Ripple Effect™
The Voice Of Plumbing Manufacturers International

FEBRUARY 2025
VOLUME 28, ISSUE 2

The Wisdom of Sensible Science

By Kerry Stackpole, IOM, FASAE, CAE, PMI CEO/Executive Director

Kerry Stackpole

Plumbing Manufacturers International supports the implementation of sensible, pro-growth, science-based policies and regulations. In today's fast-evolving global economy, as our industry strives to achieve sustainable growth, we must adopt strategies rooted in these principles. Such an approach ensures that economic development is balanced with environmental stewardship, public health, and technological advancement. How do we navigate this path?

We begin by leveraging science-based innovation. At the heart of a successful plumbing fixtures and fittings industry is the integration of cutting-edge scientific research and technology. Science-based policies emphasize evidence over conjecture, promoting innovations that are not only effective but also safe and sustainable. By relying on such policies, we can prioritize our longstanding investments in research and development, enabling us to discover and implement new technologies, improve efficiency, reduce costs, and meet regulatory standards.

In today's data-driven environment, using those insightful tools to aid decision making will result in robust assessments of trends, helping you to mitigate risks and adapt swiftly to regulatory changes. Many of you have also found that partnering with universities and research institutions ensures access to the latest scientific discoveries and methodologies, fostering innovation while remaining compliant with current and emerging regulations.

As we've highlighted over the past many years, PMI members excel at their commitment to sustainability. The collection of sensible policies deployed by PMI members include sustainability as a core component, recognizing the importance of balancing growth with environmental preservation. Our industry leads the way in optimizing the use of raw materials, water and energy to reduce waste and minimize environmental impact. Coupled with recycling, reuse and sustainable product design, PMI members excel at minimizing our industry's ecological footprint. Pushing forward as we transition to renewable energy sources and eco-friendly manufacturing processes, we'll not only meet regulatory requirements but also strengthen our appeal to environmentally conscious consumers.

To be clear, pro-growth policies do not equate to a lack of regulation; instead, they involve creating a framework that supports innovation while safeguarding public interests. An environmental scan of successful industries demonstrates a commitment to proactively aligning operations with anticipated regulations; this commitment assures compliance and mitigates potential legal and financial risks.

PMI members are on the forefront of actively participating in the policymaking process to ensure that regulations are both practical and aligned with our industry's capabilities. Later this year, PMI will host legislative forums in Sacramento and Washington, D.C., to enable you and members of your team to visit and share perspectives with your elected representatives on issues of concern to your company and our industry. You will want to be part of both.

One of the continuing challenges in today's environment is growing a skilled and knowledgeable workforce, especially one operating within a science-based regulatory framework. PMI supports this effort by pursuing legislation that supports innovative workforce training initiatives. We also provide your team with free monthly continuous learning opportunities, a dynamic annual conference, and several leadership gatherings to ensure they (and you) stay current with the latest technologies and regulatory requirements.

The continued success of the Environmental Protection Agency's WaterSense Program clearly demonstrates the value

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INSIDE

PMI Amplifies Effort Against Counterfeit Plumbing Products

By Judy Wohlt, PMI Communications Team, Valek and Co.

A top priority for Plumbing Manufacturers International is protecting members' brand value in online marketplaces such as Amazon, eBay, and home improvement retailers. PMI continues to work with members, online marketplaces, federal and state agencies, legislators, and the Buy Safe America Coalition (BSAC) to protect Americans from counterfeit and contraband plumbing products, which are often unsafe and made poorly.

Amazon, BSAC, and federal agencies such as the National Intellectual Property Rights Coordination Center (IPR Center) continue strengthening protections for plumbing manufacturers and others against counterfeiters. For example, the IPR Center announced in December a new partnership with a private investigative firm to battle counterfeiting, digital piracy, and illicit trade.

The annual cost of counterfeit goods, pirated software, and trade secrets theft to the nation's economy runs between $225 billion and $600 billion, stated the Federal Bureau of Investigation.

Curbing the sale of counterfeit plumbing and other products takes vigilance and collaboration among businesses, government, industry associations, and individuals buying products.

