be used not only for clash detection and accuracy, but also for quality control (QC) and quality assurance (QA) processes. In fact, the use cases for digital twins are strong throughout all phases of the construction process and even the building's lifecycle.

## Eliminate Assumptions

Anyone in the design/build industry knows built structures are rarely constructed to the design specifications in the original design model or plans. These plans are rarely updated to reflect changes that occurred in the field, but then down the road, are often used as a starting point for renovations and updates. This continuous cycle leads to unnecessary issues and delays.

In scan-to-BIM, existing buildings can be scanned and the point cloud data can be compared to the core shell model the design team may be working from. Rather than basing the design on inaccurate data, they now have an accurate data set to work from and can have confidence in knowing that the design will actually work and there are no surprises in the field from a structural or layout perspective.

Unless the architect or designer is given a current as-built, that was developed from a point cloud of the building post-construction, chances are there are going to be deviations in the model. If the architect is creating new plans based on what they believe the square footage to be or where they believe structural or MEP members are



There are still areas of construction where the benefits of digital twins—or digital as-builts—are widely overlooked.

located, but those are inaccurate, they run the risk of creating a design that may not actually work. This often results in change orders, issues, delays, and an unnecessary waste of time and money.

Going scan-to-BIM to create a point cloud is a quick way to gain an accurate analysis of the true existing conditions. Overlaying point cloud data over the design model will quickly reveal deviations, errors and/or omissions. The design model can be “trued-up” and provide an accurate starting point from the very beginning.

## Maintain Quality Control

The process of comparing point cloud data can also be used as a quality control measure to create more replete 3D models and 2D plans. Because creating models from a point cloud is still a very manual process, it's naturally subject to human error. Even some of the best automated systems that create components from point cloud data aren't highly accurate. By using the point cloud as a quality control tool, parts of the quality check process can be automated and the model designed to a higher degree of accuracy.

## Design and Build to Greater Accuracy

In complex scenarios like semiconductor or processing plants, where specificity is critical, it's an easy way to confirm that everything that was supposed to be modeled was in fact modeled and it's to the specified level of accuracy.

In industries where accuracy is critical—especially when getting into points of connection for tooling—construction and design detail have to be really tight. A digital as-built or digital twin provides verification of existing conditions and confirms whether a design will work.

Similarly, warehouse and distribution facilities are continually undergoing reconfiguration to accommodate new platforms and automation machinery. Following an installation, the specified area can be scanned and compared to the design model and the as-built updated if anything was installed slightly off or askew from how it was designed. For instance, if a column or support is a quarter of an inch off, that can be identified and adjusted to true up the as-built model. This provides building owners and managers an accurate understanding

of what's actually there and how it was installed so they can update and design for the future.

The scanning and point-cloud-comparison process can also be used throughout various phases of the construction process. As various parts of construction are completed, the area is scanned and compared to the coordinated model to identify errors, accuracy and/or omissions. If errors are identified, the GC can make real-time adjustments or coordinate any clashes that might result and solve them before they proceed to prefabrication or installation of subsequent systems.

## Perfect for Prefab

By doing this throughout the construction process, problems can be solved in near real time and adjustments made prior to the installation of the next phase of construction. Particularly on projects with prefabricated assemblies, designs have to be accurate. There's nothing worse than getting an assembly out to the site only to find out it won't work. With lengthy lead times on certain materials and supply chains, this is critical to mitigating delays.

As technology is integrated more and more into construction, this level of insight will become table stakes. Not only does point cloud data help maintain accuracy and reduce errors, the continuous checks also add an extra layer of quality control and accountability beyond the human eye. It opens the door for better communication and transparency and can be used to inform design and construction decisions, devise coordinated workflows and teams, and avoid costly errors. **G**

*Sean Spisak is Director of Operations for ZELUS, a company that specializes in the “capture” of existing conditions—buildings, interior spaces, topography, etc.—using state-of-the-art imaging technology, then converting that data into highly accurate “digital twins”, 3D computer models that used by owners, contractors, architects, and engineers for design, renovation, and construction. Learn more at teamzelus.com.*

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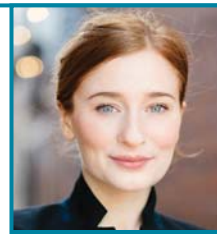


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by Rose Morrison  
FREELANCE WRITER



# How to Convince Property Managers to Invest in Sustainable Plumbing

**M**any industries have adopted green initiatives to meet consumer demand for sustainability. From how consumers shop to what they purchase, it's impossible to overlook market transformations worldwide.

According to the recent Sustainability and Consumer Behavior 2022 report by Deloitte, 52% of consumers are limiting water use as part of an overall effort to lead a more sustainable lifestyle. 21% would spend more on goods and services for company or brand committed to saving water and other natural resources.

This is excellent news for contractors who have streamlined their business processes toward the same mission of enhanced sustainability. Additionally, property managers should see a more significant opportunity for growth.

Real estate experts expect 88% of commercial properties to align financial and energy incentives in the form of green leases in the next five years. As a result, tenants and renters will perceive sustainable properties as a chance to live their green lifestyle.

However, not all property managers understand the impact of investing their money in sustainability. Contractors are crucial players in convincing property managers to transition toward sustainable plumbing.

## Advocating for Savings

Changing consumer behaviors and demands for greener living have prioritized sustainability in commercial real estate, yet not enough people are talking about green plumbing. Explaining the value of integrating or updating plumbing systems to drive more energy-efficient and water-saving technologies is often left up to the contractor. However, their promotion of sustainable plumbing can go a long way in helping property managers with their business goals.

A McKinsey study showed 63% of those implementing environmental, social and governance (ESG) propositions see positive results. Contractors must educate property

owners on the benefits of establishing sustainable plumbing for their bottom line. Research has proven eco-friendliness is a critical driver of profitability, generating a return on investment for property owners who make the switch.

For instance, the Harvard Business Review found a 29% increase in sustainable product sales from 2013 to 2019. This is clear evidence green businesses attract a broader scale of consumers and help build brand loyalty. It's important to note the commercial property management industry can view this as a chance to reach more rental prospects and retain current tenants long-term.

Of course, mechanical contracting professionals should also demonstrate a

commitment to sustainability by building out their own green business practices. Relying on renewables to power their offices, installing the same green products they use in their clients' properties, investing in the latest green technologies and applying for green certifications—"walk it like you talk it"—will impress wary property managers.

## Benefits of Sustainable Plumbing

The benefits of installing sustainable plumbing are likely obvious. In addition to lowering water bills, property managers can improve their buildings' water and energy efficiency, increase the marketability of commercial properties and secure building longevity.

There are several opportunities for property managers to implement green plumbing, including:



An evacuated glass tube solar water heater.

- Installing low-flow faucets and showerheads
- Installing waterless urinals
- Installing or retrofitting high-efficiency water heating systems
- Installing or retrofitting solar or heat-pump water heaters
- Installing high-efficiency toilets

While some of these solutions do present higher up-front costs, good data about the return on investment

commercial real estate's environmental impact.

