Statement

of the

Plumbing-Heating-Cooling Contractors

of Nevada

Hearing on

Examining the Role and Effectiveness of Building Codes in Mitigating against Disasters

Before the

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Committee on Transportation and Infrastructure

Economic Development, Public Buildings and Emergency Management Subcommittee

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Introduction

Chairman Perry, Ranking Member Titus, and Members of the Subcommittee, thank you for the opportunity to testify today on behalf of the Plumbing-Heating-Cooling Contractors of Nevada regarding the role and effectiveness of FEMA's focus on building codes in mitigating against disasters.

My name is Jordan Krahenbuhl, and I have been serving as Executive Director of the Plumbing-Heating-Cooling Contractors (PHCC) of Nevada since 2019. As an organization, PHCC is dedicated to the education and advancement of the plumbing and HVACR industry. The Association's members, spread across the state of Nevada, work in the residential, commercial, new construction, industrial, and service and repair segments of the construction industry. Collectively, they represent a key segment of the skilled construction professionals who work to keep homes and businesses healthy, safe, comfortable, and efficient. Prior to joining PHCC of Nevada, I worked for the Clark County Building Department for 30 years, where I was the lead plumbing and mechanical code official. I am also a member of IAPMO, an organization that develops model codes and standards used in this sector, trains and establishes credentialing requirements for the workforce, and tests and certifies many of the products used in Nevada's homes and businesses.

Overview of Construction Codes

The resiliency of America's buildings relies on a robust ecosystem of model codes and standards developed by standards development organizations. These organizations include, but are not limited to, IAPMO, the International Code Council (ICC), the National Fire Protection Association (NFPA), the American Society of Heating Refrigeration and Air-Conditioning Engineers (ASHRAE), and the American Society of Civil Engineers (ASCE). The model codes and standards developed by these reputable organizations contain important hazard-resistant provisions related to drought, earthquakes, fires, floods, storm surges, energy surges, and wind damage.

At times, these codes and standards compete with one another. Today's buildings are more resilient because of this competition and the resulting increased involvement of stakeholders interested in improving safety, affordability, and resiliency. Building codes establish an industry-accepted minimum criteria for the design and construction of residential and commercial structures and facilities in their communities. Updated every three years, these model codes continue to be refined to better address needs of the built community in the United States.

State and Local Jurisdictions Select Construction Codes for a Reason

It is important to note that skilled professionals in these jurisdictions, working through locally defined processes, choose which construction codes are adopted based on local needs and preferences.

Nevada for decades has chosen IAPMO's *Uniform Plumbing Code* and *Uniform Mechanical Code* to govern its plumbing and mechanical systems. Jurisdictions have made this choice for several

reasons. First, IAPMO's codes are the only model plumbing and mechanical codes that are designated as an American National Standard. This means the codes are developed through a process accredited by the American National Standards Institute (ANSI). ANSI is a process that represents the "gold standard" in the United States for standards development, ensuring openness, transparency, due process, and a balance of interests. This ensures that all parties have a voice and a vote and work together to achieve true consensus on the proper design, installation, and inspection of plumbing and mechanical systems.

Additionally, IAPMO's codes incorporate the latest research and innovation. The Uniform series of codes include the most advanced provisions available on such critical topics as water and sanitation pipe sizing, storm rainfall resiliency, leak detection, minimizing *Legionella* growth, and water treatment technologies. IAPMO's codes continue to be an important tool in ensuring the efficient use of much of our state's limited water supplies and enhancing the safety and resiliency of our buildings. In Nevada, skilled professionals review each edition of these model codes to ensure the codes are tailored to Nevada's own unique needs.

The major model building codes benefit public health and safety and contain hazard resilient criteria. States and local communities benefit from being able to choose which of these model codes best meet their requirements. Federal, and in particular FEMA, policy on construction codes should promote a competitive environment so that Nevada and other jurisdictions have access to all of the tools they need.