Government agency curbs global IP theft, delivers free tools

The IPR Center leads the U.S. government's response to stop global intellectual property (IP) theft and enforce trade laws. Comprised of federal agencies and industry experts, the center prevents predatory and illegal trade practices that threaten the public's health and safety, the U.S. economy, and national security.

The IPR Center and IP House, a private-sector investigative firm, recently announced their partnership to "enhance the enforcement of IP rights, protect the global economy, and safeguard innovations by connecting resources and sharing intelligence within the anti-counterfeiting, brand protection, and anti-piracy communities," stated a Homeland Security Investigations (HSI) news release.

The center also helps small and medium-sized businesses, including plumbing manufacturers, get free help protecting themselves against IP theft and fraud via "IP Protect," a joint initiative offered by the IPR Center, Michigan State University's Center for Anti-Counterfeiting and Product Protection (A-CAPP), the U.S. Chamber of Commerce, and the Better Business Bureau.

Through the IP Protect initiative, small businesses can request an in-depth IP rights briefing, which will be conducted by one of HSI's special agents, and receive brand protection best practices and guidance on trademark and copyright registration.

Coalition continues advocacy efforts on behalf of plumbing manufacturers, others

The BSAC, of which PMI is a member, represents a diverse collection of retailers, consumer groups, manufacturers, intellectual property advocates, and law enforcement officials that support government efforts to protect against the sale of counterfeit and stolen goods.

PMI supported the coalition's advocacy efforts to pass the Integrity, Notification, and Fairness in Online Retail Marketplaces (INFORM) Consumers Act in 2023. The act was passed to help combat the online sale of stolen and counterfeit consumer products, including plumbing products, by ensuring transparency of high-volume, third-party sellers in online retail marketplaces.

In 2024, the BSAC sent a letter to the Federal Trade Commission urging the agency to beef up enforcement actions against online marketplaces to better protect buyers. "BSAC encourages the commission to publicize INFORM violations and FTC enforcement activity to promote transparency and to raise consumer awareness of non-compliant online marketplaces," the letter stated.

Amazon crime unit, tools help stop counterfeiters

Amazon employs a Counterfeit Crime Unit (CCU) and delivers several tools, including Brand Registry, Transparency, and Project Zero, to help plumbing manufacturers and others keep their intellectual property secure, automate the detection of counterfeits, and take legal action.

Since the CCU was founded in 2020, its team of former federal prosecutors, law enforcement, and data scientists has pursued more than 21,000 bad actors through litigation and criminal referrals to law enforcement, reported the Amazon website.

Amazon's Brand Registry detects and reports suspected IP infringement while Project Zero provides a self-service tool

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PMI Urges CEC to Reconsider Lowering Flush Volumes

By Judy Wohlt, PMI Communications Team, Valek and Co.

Plumbing Manufacturers International is taking new steps to encourage the California Energy Commission (CEC) to reconsider further lowering maximum toilet flush volumes in California. Those steps include building a coalition with other organizations with similar concerns as PMI and collecting relevant information from current studies on the negative effects of lower flush volumes.

For the last several years, PMI has urged the CEC to focus on replacing legacy plumbing products with Title 20-compliant products to achieve significant and immediate water savings. However, the CEC staff believes lower flush volumes will help achieve the water-saving goals the state has set, reported PMI Technical Director **Kyle Thompson**.

The CEC issued a staff report and recommendations to the public for review and comment on Nov. 6, 2024, on CEC Docket 22-AAER-05, Appliance Efficiency Regulations for Water Closets. The report proposes updating the state's water efficiency standard from 1.28 gallons per flush (gpf) to 1.1 gpf for single-flush water closets. The report also proposes updating the effective flush volume of 1.28 gpf to a full flush volume of 1.28 gpf and a reduced flush volume of 0.8 gpf for dual-flush water closets, effective Dec. 1, 2026. The CEC is accepting public comments on the proposed standards through Feb. 5, 2025. This pre-rulemaking action could trigger a formal CEC rulemaking process with further opportunity for public comment before the commission makes a decision, Thompson added.

Shifting strategy

PMI's latest strategy includes new steps to help the CEC understand the potential health risks and other consequences of lower flush volumes. The PMI California Focused Task Group recently created a strategy document with member input; the document was approved by the PMI Advocacy/Government Affairs Committee.