Property managers who install sustainable plumbing join an elite market of green buildings helping to improve the environment and resource availability. The US Environmental Protection Agency says 40 state water managers anticipate resource shortages within the next 10 years.

Commercial buildings already use a lot of water. The 2017 Commercial Buildings Energy Consumption Survey reported commercial buildings over 200,000 square feet consumed an average of 22,000 gallons of water per building daily in 2012. By integrating sustainable plumbing, property managers can significantly reduce their water use.

It's never been more critical for property managers to meet the moment for green building efficiency. While they don't have to be experts in sustainable plumbing, reducing water consumption with green materials and replacing old systems with the latest technology can help ease environmental impact and safeguard public health.

## The Contractor's Role

Property managers may not fully understand how sustainable plumbing could improve their bottom line and help them meet consumer demand for green infrastructure. Mechanical systems contractors should leverage their skills and expertise to help promote water efficiency in the commercial sphere. **G**

*Rose Morrison is a freelance writer who covers construction, home improvement, and contracting topics. She is also the managing editor of Renovated.com, a site dedicated to the latest trends in the home industry. She has a passion for innovative technologies that are making the home industry sustainable and efficient. Check out Renovated.com to see more of her work.*

**Contractors are crucial players in convincing property managers to transition toward sustainable plumbing.**

such systems offer is now more easily available than ever before.

Swapping older toilets for high efficiency models can greatly benefit a property owner's bottom line, and the new low-flow technology means end-users will see no impact on performance. Toilets meeting the requirements for WaterSense certification guarantee 20% savings above the federal flushing standards. Likewise, the most efficient ENERGY STAR-certified gas-fired water heaters can help property owners save \$740 on their commercial property utility bills.

## Commercial Concerns

Commercial buildings have dire effects on the environment. Their carbon emissions, water consumption and air pollution account for 90% of

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# Applewood Helps Provide Bathrooms in Nepal

► **Continued from page 3**

Electric. “Here we take having a clean, accessible bathroom for granted. In these rural areas of Nepal, many lack such facilities and we can help to change that.”

## NIVAS

The special partnership with NIVAS, a local Denver nonprofit, will provide 12 families with a sanitary bathroom in the next year. The program, which assists single-mother, marginalized families with safe housing and improved living standards, uses local workers to build the secure, safe bathrooms. Access to such facilities has a dramatic effect on the overall health and safety of the family. NIVAS is a Nepalese word meaning home, which fits perfectly with the organization’s mission to assist on the many housing needs in Nepal’s rural areas.

“It is exciting for our organization to work with our new trade partners,” said Lindsey Kruger, founder of NIVAS. “In Applewood’s case, they are at a higher level of understanding of what the plumbing side of things mean and they are a company that has family and community connectedness, which is in perfect synchronicity to our program.”

Beginning in the fall, Applewood will cover the cost of the bathrooms that are included in these safe-home builds.



**New homeowner Shanti P. fist bumps NIVAS Construction Manager as walls go up on her new home in Nuwakot, Nepal.**

**The special partnership with NIVAS, a local Denver nonprofit, will provide 12 families with a sanitary bathroom in the next year.**

## Annual House Party

Applewood will also sponsor NIVAS’ upcoming “House Party” fundraising event at Woodie Fisher in downtown Denver on September 29, 2022. The annual event has a goal of \$80,000 this year to help provide the following:

build disaster-resilient homes for single moms, train 40+ local trades people on resilient construction, train 70+ women with vocational skills, infuse new home businesses with start-up capital and help approximately 30 people out of homelessness. The evening

will include a live and silent auction, creative entertainment and a select menu from Chef Franco Ruiz. Tickets are \$75 or \$280/4; more information can be found at Annual House Party Event 2022.

## Making a Difference

The need for safe and functioning homes is immense in many areas of Nepal, where 24% of households still do not have access to basic sanitation, according to NIVAS. According to the World Health Organization, poor sanitation ranks as a very important risk factor of death globally. Without private household sanitation, women and girls are vulnerable when leaving the home at night.

“We can make a difference in the overall quality of health,” said Ward. “These are the kinds of projects we can embrace as a whole company. We’re fortunate that Denver has such an organization we can support to make real positive change for others.”

Applewood’s partnership will assist, single-women families with children under the age of 17 living in multi-dimensional poverty to have access to safe shelter and other resources. Families work alongside local contractors to build the bathrooms, which are constructed of stone, concrete and steel. NIVAS has been working to provide resources for safe housing since 2013.

To learn more about Applewood’s community efforts, visit [www.ApplewoodFixIt.com](http://www.ApplewoodFixIt.com).

## Roberts Appointed VP, Sales and Marketing for BrassCraft

NOVI, MI – BrassCraft Manufacturing Company, a leading manufacturer of plumbing products, announces the retirement of George Werner, Vice President of Sales, after 27 years of dedicated service.

“I am thankful for the tremendous impact he has had on our company and the industry over the last three decades. We wish him the best as he enters his well-deserved retirement,” said Tom Assante, President of BrassCraft.

Assuming the responsibilities of Werner, Mike Roberts now leads a unified global sales, marketing, and product development team as Vice President of Sales and Marketing.



**Roberts now leads BrassCraft’s unified global sales, marketing, and product development team.**

“I am thrilled to take on this new role focused on honoring and continuing the storied BrassCraft legacy. Few brands earn the fierce loyalty of the plumbing professional that BrassCraft experiences every day; we are redoubling our efforts to deserve that loyalty through industry-leading quality and exceptional product solutions,” said Roberts.

As 12-year Masco veteran, Roberts joined BrassCraft as Vice President of Marketing and Product Development in 2018, previously having managed the fixtures business at Delta Faucet Company for nine years. Roberts brings over two decades of experience in the home improvement industry, both in the U.S. and Europe. [G](#)



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Learn more at [www.tacomfort.com](http://www.tacomfort.com)





# IAPMO Opens 93rd Annual Education and Business Conference

► **Continued from page 6**  
**Richard Lisle, Dave Mann, David McHenry, Danny Nunez, D.J. Nunez, Bruce Pfeiffer** (posthumously), **Tom Pitcherello, Linden Raimer** (posthumously), **Shabbir Rawalpindiwala, Phil Ribbs, Ron**

**Rice, Arnie Rodio, Bob Siemsen, Larry Soskin, Jim Stack, Marylyn Stapleton, Dave Straub, Jaime Valdivia and Mike Wynne.**

Also during the conference, winners of the 12th IWSH Scholarship Essay Competition were announced. First prize

was awarded to **Chantal Cheung**, Queen's University, Ontario, Canada, and three runners-up were **Sofia Lang**, McGill University, Alberta, Canada; **Callie Lowery**, Mercer University, Macon, Georgia; and **Wyatt Snyder**, University of Indiana, Bloomington.



