



July 25, 2023

U.S. Federal Emergency Management Agency
Regulations Division, Office of General Counsel
451 7th Street SW, Room 10276
Washington, DC 20410–0500

Via Regulations.gov

Re: Comments of the International Code Council on the Federal Emergency Management Agency’s Request for Information (RFI) regarding the implementation of the Community Disaster Resilience Zones Act of 2022 and updates to the National Risk Index; Docket ID FEMA–2023–0009

The International Code Council (“ICC” or “Code Council”) is a nonprofit organization of roughly 700 employees—driven by the engagement of its more than 63,000 members—dedicated to helping communities and the building industry provide safe, resilient and sustainable construction through the development and use of model codes (I-Codes) and standards used in design, construction and compliance processes. Most U.S. states and communities, federal agencies and many global markets choose the International Codes (I-Codes) to set the standards for regulating construction and major renovations, plumbing and sanitation, fire prevention and energy conservation in the built environment.

The Code Council is committed to providing the building industry with the tools necessary to realize safe, sustainable, and resilient buildings and communities. This includes achieving community-level resilience through the effective adoption and implementation of modern building codes and standards to provide building safety in response to increasing hazard events. One of the International Code Council’s Family of Solutions, the Alliance for National and Community Resilience (ANCR), also engages in resilience benchmark development and implementation to support communities in identifying and addressing the shocks and stresses impacting their residents and businesses.

ICC appreciates the opportunity to submit the following comments in response to the U.S. Federal Emergency Management Agency’s (FEMA) request for information (RFI) on the implementation of the *Community Disaster Resilience Zones Act of 2022* (CDRZ), including updates to the methodology and data used for the National Risk Index (NRI) and other hazard assessment products.

Federal agencies adopt I-Codes and Standards because they are national “voluntary consensus standards” under Office of Management and Budget (OMB) Circular A-119 and the *National Technology Transfer Advancement Act* (NTTAA), meaning they are developed in an open forum—with a balance of interests represented and due process—that ultimately, ensures a consensus outcome. All I-Codes are updated every three years. The NTTAA, supplemented by OMB Circular A-119, directs federal agencies to use voluntary consensus standards wherever possible in their procurement and regulatory activities in lieu of expending public resources developing government unique standards. The OMB Circular “directs agencies to use standards developed or adopted by voluntary consensus standards bodies rather than government-unique standards, except where inconsistent with applicable law or otherwise impractical.”

In recent years, the federal government has increasingly moved towards ensuring federally assisted infrastructure adheres to modern construction standards. During the prior administration, the Building Codes Task Force of the interagency Mitigation Framework Leadership Group (MitFLG) issued the [2019 National Mitigation Investment Strategy](#). The MitFLG – chaired by FEMA and comprised of another 13 federal agencies and departments as well as state, tribal, and local officials – made several recommendations concerning the use, enforcement, and adoption of building codes: “[a]rchitects, engineers, builders, and regulators should use the latest building codes for the most up-to-date requirements for structural integrity, mechanical integrity, fire prevention, and energy conservation,” and “[u]p-to-date building codes and standard criteria should be required in federal and state grants and programs.”¹ This work has been continued by the current Administration through the [National Initiative to Advance Building Codes](#) (NIABC). The NIABC’s goal is “to ensure that building activities receiving federal funding or financing will meet or exceed the latest building codes.”

And, despite the federal government investing billions of dollars in infrastructure annually and requiring current codes and standards for its own portfolio, FEMA is the only federal entity that currently requires that federally assisted projects adhere to up-to-date building codes and standards. FEMA has done so to “increase the resilience of communities after a disaster,” “protect lives and property,” and to “reduc[e] the need for future Federal disaster recovery funding and other assistance.”²

I. FEMA Should Require CDRZ Mitigation Projects Meet or Exceed Modern Building Codes

Though we celebrate the announcement by the White House in 2022 of the NIABC, there are years of disaster recovery and billions of dollars in taxpayer resources that could have been avoided with more consistent and frequent consideration of the I-Codes. FEMA’s 2020 report “Building Codes Save: A Nationwide Study,” has found that adopting the current I-Codes would save the U.S. \$600 billion over the next four decades.³ Over the last three award cycles of FEMA’s pre-disaster mitigation program – Building Resilience Infrastructure and Communities (BRIC) – the agency has encouraged the adoption and implementation of building codes as a “low cost, high impact” mitigation strategy.