"Our strategy is to align efforts with water and waste utility organizations, hospital organizations, third-party certifiers, and retailers, such as Lowes and Home Depot, who, like PMI, care about the potential impacts that lower flush volumes can have," Thompson said.

PMI's next round of comments to the CEC will convey the potential negative health and safety concerns lower flow rates would have on water both upstream and downstream of plumbing fixtures. Comments will highlight potential waterborne disease and health implications, how water utilities may need to adjust wastewater treatments, and current studies that assess the balance between water conservation, stagnant water in plumbing, and promoting a healthier water ecosystem, he explained. In addition, PMI will collect information from members to identify any negative impacts manufacturers anticipate in developing California-specific, lower-flow plumbing products.

Nevada, a state facing water shortages like California, has set an example for using thoughtful water conservation methods without lowering flow and flush rates, Thompson noted. Southern Nevada recycles all indoor water for either direct or indirect use, stated the Southern Nevada Water Authority website. California would benefit from conserving water in other areas, such as installing landscaping in office parks and commercial spaces that require little water to maintain, he added.

Ultimately, PMI plans to present to the CEC a discussion and presentation of the challenges, risks and timeframes involved with lowering maximum flow rates in California. "PMI wants to ensure the effectiveness of our members' products—that they perform to consumers expectations and deliver water safely," Thompson said.

Staying engaged

PMI has been actively engaged in each phase of the docket since it was introduced in 2022, responding with comments and conversations with CEC staff and other stakeholders.

PMI leadership and some members met in person with CEC staff and Commissioner **Andrew McAllister** during the PMI Sacramento Fly-in last June and virtually at the CEC staff workshop in December. Discussions involved PMI's concerns with further lowering flush volumes and the association's recommendation to focus on California's transition to products compliant with existing laws—since there is currently less than 25% market penetration of compliant products.

PMI will submit comments on the CEC staff report by Feb. 5, the public comment deadline, and continue making headway on its updated strategy to prepare for the CEC's formal rulemaking process.

Net-Zero Water A Key Feature of Living Buildings

By Ray Valek, PMI Communications Team, Valek and Co.

A flower receives all its nourishment from natural elements—rain and sunlight from the sky and nutrients from the soil. When a flower dies, it leaves behind seeds—it has given us more than it consumed.

"The flower is the metaphor of a living building," said **Shan Arora**, director of the Kendeda Building for Innovative Sustainable Design at Georgia Tech, during "The Future is Net-Zero Water" panel presentation at the PMI24 Manufacturing Success Conference. Also participating in the panel were **Joshua Gassman**, principal and sustainable design director, Lord Aeck Sargent, the firm that developed the Kendeda Building, and **Mike Snider**, field foreman, Batchelor & Kimball, which participated in the construction of the building.

A living building "produces more electricity than it consumes each year," Arora stated. The building's photovoltaic system supplies more than 200% of the building's annual energy needs, far exceeding the 105% Living Building Challenge requirement. The building is 80% more efficient than a comparable new, conventionally built higher education building, he said.

A building with net-zero electric, water, carbon and waste

The Kendeda Building is fully certified to the Living Building Challenge, the world's most ambitious and holistic green building achievement. Having satisfied about 300 requirements to earn its certification, the building achieved zero carbon impact and negative waste during its construction "One-half percent of the building's waste was landfilled. Everything else was recycled or reused in the building. Incorporation of salvaged materials resulted in the project diverting more waste from the landfill than was sent to it," Arora emphasized.

The building's water efficiency is a marvel, too. "It infiltrates 15 times more rainwater each year than we need, and that's one of the ways we get to net-positive water," Arora stated. He showed an image of the entrance to the Kendeda Building that looks like a beautiful garden but is actually a constructed wetland that treats all of the property's gray water. "The gray water does not hit the sewer. It hits this wetland and then goes straight into the groundwater," he explained.

The building is working to make its rainwater drinking water system operational. Once that happens, hopefully this year, it will be the "smallest municipal water system in the state of Georgia," Arora stated.