**Ray Levangie, retired business manager, UA Local 398.**



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[safep plumbing.org/events/aspiring-leaders-program](http://safep plumbing.org/events/aspiring-leaders-program)

**Learn more and register at [safep plumbing.org/pmi22](http://safep plumbing.org/pmi22)**

### Down to Business

During the conference's Association Technical Meeting Convention, membership votes produced a total of 27 successful motions for the *Uniform Plumbing Code (UPC)* and *Uniform Mechanical Code (UMC)*. Successful motions for the *UPC* included provisions for soap dispensers, adult changing stations, beverage dispensers, material standards for building supply, and professional qualifications. Successful motions for the *UMC* included various listings for equipment and appliances, provisions for shutdown and reopening of buildings, and professional qualifications.

In accordance with code development regulations, an amendment recommended by the association shall be submitted to ballot of the responsible technical committee (TC). Approval is determined by two-thirds affirmative vote by the responsible TC. If the association recommended amendment is not approved by the TC, the issue is automatically docketed as an appeal to the IAPMO Standards Council to be heard on Nov. 16. Successful motions made during the meeting will be available at [www.iapmo.org/code-development](http://www.iapmo.org/code-development).

### Thanks to the Sponsors

The conference was sponsored by Western States Pipe Trades, UA Plumbers 78, Southern California Pipe Trades District Council 16, NITC, Watts, Cast Iron Soil Pipe Institute, IAPMO California Central Chapter, IAPMO R&T, UA Local 230, ASPE, American Water Works Association, PHCC, and IAPMO Southern Nevada Chapter.

IAPMO's 94th annual Education and Business Conference will be held in San Antonio, Sept. 24-28, 2023. **C**

# NIBS Launches US National BIM Program

WASHINGTON, DC — The National Institute of Building Sciences (NIBS) has developed an implementation and launch plan for the US National Building Information Management (BIM) Program. The aim: To achieve a new level of industrial efficiency through digitalization.

An overview of the launch plan recently was presented to industry leaders at an executive roundtable to accelerate ongoing efforts.

A critical issue in the construction industry is its low level of digitalization, which prevents it from transforming work processes to be more efficient, less expensive, more resilient, and safer to build and maintain. The US National BIM Program expands upon existing and ongoing work of the NIBS BIM Council.

“Many national and international initiatives focus on BIM standardization to support digital transformation throughout the entire life cycle of designing, constructing, and operating the built environment,” says Stephen T. Ayers, FAIA, Interim CEO of NIBS. “The US National BIM Program will be successful through collaboration between the public and private sectors and across the diversity of project stakeholders.”

To aid in the implementation and launch of the US National BIM Program, AEC subject matter expert Johnny Fortune joined NIBS in June to serve as Director. Fortune said next steps include securing resources and establishing workgroups to operationalize different aspects of the plan.

NIBS began the planning process for the US National BIM Program last year, meeting and working with industry leaders. Since then, many volunteers and NIBS staff members have worked to develop the implementation plan, which includes key activities and an estimated budget for the first five years.

The construction industry employs more than seven million people to create or renovate nearly \$1.4 trillion in buildings, infrastructure, and other built assets each year. But the industry has yet to enjoy the productivity improvements of the digital age, averaging only 1% productivity growth in the past 20 years.

The BIM Council has focused on capturing the requirements of US



building owners to document best practices and provide guidance on the

adoption of digital technology to increase productivity and performance. Examples include the United States National CAD Standard (NCS), National BIM Standard-United States (NBIMS-US),

National BIM Guide for Owners, and Construction to Operations Building information exchange (COBie) Specification. For more information, visit the Building Information Management Council at [www.nibs.org/bimc](http://www.nibs.org/bimc).

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# Jackson, MS, Faces Municipal Water Crisis

## ► Continued from page 1

situation closely, and actively working to respond as quickly as possible to ongoing developments with the flooding,” said Governor Reeves.

On August 29th, the Reuters News Agency reported that Jackson residents would have to go without reliable drinking water indefinitely after pumps at the main water treatment plant failed. Emergency responders organized the distribution of bottled water and tanker trucks for 180,000 people. By September 1st, the state had opened seven water distribution sites for those affected, staffed by more than 600 members of the Mississippi National Guard.

As of September 12, according to NPR, residents of Jackson remained under a boil water order.

## Ongoing Problems

Jackson has two water treatment plants. The O.B. Curtis plant treats 50 million gallons per day and the Fewell plant normally treats 20 million gallons per day. The O.B. Curtis plant is located near the Ross Barnett Reservoir, which doubles as water supply and flood control. Flooding at this reservoir, after the excessive rainfall event, affected the plant’s operation.

This, however, is only the latest in a series of ongoing problems, as reported in *Stormwater* magazine.

In 2021, winter storms and multiple days of below-freezing temperatures caused equipment failures at the O.B. Curtis plant. Many homes went without water for 18 days.

Since late July of this year, Jackson’s residents have been under a boil water notice due to water quality issues that included cloudiness and discoloration.

And, at the time of the latest failure, the O.B. Curtis plant’s main pumps had actually been damaged and out of operation for about a month. The plant had been operating on backup pumps when the flooding caused yet another failure.

In response to the crisis, the Water Environment Federation issued statement that reads in part:

*This is an unacceptable situation in the United States in the 21st Century, which reflects a historic lack of investment in water infrastructure and in communities*



Outside the O. B. Curtis Water Treatment Facility in Jackson, MS.

## Aging infrastructure, the effects of climate change challenge states across the nation

*of color. The results, as seen in Jackson, are crumbling water systems, threats to public health, and significant economic losses. Unfortunately, there are many communities across the country that could be the next Jackson because of the lack of investment in water systems.*

## Nationwide Concern

The City of Jackson’s situation is ultimately not that different from recent drinking water crises that have struck and continue to concern the aging cities of Flint (MI), Milwaukee, Chicago, New York, and others. In fact, Mississippi’s latest Infrastructure Report Card from the American Society of Civil Engineers gave its drinking water systems a grade of ‘D’ in 2020 and warned then that the state needed to increase related investments drastically:

*In 2015, the EPA estimated that Mississippi needs \$4.8 billion over the next 20 years to fund safe drinking water infrastructure for the people of Mississippi. Much of the state’s current drinking water infrastructure is beyond or nearing the end of its design life, with older systems losing as much as 30-50% of their treated water to leaks and breaks...*

On September 7, ASCE National President Dennis Truax, himself a

Mississippi resident, said, “My heart goes out to all of those impacted in Jackson. No one should be without safe drinking water in the 21st Century.”

Nationally, of course, ASCE has been sounding the alarm for decades, ever since launching its overall US Infrastructure Report Card in 1998 and re-issuing grades every four years in 16 categories, ranging from transportation and energy to water systems. Ironically, the most recent report card in 2021 actually raised the national grade for drinking water systems from ‘D’ to ‘C-.’ But that assessment was made well before the latest failures in Jackson.

## Legislation and Investment

Last November witnessed the enactment of the new bipartisan infrastructure law (The Infrastructure Investment and Jobs Act - H. R. 3684). As a result, the federal government is providing some \$55 billion to support capitalization projects through the Clean Water and Drinking Water State Revolving Fund (SRF) programs, including \$15 billion specifically for lead service line replacement projects. EPA estimates there are 6 to 10 million lead service lines still in the ground across the country.

