

October 23, 2020

Eric Costello
Baltimore City Council
Judiciary Committee, Chair
100 Holliday Street, Suite 500
Baltimore, Maryland 21202
Eric.Costello@baltimorecity.gov

RE: Proposed legislation regarding Green Building

Dear Chair Costello,

Becoming more efficient with our precious and increasingly costly water supply has become an ongoing goal for society. The City of Baltimore is providing national leadership in seeking innovative solutions to create a more resilient community and employ state-of-the-art improvements to guide the design and construction of more efficient structures. As part of the City's effort, I want to recommend alternative ideas on how the City can meet its goals of saving water and energy that should be included in its arsenal of tools.

One of the most significant advances in water efficiency was introduced to the industry in recent years by the International Association of Plumbing and Mechanical Officials (IAPMO): The Water Efficiency and Sanitation Standard – WE Stand®. *WE Stand* is the most comprehensive Water Efficiency and Sanitation Standard available for the built environment. *WE Stand* works as an overlay code to any base line model plumbing code, and as such can be applied anywhere. It was developed as a American National Standard.

The standard provides progressive, codified requirements to optimize water use practices attributed to the built environment while maintaining protection of the public health, safety, and welfare. It should be noted that the scope of *WE Stand* includes both residential and non-residential buildings, as opposed to other “green codes” that only apply to non-residential construction.

WE Stand includes the new Peak Water Demand Calculator (WDC), the most significant and cost saving pipe sizing formula for plumbing systems since the development of Hunter's Curve back in the 1930's. Hunter's Curve has been the basis for all plumbing code water supply calculations for almost a century. As a result, plumbing systems in today's buildings are grossly over-sized which contributes to water aging, declining water quality, and wasted water and energy. The WDC takes modern water use patterns, consistent with today's more efficient plumbing fixtures and appliances into account, resulting in plumbing systems that are properly sized, healthier, and more efficient. Savings in residential construction could be seen with smaller systems being designed to this new method of calculating water needs in a system.

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In addition, to the WDC, *WE Stand* provides codified and enforceable requirements for:

- Indoor water efficiency and conservation for all homes and non-residential buildings
- Alternate water sources such as gray water and utility supplied recycled water
- Non-potable rainwater catchment systems
- Efficient water heating system design, equipment, and installation
- Efficient landscape irrigation
- Leak detection systems
- ... and much more.

The provisions in *WE Stand* will assist designers and installers alike to produce systems that protect and save a precious resource while at the same time protecting the health and safety of the public.

WE Stand establishes requirements for fixtures, fittings, and appliances for safe and efficient water consumption and flow. A good example of this is language regarding composting toilets and urine diversion systems that safely remove toilet waste without using water. In addition, *WE Stand* helps reduce water consumption in commercial food service by requiring high efficiency ice makers, food steamers, pre-rinse spray valves and combination ovens. All with the focus of increasing water efficiency while protecting health and safety.

IAPMO respectfully requests the City of Baltimore to review the *WE Stand* and adopt the document in total or any part the City believes will help protect and save resources.

IAPMO, founded in 1926, helps protect health and safety by working in concert with government and industry to implement comprehensive plumbing and mechanical systems around the world. IAPMO is a complete service organization providing:

- Code development assistance
- Industry-leading education and training services
- Personnel certification programs
- Plumbing and Mechanical product testing and certification
- Building Product testing and evaluation services
- ... and much more.

If you need additional information or wish to request copies of the *WE Stand* to facilitate a review, please do not hesitate to contact me.