The U.S. Senate Committee on Homeland Security and Government Affairs submitted a report accompanying [S. 3875 – Community Disaster Resilience Zones Act of 2022](#), which concluded that a “resilience or mitigation project that the entity plans to perform within, or that primarily benefits, a community disaster resilience zone— (i) meets or exceeds hazard-resistant, consensus-based codes, specifications, and standards.”⁴ The report established this recommendation based on the findings of a National Institute of Building Science (NIBS) study which highlights the savings benefits of pre-disaster mitigation.

The 2019 FEMA-funded study by the congressionally-established NIBS found that building to modern building codes saves \$11 for every \$1 invested through earthquake, flood, and wind mitigation benefits, while retrofitting 2.5 million homes in the wildland urban interface to wildfire codes could provide a

¹ Mitigation Framework Leadership Group, [National Mitigation Investment Strategy](#) (Aug. 2019).

² FEMA, [Recovery Interim Policy](#) FP-104-009-11, Version 2.1 (Dec. 2019).

³ FEMA, [Building Codes Save: A Nationwide Study](#) (Nov. 2020)

⁴ U.S. Senate Committee on Homeland Security and Governmental Affairs, [Community Disaster Resilience Zones Act of 2022 Report](#) (September 2022).

nationwide benefit-cost ratio as high as \$8:1.⁵ These benefits represent avoided casualties, property damage, business interruptions, first responder and annual homeownership costs, and are enjoyed by all building stakeholders—from governments, developers, titleholders, and lenders, to tenants and communities. Better built buildings minimize repair and displacement costs and economic impacts following disasters⁶ and reduce the risk of loss.⁷

Last year, the U.S. House of Representatives overwhelmingly voted to pass H.R. 5689, the *Resilient Assistance for Mitigation for Environmentally Resilient Infrastructure and Construction by Americans (AMERICA) Act*, by a vote of 383-41.⁸ The bill contained a host of provisions designed to create new resources for communities to mitigate their risk from natural hazard events, including the development of a 10 percent set-aside explicitly for building code implementation and enforcement under the *Robert T. Stafford Disaster Relief and Emergency Assistance Act* ([42 U.S.C. 5133\(m\)](#)). The vote displays the strong bi-partisan support for more targeted funding for pre-disaster mitigation activities, highlighting the value of modern building codes and standards in protecting communities from future hazard risk.

Requiring current hazard-resistant codes could prevent roughly \$14,000 in losses per building in areas where codes have not been updated in the past two decades. Ensuring that future construction within these jurisdictions is resilient and energy efficient provides corresponding loss avoidance benefits equivalent to preserving 15,000 new homes, and avoiding 1.5 million metric tons of CO₂ emissions, per year.⁹ The loss avoidance benefit of constructing buildings to wildfire resistant codes has the equivalent value of preserving about 4,800 new homes, and avoiding 500,000 metric tons of CO₂ emissions, per year.¹⁰

Further, research shows that disasters hit low- and moderate-income (LMI) communities the hardest because they are more likely to live in homes built in hazard-prone areas or homes with lower quality construction.¹¹ Consequently, LMI families are at greater risk of damage to or loss of their homes and are at higher risk of being displaced by a disaster. Disasters strike with both a physical and a financial shock, and only about 4 in 10 Americans can afford to cover an unanticipated \$1,000 expense.¹² That's about one-third of the average FEMA-verified (not actual) losses post-Hurricane Harvey.¹³ Absent stronger codes, thousands of buildings in underserved, vulnerable communities will sustain avoidable damage, in many instances, irreparably so, at the significant environmental costs associated with building new replacements and reconstruction.

⁵ NIBS, *Natural Hazard Mitigation Saves: 2018 Interim Report* (2019).

⁶ *Id.*

⁷ *Id.* See also ASFP's [Comments](#) in Response to FR-6187-N-01, White House Council on Eliminating Barriers to Affordable Housing Request for Information (Docket HUD-2019-0092).

⁸ See, <https://www.congress.gov/bill/117th-congress/house-bill/5689>.

⁹ Porter, K. [Do Disaster-Resistant Buildings Deliver Climate Benefits?](#) SPA Risk LLC (2021).

¹⁰ *Id.*

¹¹ SAMHSA, [Greater Impact: How Disasters Affect People of Low Socioeconomic Status](#), Disaster Technical Assistance Center Supplemental Research Bulletin (July 2017).