In May, EPA announced that it is making available \$7.28 billion in new federal grant funding for the Drinking Water State Revolving Fund (DWSRF). This funding can be used for loans that help drinking water systems install treatment for contaminants, improve distribution systems by removing those lead service lines and improve system resiliency to natural disasters.

## Getting it Right

Even as the federal government now moves forward more aggressively some environmental advocates are concerned the size of the investment may not be enough and the initial targets may not be the most needed.

“While there is much to like about this landmark federal investment in replacing lead service lines, key improvements are needed to equitably distribute funding and align this assistance with need,” said Cyndi Roper, a senior policy advocate in Michigan for the National Resources Defense Council (NRDC).

Writing in July on the NRDC blog, Roper explained, “Every state has lead service lines, but some have significantly more than others. The highest concentration of lead service lines delivering water to homes are in the upper Midwest and Northeast states, as well as Texas... The states with the most lead service lines—like Illinois, Michigan, Missouri, New Jersey, New York, and Ohio—will receive far less per lead line than states with fewer lead service lines.”

NRDC says the fix for this problem is for EPA to quickly complete its Drinking Water Infrastructure Needs Survey and Assessment (DWINSAs) and to re-distribute the \$15 billion for lead service lines based only on the number of lead service lines in each state or territory.

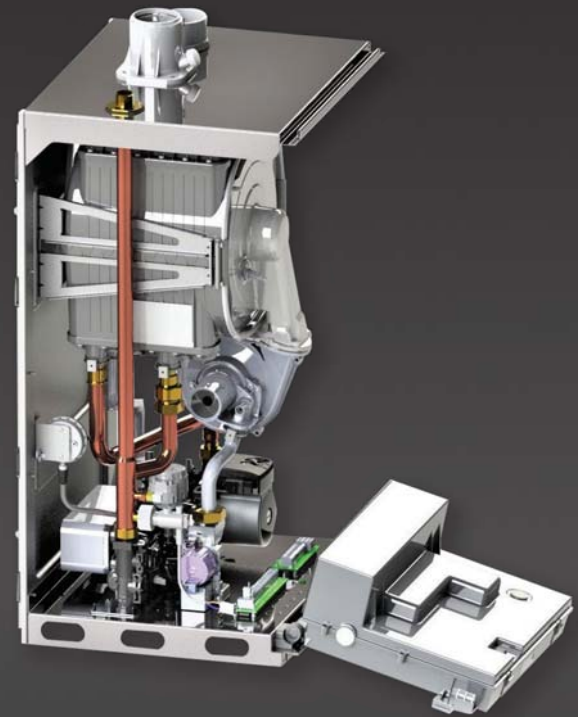
If and when those funding allocation revisions happen remains to be seen. For now, the number of lead replacement projects moving forward is accelerating. The hope, both nationally and locally, is that this long-delayed work will now move quickly enough to avoid the next Flint or Jackson. **G**

*HPAC Engineering contributed reporting for this article.*

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## A Plumber's Impact on Water Savings

► **Continued from page 24**  
**Balancing Act**

Many jobs or projects need to balance both flushing/carrying power with water efficiency when it comes to toilets. Vacuum-assist toilets provide both. When flushed, the water exiting the specialized chamber within the tank creates a vacuum, depressurizing the trapway, and allowing waste to be pulled through the trap. This allows vacuum-assist toilets to use substantially less water; some models even use as little as 0.8 GPF, while still flushing two pounds of waste or more.



use products with WaterSense certifications. The EPA WaterSense Program mandates that plumbing fixtures drive innovation, conservation, and elimination of waste. Designed for companies and consumers who are committed to conserving water, a separate EPA certification process is required to earn the WaterSense label. For a toilet to be WaterSense certified, it must flush at or under 1.28 GPF and pass a rigorous round of performance tests.

### The Difference a Plumber can Make

While one individual can save a few thousand gallons of water a year, a plumbing professional can influence hundreds—if not thousands—of people to save water, effectively helping to save millions of gallons of water in the course of your career. While it may seem insignificant, just by choosing to install only WaterSense-certified products and by taking the time to educate your customers on water-saving products, plumbing professionals are in the unique position to help our nation cut down on a significant amount of water use. Your expertise can help your customers make informed decisions on what's best for their homes and subsequently for our environment. Our wells are running dry already—be sure you're doing your part to keep them filled. **G**

*Trey Cutler serves as a Business Development Representative for Niagara. With over ten years in the plumbing and contracting industry, Trey is an expert on property ownership and disposition, as well as single and multifamily construction. He is a passionate conservationist who is dedicated to conserving the world's resources and providing a better, healthier living experience for all.*

**As professionals in the plumbing industry, it is our job to fully educate our clients—and anyone who will listen, really.**

Vacuum-assist toilets are becoming more favored in a variety of applications for several reasons, but the powerful, quiet flush paired with efficient water use is typically the main decision driver. With no change in customer use, a powerful flush is achieved while reducing the amount of water used, creating remarkable cost savings throughout the life of the toilet.

Whether or not you go with a flapper or a vacuum-assist toilet, one way to ensure that you're providing a good solution to your customer while offering them the option to potentially use a rebate is to only

## October Will Mark the 10th Annual Careers in Construction Month

ALACHUA, FL — Led by the National Center Construction Education and Research (NCCER) and its Build Your Future (BYF) initiative, this October will mark the tenth annual Careers in Construction Month (CICM). The campaign aims to increase public awareness of construction careers and inspire the next generation of craft professionals.

Ways to get involved in CICM include filing an official proclamation request, taking the CICM pledge or submitting a video to the I BUILT THIS! contest.

Individuals and organizations can request their state government to officially proclaim October as Careers in Construction Month. Proclamation requests have already been filed in 33 states and

territories as of Aug. 31. To find out if your state has proclaimed and how to file a proclamation request, visit the BYF web site at [byf.org](http://byf.org).

BYF is also encouraging industry representatives and educators to pledge to create meaningful connections during CICM. By taking the pledge, these groups commit to engaging with students to promote construction careers in the month of October. Once pledged, companies are entered into a drawing to win one of four \$5,000 scholarships, given to the construction craft training program of their choice.

For graphics and tips to promote Careers in Construction Month, download the 2022 CICM Social Media Kit at [byf.org](http://byf.org). **G**

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# Midea to Provide 20,000 Electric Window Heat Pump Units for NYC Public Housing

► **Continued from page 3**

By leveraging NYCHA's portfolio of 2,198 residential buildings, "Clean Heat for All" is designed to spur innovation and growth of new technologies and support the goals of New York State's Climate Leadership and Community Protection Act (Climate Act) and the New York City Climate Mobilization Act, which both call for a significant reduction in greenhouse gas emissions from buildings by the year 2030.

Midea—a global leader in the development of hyper-efficient electric heat pumps—was designated as a primary partner to develop and deliver innovative electrification solutions that can better serve the heating and cooling needs of existing multifamily buildings and help expedite the transition away from fossil fuels.