FEMA's Building Code Policies and Guidance Can Be Improved

As amended by Section 1235(b) of the Disaster Recovery Reform Act of 2018 (DRRA), FEMA-funded repair or reconstruction of buildings is required to comply with the "latest published editions of relevant consensus-based codes, specifications and standards that incorporate the latest hazard-resistant design" specifications. To meet these requirements and to assist communities with the consistent and appropriate implementation of consensus-based design, construction and maintenance codes, FEMA released Recovery Interim Policy FP-104-009-11, *Consensus-Based Codes, Specifications and Standards for Public Assistance* (CCSP) in December 2019. I was encouraged by FEMA's draft interim update of this policy, dated April 26, 2024, because of the inclusion of flexible options that allow jurisdictions to tailor resilience solutions to their specific needs and risks by incorporation of national model building codes developed by several organizations. However, it must be noted there remains inconsistency with FEMA's Building Science Resource Library, which currently limits the definition of "building codes" to those from only one standards development organization, contradicting the broader recognition of codes from 17 organizations in the CCSSP interim policy. It appears that on the disaster response and recovery side of FEMA, competition of codes will be recognized, whereas on the resilience side of FEMA, there is preferential treatment for one organization, further contributing to confusion among States and local communities.

Specifically, FEMA has created a number of publications promoting the adoption of construction codes. Unfortunately, these efforts have fallen short as FEMA has repeatedly failed to recognize the ecosystem of model construction codes and standards that jurisdictions use, and it has continued to promote the products and services of only one standards development organization. More than 100 organizations across 15 states have asked FEMA and Congress to address this issue. The industry appreciates the efforts made by members of the House, including this panel, and the

Senate, who have urged action on this issue. However, it continues to be an issue and has created several problems. FEMA's failure to include all of the major construction codes in its policies and guidance:

1. **Discourages competition and innovation**

FEMA's policy states that it does not approve, endorse, or certify any products or companies. It is concerning that FEMA's communications related to building codes are contrary to that policy. FEMA appears to endorse a single vendor's products to the exclusion of and without any mention of other model codes and standards that are widely used in the marketplace. Failing to be inclusive is causing a negative influence on the competitive and innovative environment. Examples of how FEMA has specifically promoted the products of only one standards development organization include the following FEMA publications:

1. *Protecting Communities and Saving Money: The Case for Adopting Building Codes (November 2020)*[1] – Features only one standards development organization and its products.
2. *Building Codes Toolkit (July 2021)*[2] – Features the products of only one standards development organization throughout the document, including color photos of their products. It also advertises where these codes can be purchased on the organization's website.
3. *Guide to Expanding Mitigation: Making the Connection to Codes and Standards (August 2021)*[3] – Highlights only standards development organization and features four of its products. No other standards development organization is mentioned.
4. *FEMA Resources for Climate Resilience (December 2021*)[4] – This publication only specifically references construction codes created by one standards development organization. No other standards developer is mentioned.
5. *FEMA Building Codes Strategy (March 2022)*[5] – The only national plumbing and mechanical codes identified in Appendix D are the products of one standards development organization.
6. *Building Codes Adoption Playbook (August 2022)*[6] – The model codes of only one standards development organization are featured throughout. It includes features on this organization's code development process and color photos of all 15 of its code book products, with a link to where to purchase them.
7. *Building Codes Toolkit (May 2023)*[7] – The products and services of only one standards development organization are mentioned 20 times.

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[1] https://www.fema.gov/sites/default/files/2020-11/fema_building-codes-save_brochure.pdf
[2] https://www.scribd.com/document/637320830/Fema-Building-Codes-Toolkit-07-19-2021&ved=2ahUKEwiQ75LF48-IAxVMD1kFHeLFNP4QFnoECBQQAQ&usg=AOvVaw29vSSW7Zk3VhezS4p2n10G
[3] https://www.fema.gov/sites/default/files/documents/fema_guides-expanding-mitigation-codes-standards_08052021.pdf
[4] https://www.fema.gov/sites/default/files/documents/fema_resources-climate-resilience.pdf
[5] https://www.fema.gov/sites/default/files/documents/fema_building-codes-strategy.pdf
[6] https://www.fema.gov/sites/default/files/documents/fema_building-codes-adoption-playbook-for-authorities-having-jurisdiction.pdf
[7] https://www.fema.gov/sites/default/files/documents/fema_building-codes-toolkit.pdf

8. *Hazard Mitigation Assistance and Program Policy Guide (Effective July 2024)*[8] – The products and services of one standards development organization are mentioned more than 40 times in the document. No other national plumbing or mechanical code is mentioned.

FEMA's publications highlighted above stand in stark contrast to HUD's *Resilient Building Codes Toolkit (June 2022)*[9], in which standards development organizations such as ASCE, ASHRAE, IAPMO, ICC and NFPA are presented with parity and without preference to one brand or another. As a federal agency, FEMA should remember that reduced competition frequently leads to monopolies and often results in higher prices and less innovation.