Toilet system turns waste into compost

The building's foam-flush toilet system turns all waste into compost within the building. Arora explained that onsite composting can revolutionize sanitation by eliminating the need for pipes leading to an off-site sanitation facility. "How do we do with toilets what we did with cell phones?, which is when you cut the wire of a cell phone (go wireless), a place like India can go from 20 million landlines to a billion cell phones. How are you going to get sanitation to everybody? You cut the pipes," he said.

Arora clarified the definition of net-zero water. "Net-zero water does not mean toilets that don't use any water. Net-zero water means that over the course of a certain timeframe, your consumption is net zero," he explained.

Snider said that some of his clients are asking how they can be proactive in conserving water. In addition to suggesting water-efficient products, including waterless urinals, he said right-sized piping systems can help, especially in older buildings with oversized piping systems, which result in unnecessary material costs and low fluid velocity leading to water and energy waste.

Demystifying living buildings

To encourage the construction of more living buildings, the challenge is to normalize them, Gassman said. "And not only within our design team, engineers and others we work with, but also within our client groups and the authorities having jurisdiction over net-zero water strategies," he said. The idea is to make them normal in the same way that double-pane windows transitioned from being seen as extravagant to being required by code, he added.

Arora emphasized the importance of having an example of a living building in your jurisdiction. Gassman's firm had previously designed a smaller version of the Kendeda Building's foam-flush composting toilet system for another building in Atlanta. Because this precedent had been established, the city of Atlanta regulator recognized the technology and readily approved the Kendeda Building's larger foam-flush composting toilet system, Arora explained. "That's why the Kendeda Building exists: to demystify what we've done so it can be easier for the future," he emphasized.

When thinking into the future, Arora suggested owners of building assets ask themselves: is water, electricity and sewage treatment going to be cheaper in the future? "If you're not thinking resilient and regenerative, you're locking in increased operating costs," he stated.

"The goal of the Living Building Challenge isn't to make every single new or retrofitted building a living building," Arora continued. "It's to show that it can be done. Then for every single project, for every single product, if we incorporated one regenerative feature or one resilient feature collectively, that would be tremendous. . . The goal is to drive down costs. There's going to be increasing economic pressure for buildings to lower their operating costs, and water's definitely going to be one of those things."

Experts Share Cautiously Optimistic Manufacturing Outlook

By Judy Wohlt, PMI Communications Team, Valek and Co.

Industry and financial experts shared a cautiously optimistic outlook for plumbing and other manufacturers in 2025, citing the potential for lower interest rates, new investments, and the use of technology to help manage lingering labor challenges. Meanwhile, the new Trump administration announced new 25% tariffs on imports from Canada and Mexico and an additional 10% on Chinese goods, all subject to negotiations.

Strong housing growth at the end of 2024 will likely translate into higher demand for plumbing products in 2025. The U.S. Census reported December 2024 housing starts grew by 15.8% from November to a seasonally adjusted annual rate of 1,499,000—the highest since March 2021. Starts for housing with five or more units climbed 58.9% from November to December but declined 11.3% over 2024.

Spending to build new or expand existing manufacturing facilities hit a new record of $238 billion in June 2024, which is likely to fuel future investments in new equipment and intellectual property, stated Deloitte's 2025 Manufacturing Industry Outlook report. Lower interest rates in 2025 could encourage further investments.

Offset labor issues with tech

While finding workers will remain challenging for this year and beyond, plumbing and other manufacturers can use technology to their advantage.

Almost 60% of manufacturers in the National Association of Manufacturers outlook survey for the third quarter of 2024 mentioned their top challenge was the inability to attract and retain employees. Nearly 2 million manufacturing jobs could go unfilled if talent issues aren't tackled over the next 10 years, according to a 2024 study by Deloitte and the Manufacturing Institute. More roles that require a blend of technical manufacturing and digital and soft skills will be in demand.

"For every job opening posted today, there's about 92% of a worker," said ITR Economics' **Lauren Saidel-Baker** during her PMI Market Outlook LIVE presentation on Nov. 6. Retiring Baby Boomers and high prime-age labor force participation are contributing to the issue. AI, automation and co-worker robots may be part of the solution, she noted. Offering competitive salaries and other benefits will help, too.