## Public-Private Partnerships

"The lack of an efficient and affordable solution for electric heating and cooling remains one of the primary hurdles for meaningfully reducing our carbon emissions footprint, especially for many of the tall residential buildings that comprise our portfolio," said NYCHA Chair and CEO Greg Russ. "The support of the Governor and Mayor has been instrumental in bringing this innovative public-private partnership to the Authority and helping us move towards a low-carbon future, by bringing the promising technology of beneficial electrification to the largest public housing authority in the United States."

Under New York City Local Law 97, which is part of the New York City Climate Mobilization Act, NYCHA must cut greenhouse gas emissions from its over 300 housing developments with 177,000 apartments by 40 percent by 2030 and 80 percent by 2050, and three quarters of its emissions come from old heat systems that run on natural gas. Knowing how critical it is to reduce carbon emissions, the state found an equitable and transformative way to implement new innovations with the scale and speed to achieve its ambitious carbon-reduction goal.

## Accessible, Affordable Solutions

The seven-year contract for Midea calls for the development and delivery of 20,000 cold climate packaged window heat pump units—devices that support the city's move away from natural gas and towards more efficient energy sources. The window heat pump units which Midea is developing for NYCHA will enable rapid, low-cost electrification heating in multifamily buildings by reducing or eliminating many of the cost drivers inherent to installing existing heat pump technologies in apartments, including electrical system upgrades, lengthy refrigerant piping, and through-wall drilling and penetrations.

Over the next year, NYPA will work with Midea to develop the proposed heat pump technology for testing and demonstration. NYPA will then collaborate with NYCHA to install pilot units in designated




President of Midea America Corp., Kurt Jovais and NYSERDA President and CEO, Doreen Harris, gather around a Midea product display at Woodside Houses to celebrate Midea America Corp. being selected to develop new heat pump technology to decarbonize NYCHA buildings as part of 'Clean Heat for All Challenge' in New York City on August 2, 2022.

public housing before moving forward with the widespread installation throughout the following years.

## Next Generation of Innovation

"Midea is excited to be leading the development of innovative technologies that can support more energy efficient options for heating and cooling," said Adam Schultz, research and development manager, Midea America Research Center Residential Air Conditioning. "Midea has a rich history of creating innovative air conditioning products, including cutting-edge heat pump and inverter technologies. The product we have developed for the 'Clean Heat for All Challenge' is the next generation of innovation, leveraging our decades of expertise. We feel that this product is a great step towards achieving the clean energy goals for New York City and will create a lot of interest across the country."

Midea will be collaborating with numerous government agencies including the Department of Energy as part of its "Cold Climate Heat Pump Challenge" initiative launched in 2021 to make this technology an attainable reality, and already has highly efficient cold climate heat pumps available in the US. 



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# software spotlight

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**Ford Pro**  
[WWW.FORDPRO.COM/EN-US](http://WWW.FORDPRO.COM/EN-US)



**▲ SPARKCOGNITION VISUAL AI** uses an organization's existing camera infrastructure—fixed, drone-mounted, or phones—to contextualize what it "sees." It can identify potentially unsafe practices and conditions before they become accidents.

**SparkCognition**  
[WWW.SPARKCOGNITION.COM](http://WWW.SPARKCOGNITION.COM)

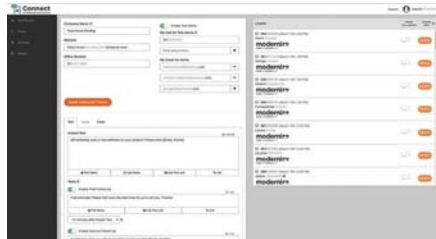
**▼ TIPPING AND REFERRAL FEATURES** make it easier for homeowners to reward service pros directly and support their businesses. The tipping feature makes it easier for home service businesses to motivate high-performing team members.

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[WWW.GETJOBBER.COM/WHY-JOBBER](http://WWW.GETJOBBER.COM/WHY-JOBBER)



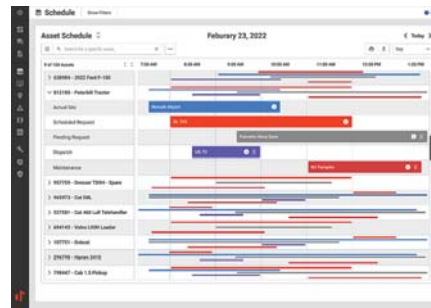
**▼ CONNECT AUTOMATED MESSAGING PLATFORM** automates the process of following up with initial sales leads as well as facilitating ongoing communications. Homeowners are able to respond via their preferred medium.

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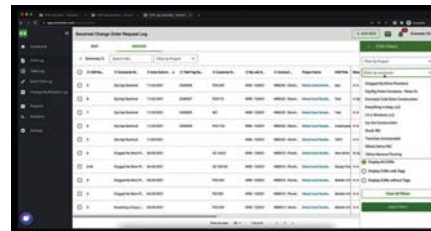
**▼ RESIDENTIAL CONSTRUCTION PROJECT MANAGEMENT** can cut bidding time by 80% with digital takeoffs and reusable estimate templates. Complete accurate takeoffs with tools that can capture and reuse measurements.

**Buildxact**  
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**▲ CONSTRUCTION SCHEDULING SOFTWARE** allows for visibility of equipment and labor resources across divisions and jobsites in a single combined calendar/Gantt chart view for equipment and labor planning and forecasting. Project managers can see what's down for maintenance, what's currently operating and what's scheduled for six months down the road for a job.

**Tenna**  
[WWW.TENNA.COM](http://WWW.TENNA.COM)



**▲ CHANGE ORDER PLATFORM** allows project stakeholders to create, track and share change order request data in one place. The cloud-based software helps contractors organize change order communication to speed up processing time, close out extra work faster and maintain better customer relationships.

**Extracker**  
[WWW.EXTRACKER.COM](http://WWW.EXTRACKER.COM)

**▼ MASTERWORKS CLOUD CAPITAL PROGRAM MANAGEMENT** is now compliant with Web Content Accessibility Guidelines, version 2.1, an internationally recognized set of standards for making web applications more accessible, primarily for people with disabilities.

**Aurigo Software**  
[WWW.AURIGO.COM](http://WWW.AURIGO.COM)



**► BOOMNATION 2.0 SKILLED WORKFORCE APP** connects tradespeople with employers who are looking for a better way to engage with and hire qualified skilled workers and share content to enhance project communications. It is upgraded with more relatable content, an improved and personalized community, and a new communications system.

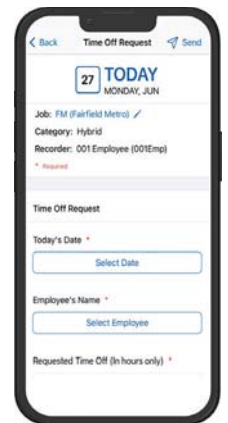


**Boom Nation**  
[WWW.BOOMNATION.COM](http://WWW.BOOMNATION.COM)

**► HCSS FORMS DIGITAL FORMS BUILDER**

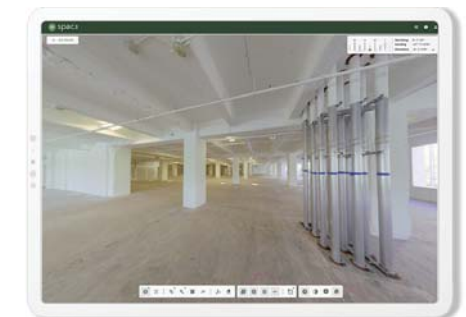
eliminates paperwork and improves worker productivity. Crews can answer questions online, add photos, generate smart forms, and sign off on forms. It is available in the HCSS Field app as an enhancement to both HCSS HeavyJob and HCSS Safety..