¹² <https://www.bankrate.com/banking/savings/financial-security-january-2021/>

¹³ See Texas Low Income Housing Information Service's [comments](#) to Texas General Land Offices' Draft State of Texas Hurricane Harvey Plan.

These statistics present an issue, while available pre-disaster mitigation funding has fallen far short of demand and there are concerns that vulnerable communities face challenges accessing pre-disaster mitigation funding.^{14, 15} If the intent of the CDRZ is to identify the highest risk and most vulnerable communities, and we know that building codes are the most cost-effective mechanism of mitigating a community's pre-hazard risk, FEMA should ensure that building in these identified zones is consistent with the requirements outlined in the modern building codes. This is another opportunity for FEMA to plug in technical assistance for building code implementation in communities that would benefit the most from their savings benefits.

II. Leverage Resilience Benchmarking

Climate-related disasters are continuing to increase along with the cost of recovery, especially in urban areas—the economic cost of extreme weather attributed to climate change is estimated to rise from \$240 billion to \$360 billion annually in the U.S. over the next decade.¹⁶ According to the Center for Disaster Philanthropy, only 20 percent of disaster-related philanthropy goes to resilience, risk reduction, mitigation and preparedness efforts. This is despite the strong benefits associated with pre-disaster mitigation, like modern building codes, as outlined above.

The [Alliance for National and Community Resilience](#) (ANCR), a 501(c)(3) non-profit organization focused on developing the tools and resources that communities and others can use to assess and improve their resilience, was established by the International Code Council and U.S. Resiliency Council on the concept that great communities rely on the resilience of multiple community functions that should function in concert. ANCR has been developing [Community Resilience Benchmarks \(CRB\)](#) —identifying 19 community functions or 'links' covering the social, organizational, and infrastructural aspects of communities that influence their resilience and is developing benchmarks for each of the identified functions. To be resilient, communities must address the resilience of each of these functions. An adverse event reveals the importance of both a coordinated approach to resilience across multiple community functions and the impacts that can occur across the local economy.

Resilience planning is an essential component of assuring communities are prepared for the evolving risks presented by climate change. The ANCR CRB process recognizes the importance of addressing the shocks and stresses a community faces today and those they are likely to face in the future. The CRB process can also assist in attracting new businesses and residents while also potentially impacting bond ratings or the community's competitiveness for grants to support enhanced resilience. Community resilience can only be achieved through a holistic approach that captures the impacts and influences of

¹⁴ U.S. Senate Committee on Homeland Security and Governmental Affairs, [Community Disaster Resilience Zones Act of 2022 Report](#) (September 2022).

¹⁵ Federal Emergency Management Agency, Building Resilient Infrastructure and Communities FY 2020 Subapplication Status (<https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities/after-apply/fy-2020-subapplication-status>); Federal Emergency Management Agency, Summary of Stakeholder Feedback: Building Resilient Infrastructure and Communities (BRIC) (Mar. 2020) (https://www.fema.gov/sites/default/files/2020-06/fema_bric-summary-of-stakeholder-feedback-report.pdf); Congressional Research Service, FEMA Hazard Mitigation: A First Step Toward Climate Adaptation (R46989) (updated March 23, 2022).

¹⁶ Center for Disaster Philanthropy, [Resilience](#) (2023).



multiple systems and services and the experiences and perspectives from the diversity of a community's members.

ANCR has completed development of the [Buildings](#), [Housing](#), and [Water](#) Benchmarks and has piloted them with the communities of [Martinsville, Virginia](#) and [Oakland Park, Florida](#). The benchmarks were developed through the engagement of subject matter experts and reflect the core principles for resilience in a specific topical area. The Buildings Benchmark incorporates requirements on the adoption and enforcement of building codes, the identification and mitigation of vulnerable buildings and critical facilities and incentive programs to drive increased resilience of the building stock. The Housing Benchmark addresses the affordability and availability of housing, including the conduct of a housing stock assessment and implementing policies and programs to assure that community housing needs are met. Taken together, the Buildings and Housing Benchmarks provide direction on the strategies to achieve resilient communities.