More companies are using digital tools to minimize worker turnover, plan for unpredictability, and improve talent management. By 2025, more than 80% of large companies with hourly employees will be using advanced management software solutions, stated a recent Gartner report. In addition to improving operational efficiency, these systems enhance worker experiences by gathering employee feedback, suggesting shift pattern modifications, and improving communications. In addition, the report suggested that employing AI tools allows manufacturers to create personalized development plans for workers that boost job satisfaction and reduce turnover.

New administration to review tariffs and trade deals

On his first day in office, President **Donald Trump** signed an executive order asking federal agencies to examine a broad list of trade issues that could launch new tariffs on both American adversaries and allies.

The order directed the Departments of Commerce and Homeland Security to assess illegal migration and the flow of fentanyl from Canada, Mexico, China, and "other relevant jurisdictions" and recommend trade actions to resolve the issue. Only days later, the president signed an order placing a 25% tariff on goods imported into the U.S. from Canada and Mexico and an additional

Lauren Saidel-Baker

10% tariff on Chinese goods, all subject to negotiations.

In addition, the order states that the U.S. Trade Representative and senior counselor for trade and manufacturing must review the impact of all trade agreements to ensure trade deals favor domestic workers and manufacturers rather than foreign workers. A global supplemental tariff could be considered to address national security risks associated with persistent annual trade deficits.

As part of the order, government agencies must review how the U.S.-Mexico-Canada trade agreement (the USMCA)—which was signed by Trump in his first term and is up for review in 2026—is impacting American workers and businesses.

"PMI's position remains the same—we strongly oppose tariffs on plumbing fixtures and fittings because tariffs raise the price of infrastructure projects and the affordability of homes and building projects across America," said PMI CEO/Executive Director **Kerry Stackpole**.

PMI members can attend a Feb. 20 PMI webinar to learn more about trade policy under the Trump administration and its impact on plumbing manufacturers. Learn more and register at tinyurl.com/4rjjxu37.

Urine Recycling Can Reduce Pollution, Energy Use and GHGs

By Ray Valek, PMI Communications Team, Valek and Co.

Mathew Lippincott spoke of efforts to build a urine recycling industry at the PMI24 Manufacturing Success Conference. An expert on the regulatory issues concerning urine reuse, especially urine-diverting toilets, Lippincott is a consultant for the University of Michigan, which along with the Rich Earth Institute gained funding from the National Science Foundation to build a broader coalition to work on this issue.

Lippincott said nutrient pollution is a major reason urine recycling is needed. Nutrient-rich urine ends up in wastewater and is very expensive to remove. For example, Falmouth, Massachusetts, is struggling with nutrient pollution primarily from sewage, and conventional solutions using advanced septic systems or building a larger sewer network to reduce the pollution would cost between $50,000 to $100,000 per household, he explained.

However, early estimates for solving Falmouth's nutrient pollution problem through urine diversion costs "about a 10th what it would cost to do with advanced septic or sewers," Lippincott stated.

Most of the nutrients that existing centralized treatment systems try to remove from sewage are in urine, and the average person produces between 60 and 180 gallons of urine containing the nutrients nitrogen and phosphorus each year, he explained. Treatment systems now recover only about 11% of the nitrogen and 21% of the phosphorus through an expensive and energy-intensive process. "This is where most of the energy is used in a centralized plant," Lippincott said. "And normally, wastewater treatment is the number-one energy bill for a municipality. Urine recycling could cut energy use for nutrient removal by 40% and cut greenhouse gas emissions (GHGs) by nearly half."

Mathew Lippincott

Urine recycling can create price-stable fertilizer products

In addition to reducing nutrient pollution, urine recycling creates a more price-stable fertilizer product, he said. "Fertilizer prices have been volatile over supply chain issues. . . because most of the world's phosphate reserves are in Morocco, and a good bit of that phosphate they mine comes from conflict zones in Western Sahara." Russia is also a large supplier of phosphate, and "the war in Ukraine has created a huge issue," Lippincott explained.

This situation creates national security concerns, and "we know that if we can recycle the nutrients in America's urine, we could replace a quarter of all fertilizers, and a quarter of the fertilizer market in the United States is about $50 billion," he estimated.