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**▼ QA/QC CONSTRUCTION VARIANCE REPORTS** now includes 12-hour turnaround, enabling commercial construction teams to accurately compare design models to reality-capture laser scans, reporting on installation variances as they occur.

**Solidspac3**  
[WWW.SOLIDSPAC3.COM](http://WWW.SOLIDSPAC3.COM)



# editor's choice

**THE RESIDENTIAL COMBINATION BOILER (NRCB)** from Noritz allows for simultaneous residential domestic hot water and space heating. It uses 316L austenite stainless-steel primary and secondary heat exchangers, which have higher corrosion resistance than traditional heat exchangers. Available in two models: The NRCB180DV has a maximum gas input Btu/hr. of 180,000 for hot water and 100,000 Btu/hr. for space heating. Its maximum flow rate is 9.8 gallons per minute (GPM). The NRCB199DV has a maximum gas input Btu/hr. of 199,000 for hot water and 120,000 Btu/hr. for space heating. Its maximum flow rate is 11.1 GPM. On the domestic hot water side, the NRCB is compatible with a recirculation loop without the need for accessory heat exchangers or controls.



**Noritz America**  
WWW.NORITZ.COM

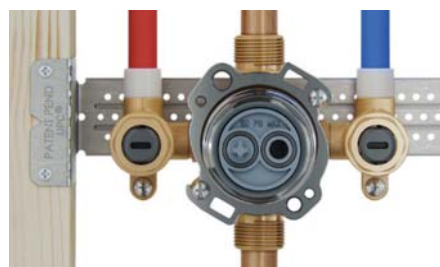
▶ **INNOVATOR TESTABLE SHOWER DRAIN** is a receptor-type drain for preformed shower bases. It features the Innovator orange test membrane, testable to 22 psi, which eliminates the need for test balls, caps or plugs. It includes a heavy-duty, snap-on grid strainer and is available in four finishes.



**Watco Mfg.**  
WWW.WATCOMFG.COM

▼ **TREYSTA TUB AND SHOWER VALVE** provides flexibility based on the specific requirements of each installation. The body features integrated mounting holes. The flat plane of the plaster guard allows contractors to set a level on top.

**Gerber Plumbing Fixtures**  
WWW.GERBER-US.COM



▲ **TRINISIC BATH EXPANSION** includes all-new wheel handle options offering an industrial, European look in the bath. Features DIAMOND Seal technology with a patented design that reduces leak points, is less hassle to install and lasts twice as long as the industry standard. It is WaterSense-labeled.

**Delta Faucet Co.**  
WWW.DELTAFAUCET.COM

▶ **ISPILLGUARD LEAK RECOGNITION SYSTEM** is placed within the sump of a spill containment device, or near the equipment to be monitored, and alerts users with an audible and visual alarm for a minimum of 24 hours when contact is made with a liquid.

**Denios**  
WWW.DENIOS-US.COM



▲ **NEXT-GEN SUBMERSIBLE UTILITY PUMP** features a new motor designed to boost the pump's performance and efficiency. The updated 5-MSP includes a permanent split capacitor motor that operates without oil—creating a more environmentally stable unit better suited for outdoor living applications. Core features such as the stainless-steel motor shaft and an epoxy powder-coated aluminum body mirror those found in the original unit. It delivers the same or better pumping capacity than the original, but at greater depths.

**Franklin Electric Co./Little Giant**  
WWW.LITTLEGIANT.COM

▼ **VGEN-EYE MICRO-SCOPE3** includes a stronger pushrod, which permits inspections in 1½" to 4" drain lines up to 100' long. A sonde on the end of the pushrod makes camera location easy with a Hot Spot locator. Wi-Fi capability lets users view and record inspections on smartphones or tablets. It is ideal for inspecting small drain lines, many toilet traps, and other hard-to-check locations.

**General Pipe Cleaners**  
WWW.DRAINBRAIN.COM



▲ **MEN'S BRZ WORKWEAR COLLECTION** is built on the concept of climate-regulating comfort. BRZ products are designed for those warmer months where pants are still a requirement on the jobsite, but breathability and temperature regulation is just as important.

**Helly Hansen**  
WWW.HHWORKWEAR.COM

▶ **MESA PRO RUGGED TABLET** features 11th-generation Intel Core i5 processors, 16 GB of LPDDR4x RAM, a Windows 11 operating system, device customization options, a sunlight-readable 10" display, all-day battery life, and Juniper Rugged design.

**Juniper Systems**  
WWW.JUNIPERSYS.COM/PRODUCTS/MESA\_PRO



▼ **CLEANTEC CTC MIDI CORDLESS MOBILE DUST EXTRACTOR** features a 36-v. turbine with up to 109 cubic ft./minute and 76" of static water lift. It is fully equipped with push-button suction control, manual filter cleaning, exterior-accessible filter drawer, and a smooth, hassle-free hose.

**Festool**  
WWW.FESTOOLUSA.COM



▶ **LFII RESIDENTIAL 5.8K CONCEALED PENDENT SPRINKLER**

includes an increased 5.8 K-factor featuring improved hydraulic performance to help more efficiently protect 18' x 18' and 20' x 20' rooms. Available in both ordinary 155°F and intermediate 200°F temperature configurations. The sprinkler and cover plate assembly provide a sleek, concealed aesthetic while allowing for adjustment up to ¾".

*Tyco/Johnson Controls*  
WWW.TYCO-FIRE.COM



▶ **IWASH S-12 BIDET SEAT** offers a warm air dryer, heated seat and built-in deodorizer, an auto-open/soft-close seat lid and an in-bowl LED nightlight. With a slim profile, it installs easily in place of a traditional seat on most elongated toilets. A tankless, instant ceramic water heating system provides an unlimited supply of warm water.

*Icera*  
WWW.ICERABATH.COM



▶ **CART ARMOUR MOBILE SECURITY PANELING** are mobile jobsite storage solutions for light duty carts to protect tools from theft and damage. The secure interlocking steel paneling system encapsulates mobile utility carts to protect the contents, while also preventing tools from falling from the cart. The product line has expanded to now support Suncast carts. Combined with PLANZBOARD, the product offers a mobile command and control center for more users.

*Knaack*  
WWW.KNAACK.COM



▶ **RAFLECT50 HIGH-VISIBILITY GARMENTS** are engineered to withstand the high temperatures and harsh chemicals of industrial laundries. They have been independently tested to withstand at least 50 washes. Available in multiple styles including T-shirts, woven work shirts, and polos.

*Reflective Apparel*  
WWW.RAFLECT50.COM



▶ **WATER HEATER SERVICE VALVE KITS** simplify the installation of water heaters and isolate the water supply and other peripheral devices for service. Hot and cold connection solutions are available with options for unique installation needs, including isolation valves, vacuum relief valves, and expansion tank service valves. All kits feature FIP dielectric unions.