The International Code Council and ANCR recognize the essential role of community planning and pre-disaster mitigation in achieving community resilience. We strongly encourage FEMA to provide support for CDRZs to conduct community resilience benchmarking in order to help identify the areas of greatest need and impact for investment in resilience projects. ANCR has developed [a guide](#) on using the CRBs in conjunction with the National Institute of Standards and Technology's (NIST) Community Resilience Planning Guide. We encourage FEMA to engage us in the ongoing work of the CDRZ and leverage the CRB process to assess barriers to current community resilience and chart a path forward.

In addition to the outlined recommendations made above, the Code Council's responses to select questions in the CDRZ RFI are provided below.

A. Risk Assessment—General Questions

1. How does your organization use risk assessment products and associated risk ratings? What products do you use and why are they useful? How does your organization vet risk assessment tools and products? Are there additional data, information, analysis capabilities, or metrics that would be useful? Are there data that you do not currently have access to, but would like?

FEMA requires adherence to the latest edition of the International Building Code (IBC), International Residential Code (IRC), and International Existing Building Code (IEBC) as minimum codes and standards for rebuilding using post-disaster public assistance funding (FEMA's "Minimum Standards Requirement").¹⁷ The Building Resilient Infrastructure and Communities (BRIC) program funds hazard-resistant code adoption and implementation activities with a 25% local cost-share, while mitigation projects submitted for a pot of competitive BRIC funding are made more competitive based on the statewide adoption and implementation of recent editions of the IBC and IRC as well as [Building Code Effectiveness Grading Schedule](#) (BCEGS) ratings between 1 and 5.

FEMA currently compiles data for and tracks the status of building code adoptions for approximately 22,000 jurisdictions across the nation through their [Building Code Adoption Tracking](#) (BCAT) effort. The International Code Council relies on BCAT data, which evaluates several aspects of a community's

¹⁷ FEMA, [Recovery Interim Policy](#) FP-104-009-11, Version 2.1 (Dec. 2019).



natural hazard risks and building code adoption. One of the BCAT products developed is the [Building Code Adoption Portal](#), which is an interactive WEBGIS map that tracks flood, seismic, tornado, hurricane wind, and damaging wind hazard risk against building code adoption status. This data and FEMA's subsequent findings can be used to determine the hazard-resistance factor of a jurisdiction. In 2023, FEMA concluded that only 27% of tracked jurisdictions had hazard-resistant building codes implemented when considering the combined risk of the 5 hazards analyzed.¹⁸ The International Code Council encourages FEMA to lean on BCAT data to identify CDRZ communities and provide technical assistance to support hazard-resistant building code implementation to promote resilient outcomes for the highest risk areas.

The International Code Council also leans heavily on ISO Verisk's BCEGS assessments to evaluate a community's building codes and enforcement, with special emphasis on mitigation of losses from natural hazards. The BCEGS program assesses a community's building code enforcement based on their code administration, plan review, and field inspection services. Verisk collects 1,243 data points to calculate two scores for their BCEGS assessments, one for one- and two-family residential construction and another for commercial or industrial construction.

Municipalities with well-enforced, up-to-date codes should demonstrate better loss experience, which can be reflected in lower insurance rates, and thus a better BCEGS rating. The prospect of lessening catastrophe-related damage and ultimately lowering insurance costs provide an incentive for communities to enforce their building codes rigorously — especially as they relate to windstorm and earthquake damage. The anticipated benefits are safer buildings, less damage, and lower insured losses from catastrophes.

Wherever possible, FEMA should provide building code assistance to CDRZ communities to improve BCEGS scores. In doing so, these highest risk communities will become more resilient and also qualify for further technical assistance, such as BRIC funding, to reduce their vulnerabilities to their unique hazards.

As discussed above, the ANCR Community Resilience Benchmarks can be a valuable tool to support risk assessment at the community scale.

F. Resilience or Mitigation Project Planning Assistance

1. What would be the most useful and equitable way for FEMA to provide financial and technical assistance to benefit communities with Community Disaster Resilience Zones to plan, apply for, and evaluate resilience or mitigation projects?

As stated above, LMI communities are disproportionately impacted by disaster events because they are more likely to live in homes built in hazard-prone areas or homes with lower quality construction.¹⁹ Underserved and disadvantaged communities often do not have the resources to field fully established building departments and/or full-time staff supporting the adoption and enforcement of hazard-resistant building codes. Alarming, 65 percent of counties, cities, and towns across the U.S. have not

¹⁸ FEMA, [Resistant Code Adoption Statistics](#), 2023.