The annual urine output of an average person can fertilize a 50-foot section of the University of Michigan's arboretum. "We have been fertilizing our arboretum with urine for almost 10 years now" through **Dr. Nancy Love's** "pee for the peonies" program, Lippincott said. The university's recycling system collects the urine and transforms it into safe fertilizers. "And we're working to scale up because the university has sustainability goals to replace imported fertilizers by 2040," he added.

Collaborating with the Michigan Department of Agriculture and Rural Development, the university licensed this concentrated sanitized fertilizer and set a precedent in doing so. The university was the first group to license a urine-derived fertilizer as a fertilizer, not a biosolid. Now, regulators across the U.S. approve permits for the urine recycling and treatment system because the end-product is licensed as a fertilizer, he explained.

Developers show keen interest in urine recycling systems

This accomplishment has generated press coverage. "Every time we get in the newspaper, we get calls from developers, and they're saying, 'Hey, how can I install these systems?' And the reason why they want to install urine diversion systems is because 81% of U.S. treatment plants are at design capacity, 16% are exceeding their capacity, and a lot of cities are hitting their nutrient limits," Lippincott said.

New York City developers know there's land on Manhattan where they could put buildings if they were not limited by federal nutrient limits, "if (the buildings) didn't have nitrogen and phosphorus to discharge to the wastewater plant," he explained. "What was interesting is that developers didn't care what these urine diverting systems cost. All they said was, 'How do I get a permit and how do I keep the permits going on schedule?' That was their only concern, because of the value (the systems provide)."

Lippincott encouraged the audience to develop urine-separating toilets, as they are an important piece of the urine diversion puzzle. He showed an example of a divided-bowl, urine-separating toilet, as well as unified bowl version that catches urine through surface tension. He also asked the audience to think about how to stabilize urine to reduce mineralization and cleaning issues and better capture urine for recycling.

Water Use in America Dramatically More Efficient

By Caroline Hyde, PMI Communications Team, Valek and Co.

Presenting at the PMI24 Manufacturing Success Conference, **Peter Mayer** showcased how far America has come in urban water preservation—and how the nation can improve even further in the coming years.

"Residential water use in America has changed fundamentally over the past 30 years and (has) become dramatically more efficient," said Mayer, the principal engineer for WaterDM and Flume Data Labs. According to data provided by the United States Geological Survey, water use per person peaked in the 1980s and has steadily declined since then.

As a key witness in the famous Florida v. Georgia Supreme Court case, Mayer made a similar case on a smaller scale, providing data showing that the metropolitan Atlanta area used much less water than Florida claimed, despite Atlanta's growing population. "This is largely the result of the products that (PMI is) making and (what) people are purchasing for their homes," he explained. "It's not the result of a lot of behavioral changes. I would argue that this is largely the impact of efficient toilets, showers, washers and faucets."

Improved data collection provides better understanding of water use

Along with water efficiency, data collection has also come a long way since the beginning of Mayer's career. "The best data that we had would be the billing data from a water utility," he recalled. However, on a national scale, these data could not reliably show specifically how water was being used in the home annually, especially in regions with mild winters allowing outdoor use year round, or where there was the possibility of leakage. To combat inaccuracy, Mayer began using flow data loggers in the mid-1990s. "With that device, we recorded the flow every 10 seconds and that gave us a very precise understanding of where water is being used to the point where we could actually look at the flow trace and say, 'Oh, that's a toilet flush. That's a clothes washer. That's irrigation,'" he explained.

Using these data, Mayer wrote the Water Research Foundation's (WRF) Residential End Uses of Water studies published in 1999 and 2016. He is working on a third due to be released in 2026. With each report, the sample sizes became larger, more encompassing, and accurate in conveying water use trends. "(The 2026 report) is going to be, I'm very proud to say, much, much more in-depth and diverse and expansive than any of the previous studies," he promised.

Technology drives improved water efficiency

According to the residential end use studies, indoor average gallons used per capita per day (gpcd) has decreased by 15.4%, from 69.3 to 58.6 gpcd, between 1999 and 2016. As part of a separate study, a set of homes were equipped with WaterSense fixtures and state-of-the-art washing machines rated by Energy Star. "We measured the water use from those homes to be as low as 36.7 gallons per person per day indoors," Mayer said. That's a 37.4% decrease compared to the normally outfitted homes in 2016. "That suggests to us that … we still had quite a bit of additional indoor water savings that were possible, just from technological changes."