*Webstone*  
WWW.NIBCO.COM

▶ **RELOAD UTILITY KNIFE** is a rapid-change tool using a patented quick-reloading blade mechanism that reloads a pack of blades with the flick of a switch. After removing a used blade, depressing the slider, and returning it, it loads a new blade from the magazine.



*ToughBuilt*  
WWW.TOUGHBUILT.COM

▶ **WAVE EDGE RECIPROCATING SAW BLADE** from Lenox, a Stanley Black & Decker brand, is an application-based technology. The new



tooth form design delivers up to 50% longer blade life for select models. The technology is featured across all models of MULTIWOLF and select METALWOLF and DEMOWOLF (pictured) models for metal, wood, plastic and demolition applications.

*Lenox*  
TOOLS.CUTWITHLENOX.COM

▶ **BLUE MONSTER VELOCITY TANKLESS WATER-HEATER FLUSH**

is a fast-acting compound to remove scale, lime, rust and other corrosive water-formed deposits in commercial and residential tankless units. It is easy to use, consists of odorless granules that eliminate splashes and spills, and restores circulation and pressure in under 20 minutes. It contains sulfamic acid and is compatible with copper.



*Clean-Fit Products*  
WWW.CLEANFIT.COM

▶ **TRENCHLESS PIPE PATCHING SYSTEM** is a start-to-finish solution for faster and simpler trenchless repairs. It offers more types of repairs with less materials and equipment. It is ideal for repairing small sections of damaged pipe in residential, commercial, and industrial settings.

*Ridgid*  
WWW.RIDGID.COM



▶ **CALCI-FLUSH STANDARD TANK WATER HEATER FLUSH**

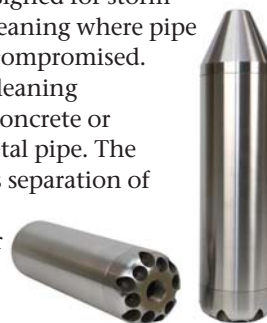
helps eliminate calcium and scale buildup and restore circulation and water pressure. Using as part of a water tank maintenance program helps extend the life and performance of a standard water heater. The solution enters the water tank via gravity flow and starts to work immediately.



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▶ **HIGH-PERFORMANCE OMG NOZZLE**

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▶ **DEARBORN TRUE BLUE BATH WASTE KITS** are now available in a champagne bronze finish for full, half and trim kits with options for ABS or PVC and touch toe, uni-lift and push 'n' pull stopper. The kits feature brass construction and heavy-duty crossbars.

*Oatey*  
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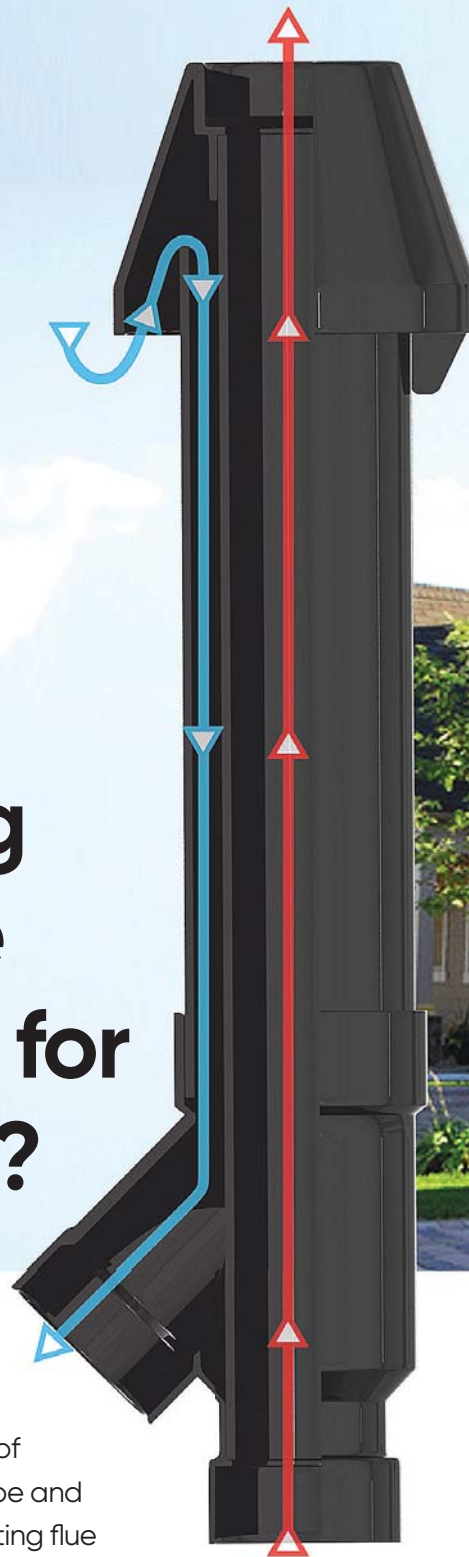
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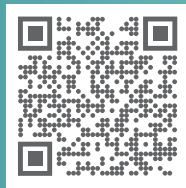
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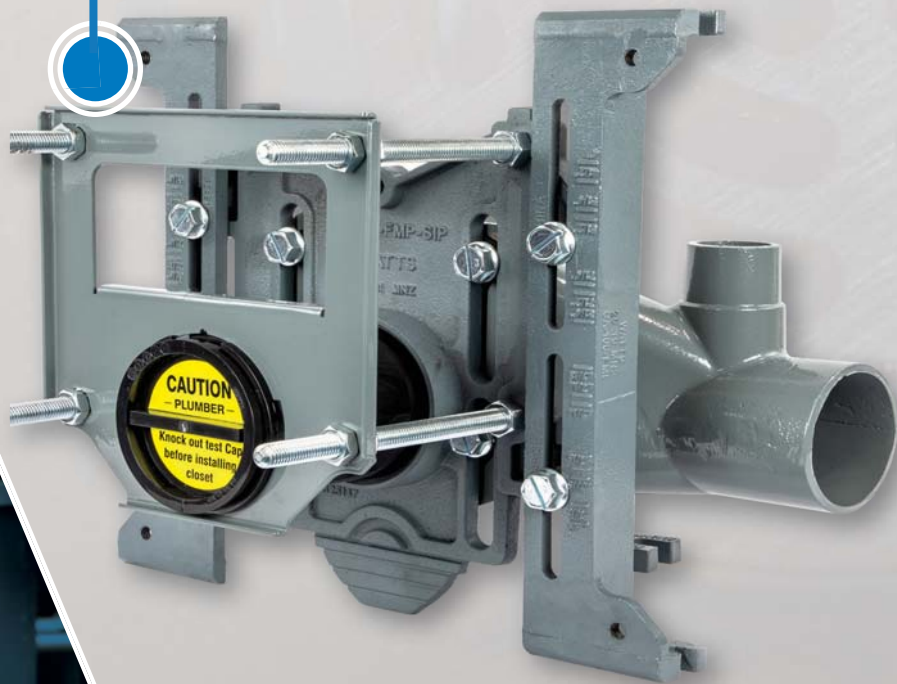
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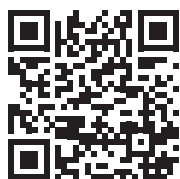
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# So is it a Recession or Isn't It?