By including all of the national model construction codes, FEMA could directly address this concern and clarify that jurisdictions have multiple tools from which to choose when deciding how best to meet their resiliency needs. The most important point is that these jurisdictions are regularly updating and implementing their construction codes with included hazard-resistant provisions.

2. <u>Introduces Barriers in State and Local Code Adoption Processes</u>

It is very concerning that one of the major unintended consequences of FEMA's focus on only one standards development organization is that it has interfered with code adoptions across the United States. By not including all of the major construction codes, like those widely used in the electrical, plumbing, and mechanical sectors, FEMA's policies and guidance create significant confusion on what model codes jurisdictions can adopt. From New Jersey, Missouri, and Texas we have seen examples in our industry where the conversation around code adoption has devolved from which code provisions will help our communities to be most resilient in an affordable way to a confused discussion of which specific national model code will qualify buildings for reimbursement following a disaster. To clarify, these are jurisdictions who are trying to do the right thing – update their construction codes. But, they are being delayed because of the confusion created by FEMA's own materials and the stakeholders promoting them. More information can be provided for the public record that highlight this point should that be needed.

3. <u>Threatens to Negatively Impact the Construction Trades</u>

My organization is one of the largest trainers of plumbing professionals in the state. Plumbing apprenticeships and training programs involve structured courses with a formal curriculum in a classroom setting in addition to on-the-job training. These courses are centered around the hazard design criteria contained in Nevada's current plumbing and mechanical codes.

If Nevada, because of FEMA's misaligned efforts, were to change its construction code to another code, it would be extremely detrimental. The cost of re-creating our training and certification programs to address the specific provisions of an entirely new construction code would be hard to recover and threaten our existence. Additionally, the existing workforce in Nevada is trained, designs to, installs, and inspects product installations in compliance with existing adopted codes. Not only would the apprentice channel have to change but the entire workforce of designers, technicians, and inspectors would need to be educated on the differences in the code.

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[8] https://www.fema.gov/sites/default/files/documents/fema_hma_guide_082024.pdf

[9]See Page 37, https://www.hudexchange.info/resource/6701/resilient-building-codes-toolkit/

FEMA's goal should be making sure that jurisdictions have access to all of the tools that they need to strengthen the resilience of our communities and not serving as the de facto marketing arm of a private sector organization.

4. **Excludes Key Stakeholders**

The number of organizations who work with state and local jurisdictions to review and adopt their construction codes is a relatively small group of stakeholders. They are natural allies and partners for FEMA in its building code initiative. Yet, many of these stakeholders (such as national standards development organizations, labor groups, and local code officials) are not able to engage with FEMA on this effort. It is difficult for an organization to use FEMA's building code materials when it only references the products and services of their competitors, instead of being agnostic to what hazard-resistant code they are adopting. It is difficult for many trade organizations in the plumbing and mechanical sector that I represent to refer to FEMA's Initiative to Advance Building Codes, with its supporting toolkits and materials, because it seems to want us to promote changing the construction codes used by our industry— an expensive change that would not improve the overall resiliency of our communities.

Regularly updating building codes is important to improving the resiliency of communities nationwide. As a federal agency, FEMA's building codes policies and materials should recognize the diverse group of stakeholders, who develop model construction codes and work with jurisdictions to implement them, and make it possible for them to engage with the agency in this effort.

Benefits of Construction Codes Come from their Effective Implementation, Not Just Adoption

The ability of model construction codes to promote resiliency and protect public health is only proven in how they are implemented and enforced. This requires skilled workers who are trained and credentialed in the design, construction, and maintenance of these buildings. It requires a steady supply of quality products and building materials that are tested and certified for safety and performance. It requires training regulators to consistently apply the provisions of these standards uniformly across their jurisdiction. FEMA's programs and guidance materials should recognize these very real implementation challenges. Adopting the latest construction code is only helpful when the community has the capacity and ability to implement and enforce it.

Conclusion

In conclusion, implementing hazard-resistant construction codes is important to improving the resiliency of communities in Nevada and nationwide. FEMA can play an important role in encouraging and incentivizing communities to adopt the latest hazard-resistant design criteria. However, as a federal agency, it should explicitly recognize the diverse group of codes and standards developers and other stakeholders that make this possible. We appreciate actions that the Committee has taken to date and continue to seek your assistance in helping to ensure a level playing field for all major construction codes in FEMA's current policies, programs, and upcoming strategic efforts.