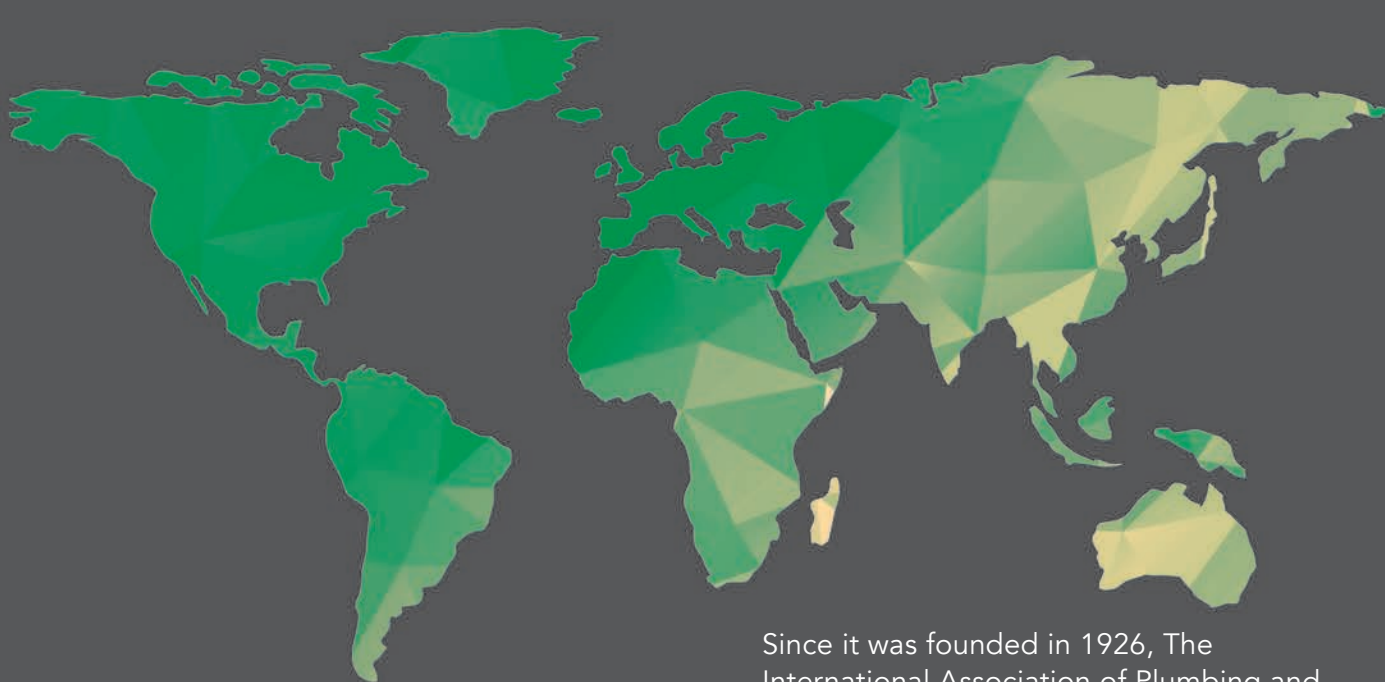
Respectfully,

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TRUSTED

"IAPMO's Water Efficiency and Sanitation Standard (WE-Stand) clearly sets the bar for progressive water efficiency provisions for use in and around buildings. As a national organization focusing on water efficiency, AWE advocates for strong code and standard guidance, and we believe that WE-Stand has the highest technical merit compared to all current available standards and programs on water use. This is due in large measure due to the strong level of expertise in the WE-Stand Technical Committee, comprised of the foremost subject matter experts in fields of water efficiency, alternate water sources and water reuse, hot water delivery, water quality, irrigation and more."

Mary Ann Dickinson
President and CEO
Alliance for Water Efficiency

Since it was founded in 1926, The International Association of Plumbing and Mechanical Officials (IAPMO) has provided jurisdictions everywhere with a plumbing code that helps protect the health and safety of each and every citizen. That code is now the basis for plumbing codes around the globe that offer protection to approximately half of the entire world's population.

GLOBAL

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AN AMERICAN NATIONAL STANDARD
IAPMO/ANSI WE•STAND 2017

2017 WE•Stand

**Water Efficiency and Sanitation Standard
for the Built Environment**



The Most Comprehensive Water Efficiency and Sanitation Standard for the Built Environment

This standard provides progressive codified requirements to optimize water use practices attributed to the built environment while maintaining protection of the public health, safety and welfare.

WE  **Stand**
for Safe and Sustainable
Water Use

WE•Stand applies to residential/commercial indoor and outdoor water efficiency, and features:

- A Water Demand Calculator that determines pipe size based on today's plumbing fixtures and appliances and usage patterns.
- Alternate water systems having progressive provisions for uses of gray water, rainwater, reclaimed water, and onsite-treated nonpotable water.
- Water heating designs that precisely determine the maximum volume of water and length of pipe for efficient hot water delivery. Flow-through design, recirculation, and insulation to improve performance for water heating efficiency.
- Landscape irrigation that provides for efficient system performance within targeted zones without water waste.
- Fixtures, fittings and appliances for safe and efficient water consumption and flow rate requirements.
- Composting toilet and urine diversion system that safely removes toilet waste without the use of water.
- Dedicated metering requirements for water management and detecting leaks, equipment failure, water waste, and irregular water waste.
- Commercial food service that lowers water consumption for ice makers, food steamers, combination ovens, and dipper wells.
- Drain water heat exchangers that transfer heat from water waste to the water supply.