**A**s I sit writing this editorial the markets are not looking healthy. The Dow Jones is falling, the dollar is rising, and some analysts are saying a recession is immanent—with some saying it's already here.

How did we get here? Basically, human needs and expectations meeting real-world conditions.

The pandemic had people staying home, not traveling, not spending money out, but still able to fire up their Amazon accounts. It gave a big boost to consumer demand. That surge in demand strained the supply chain. High demand and low supply meant rising prices for everything. Then came a spike in fuel prices (made worse by the invasion of Ukraine) which added to the cost of anything being shipped.

Demand remained high, even through the post-pandemic return to work. I say "return to work" instead of "return to the office," because after more than a year of working remotely a lot of people found they preferred working from home. For a lot of employers (certainly not all), the

pandemic proved remote work was possible without a loss of productivity. Data projections\* estimate that by the end of 2022 nearly 25% of all professional jobs in North America will be remote.

This freedom to work for anyone from anywhere, combined with a tight labor market, made it an ideal time to shop for

a new job; what the papers started calling, "The Great Resignation." Companies began raising wages to attract and retain workers. Compensation costs for civilian workers increased 5.1% for the 12-month period ending in June, according to data from the Bureau of Labor Statistics.\*\*

Those companies passed the rising cost of labor on to their customers in the form of still higher prices. Workers, in response to higher prices demanded higher wages, and 'round and 'round the mulberry

bush the country went in an inflationary cycle not seen since the 1970s. As the rate of inflation approached 9%, the Fed—whose mandate is to keep inflation around 2%—began raising interest rates.

In August, the annual inflation rate eased for the second straight month to 8.3%, the lowest in four months. But the expectation among most economists had been that it would be lower (about 8.1%). The Fed, fearing the long-term effects of inflation even more that the possibility of a recession, raised the benchmark rates another 0.75 points on September 21st. And with that, a lot of institutional investors decided the US economy had reached a tipping point, prompting a sell-off.

So, is the US in a recession? By the informal definition of two straight

quarters of negative GDP, yes we are. However, recessions are typically coupled with high unemployment, and the labor market continues to boom. It looks as if the economy might be heading into unknown waters.

At times like these, aren't you glad to be a plumber? Come what may, people will always need the taps to flow and the toilets to flush. New installations and remodel work will take a hit, but service, repair and maintenance will remain dependable sources of income. We have a column this month from Shay Bloch, *Why the Skilled Trades are Recession-Proof*, on pg. 44 that gives more reasons to be glad—and even talks about some opportunities a recession might present.

Remember, if you have a solid business model and a solid business plan, it's possible to thrive, even if the economy takes a downturn. **C**

\* <https://www.theladders.com/press/25-of-all-professional-jobs-in-north-america-will-be-remote-by-end-of-next-year>

\*\* <https://www.bls.gov/news.release/pdf/eci.pdf>

**How did we get here? Basically, human needs and expectations meeting real-world conditions.**

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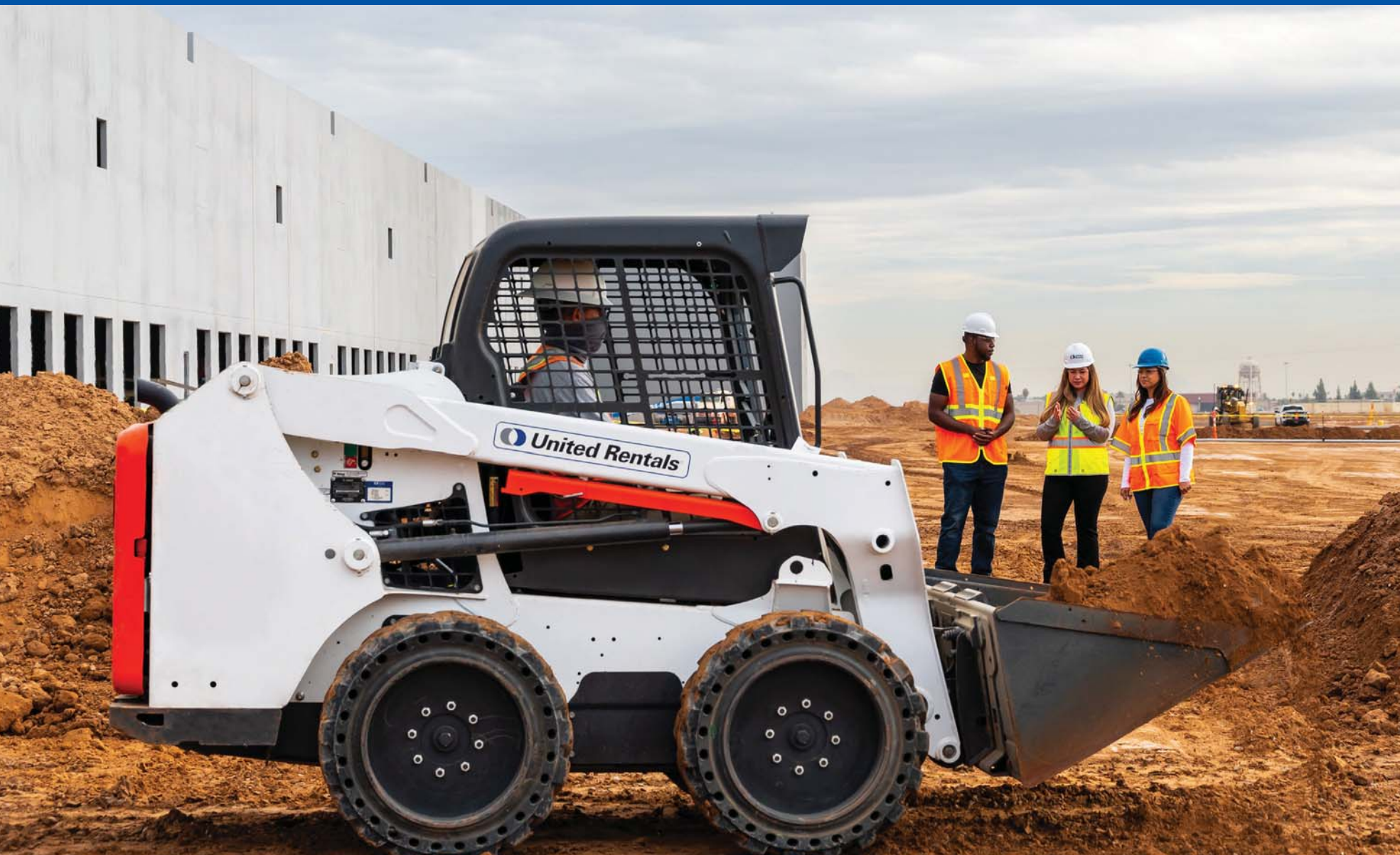
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