To help with the 2026 report, Mayer partnered WaterDM with Flume Data Labs, a home water-use monitor that attaches onto positive displacement meters and collects data every five seconds. The device connects to the internet and allows the consumer to check their usage in real time on their phones; the device also alerts the user of any possible leaks in their fixtures. "There's now over 100,000 of these installed across the country," Mayer emphasized, "so the sample size (for the 2026 study) is tremendously different."

Peter Mayer

The primary goal of the current, version 3, WRF Residential End Uses of Water research project is to see how water usage has changed over the past decade, while also documenting regional differences and household characteristics. Across the country and Canada, 45 utilities have signed on to participate in the study, allowing Mayer and his team to access the billing data from their users from the previous five years. "We will have the complete consumption data sets for every customer, single family and multi-family, from all of these different water utilities. And that will help us to understand the differences in water use, both indoors and outdoors across a large number of water utilities," he stated.

Overall, Mayer argues that conservation has come a long way since the 1980s—but there's still a ways to go. "We are going to have more intense and frequent drought," he warned. "We're going to need to adjust our approaches even year to year depending on what water supply is available to us." However, with an eye to the future, Mayer said he wholly believes that technological advances and implementation of leak detection devices like Flume are a step in the right direction.

The Wisdom of Sensible Science (Contd.)

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of collaboration between government and the plumbing fixtures and fittings manufacturing industry. Our work in this arena has resulted in building the necessary physical and digital infrastructure to support our industry's growth, pooling resources for research that benefits both public and private sectors, and ensuring clear and consistent communication between regulators and industries to foster trust and cooperation.

The winners are the end-users and consumers. PMI members are excellent at gathering feedback to refine processes and products, ensuring they meet evolving consumer expectations. While focus on the consumer experience is often missing amid proposed changes in regulatory requirements for fixtures and fittings, as an industry we must insist on delivering the highest quality, thoroughly tested and certified, water-efficient, high-performing fixtures and fittings.

After all, consumer trust is a cornerstone of sustainable growth. Plumbing product manufacturers earn this trust by communicating our science clearly. Simplifying complex scientific concepts for legislators, regulators, policymakers and the public serves to bridge the gap between innovation and acceptance. Combating skepticism about science-based policies requires persistent public education efforts. PMI is committed to openly sharing information about products, processes, and adherence to regulations to foster that accountability and public confidence.

With a new Congress and administration taking office, we will be navigating a complex regulatory remix. Our industry operates in multiple jurisdictions and has mastered the art of reconciling differing regulatory requirements without compromising efficiency. Despite these challenges, the opportunities are immense. Our industry's commitment to sensible, science-based policies better positions us to drive innovation, meet consumer needs, and maintain resilience in a rapidly changing world.

The implementation of sensible, pro-growth, science-based policies and regulations serves as a foundation for plumbing fixtures and fittings manufacturers to achieve sustainable success. By emphasizing innovation, sustainability, regulatory compliance, workforce development, and public trust, we can successfully navigate the complexities of modern markets while contributing to broader societal goals. This approach not only secures long-term profitability but also reinforces the critical role of science and reason in shaping a better future for all.

Counterfeit Plumbing Products (Contd.)

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to search for counterfeit listings and immediately remove them from the Amazon store. Transparency allows customers to apply unique codes to identify individual units of enrolled products, preventing counterfeit products from being listed or sold.

Amazon also uses machine learning to analyze and stop hundreds of millions of suspected bogus reviews, manipulated ratings, fake customer accounts, and other abuses.

Useful resources for PMI members:

IPR Center: tinyurl.com/3m8bfchd

MSU A-CAPP Guide to Brand Protection for Small- and Medium-Sized Enterprises: tinyurl.com/4enkw3ew

Amazon Brand Registry: tinyurl.com/3ujxca6t

Amazon Transparency: tinyurl.com/h2mc9ytf

Amazon Project Zero: tinyurl.com/4p6r8rdh

2025 PMI LEADERSHIP

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