¹⁹ SAMHSA, [Greater Impact: How Disasters Affect People of Low Socioeconomic Status](#), Disaster Technical Assistance Center Supplemental Research Bulletin (July 2017).

adopted modern building codes, only 50 percent of cumulative post-2000 construction adhered to the I-Codes, and 30 percent of new construction is occurring in communities with no codes at all or codes that are more than 20 years outdated.²⁰ Without the most recent editions of building codes in place, communities are failing to build-in resilience measures across their building stock which further perpetuates their risk to hazard events. Acknowledging the unequivocal pre-mitigation benefits that modern building codes provide in enhancing hazard-resistance and community resilience, as outlined previously in these comments, FEMA should provide both financial and technical assistance to establish and maintain a full building code administration program in disadvantaged communities, including the adoption and implementation of the most recent editions of building codes. Doing so will reduce social vulnerability and establish a pathway for increasing community resilience through building code administration.

FEMA should also support these LMI communities through pre-mitigation funding programs that do not further perpetuate their risk by inadvertently creating barriers to harness resilience funding due to their lack of capacity to develop resilience projects and provide competitive applications. FEMA is encouraged to increase both technical and financial assistance to support long-term resilience capacity building for LMI communities through pre-mitigation efforts like the continual updating and ongoing implementation of hazard-resistant building codes.

2. How can FEMA support comprehensive community resilience planning to benefit community disaster resilience zones and the larger communities those census tracts lie within?

Please reference our response to Section F Question #1.

As briefly touched upon in our previous answer, FEMA should require the assessment of building code adoption and implementation as a mandatory activity during community resilience planning efforts in CDRZ areas. Building codes are a highly cost-effective strategy to help protect communities from the risks posed by natural hazard events, which continue to increase in frequency and magnitude. FEMA should continue to help move the needle away from the extreme burden of post-disaster recovery by increasing assistance for mitigation capacity building to support sustained long-term resilience.

4. What activities could FEMA undertake to help community disaster resilience zones understand and implement the types of projects, activities, or services that would minimize/reduce natural hazard risk?

Please reference our responses to Section F Questions #1 and #2.

FEMA is encouraged to perform needs assessments of adopted building codes and building code administration programs in CDRZ jurisdictions. By performing an assessment of the effectiveness of building code programs and identifying gaps, or the lack thereof, FEMA would be well positioned to support the needs of communities in establishing processes to incorporate best practices in building code adoption, administration, and enforcement in at-risk communities. Doing so will enhance the hazard-resistance of CDRZs and establish sustained long-term resilience capacities. FEMA is encouraged to partner and collaborate with building code and hazard-resistance experts in these efforts, including,

²⁰ FEMA, [Building Codes Save: A Nationwide Study](#) (Nov. 2020)



but not limited to, the International Code Council, FEMA's Building Science team, and FEMA Regional Building Codes Coordination Specialists.

G. Community Disaster Resilience Zone Project Application and Certification Process and Other Investment Opportunities

2. How can the identified community disaster resilience zones and FEMA's assistance amplify other Federal and non-Federal programs to direct resources to communities with high risk to natural hazards, high social vulnerability and low community resilience? What other programs would be complementary?

FEMA should amplify CDRZ identified communities for other federal assistance programs such as BRIC, HUD's Community Disaster Block Grant (CDBG), and DOE's Resilient and Efficient Code Implementation (RECI) programs. CDRZ identified communities should be given priority for building code, pre-disaster mitigation related activities through these other programs. This will further leverage the significant benefit cost ratios associated with building codes and provide increased levels of resilience within CDRZs.

3. How can FEMA monitor progress of improving resilience in community disaster resilience zones over time? What are key data and other metrics that can be used to monitor and evaluate progress?

As mentioned above, FEMA should leverage the ANCR's Community Resilience Benchmarking program to perform baseline evaluations on the resilience of communities using the housing, buildings and water CRB's. Once baseline evaluations are performed, FEMA in partnership with ANCR and the community can better assess the explicit areas in which there is room to grow to reduce their identified risk. In this way, resilience benchmarking is an important tool in the planning process to establish community priorities, identify metrics and monitor progress. Implementation of the CRB process following capital development projects and resilience planning programs will provide a mechanism to evaluate process and continually enhance the resilience of identified CDRZ communities.

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Thank you for the opportunity to provide comments. If you have any questions concerning these recommendations, please do not hesitate to contact us.

Sincerely,

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