

# FEMA Building Codes Strategy

May 25, 2021



**FEMA**

# Bottom Line Up Front

Disaster resistant building codes reduce the impact of climate change and can help address critical needs of vulnerable communities.

FEMA is developing an Agency Strategy to advance disaster-resistant building codes at the State and local level as a starting point for a coordinated effort involving Other Federal Agencies to achieve a resilient Nation with superior building performance in disasters.

# NIBS Mitigation Saves Report

- [NIBS Mitigation Saves 2.0 Report](#) indicates adopting the latest building code requirements is affordable and saves \$11 per \$1 invested.

National Benefit-Cost Ratio Per Peril <small>*BCR numbers in this study have been rounded</small>				
	Exceed common code requirements	Meet common code requirements	Utilities and transportation	Federally funded
<b>Overall Hazard Benefit-Cost Ratio</b>	<b>4:1</b>	<b>11:1</b>	<b>4:1</b>	<b>6:1</b>
 <b>Riverine Flood</b>	5:1	6:1	8:1	7:1
 <b>Hurricane Surge</b>	7:1	Not applicable	Not applicable	Too few grants
 <b>Wind</b>	5:1	10:1	7:1	5:1
 <b>Earthquake</b>	4:1	12:1	3:1	3:1
 <b>Wildland-Urban Interface Fire</b>	4:1	Not applicable	Not applicable	3:1

# FEMA Building Codes Save Study

**What is the average annualized savings to states and counties across the nation that have adopted hazard-resistant building codes since 2000?**

**\$1.6  
billion\***

\*Average annualized savings as of 2018

## **Key Highlights:**

- First time engineering-based parcel analysis using Big Data (18.1 million post-2000 structures)
- Hazards: flood, hurricane wind, seismic
- Hazard risk and code adoption varies
- \$32 Billion saved over 20 years
- Building and Contents damage are just the tip of the iceberg!

# FEMA Building Codes Save Study (cont.)

## ***Building Codes Save***

### **National Findings of Modeled I-Code® Savings**

*Total Losses Avoided  
Based on building and content damages*

**Number of Post-  
2000 Structures**

**Money Saved  
annually, on average**



**Flood**

**786k**

**\$484  
million**



**Seismic**

**2.4m**

**\$60  
million**



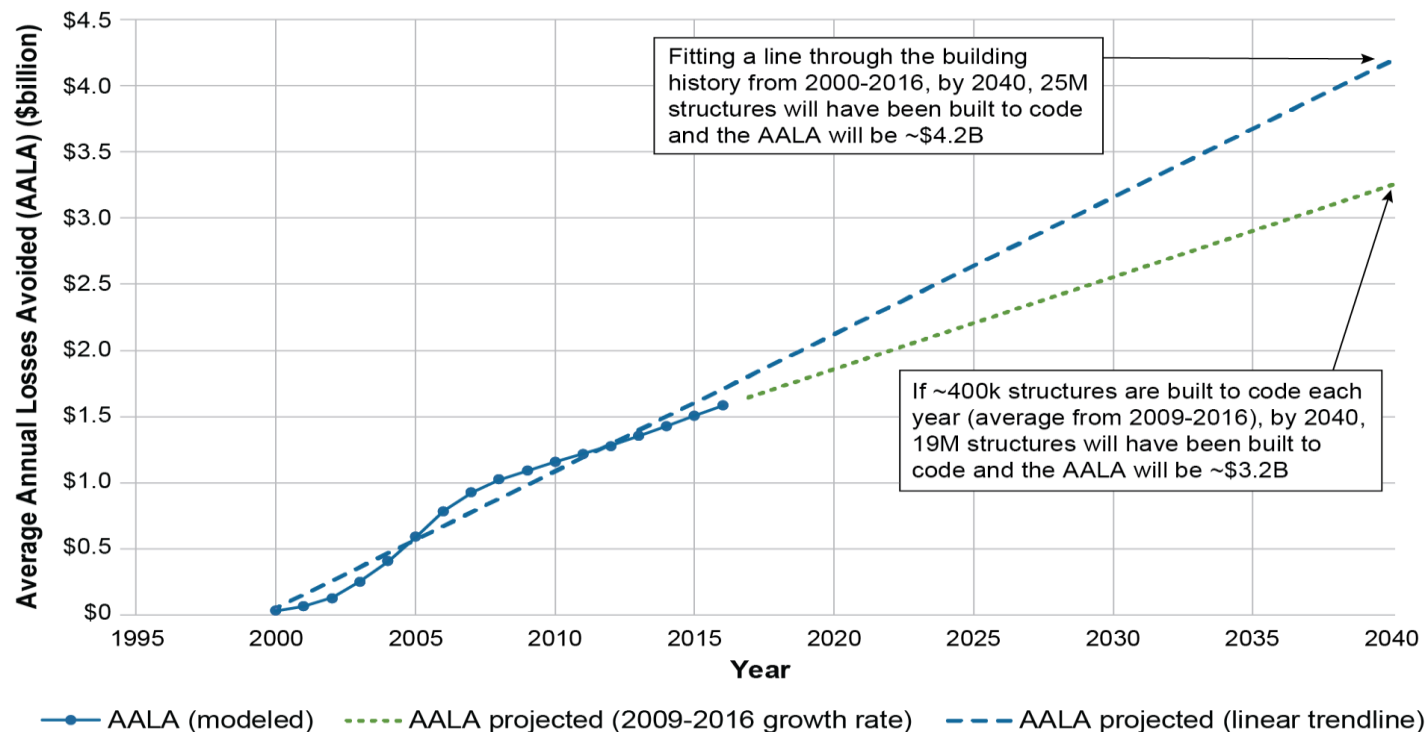
**Hurricane Wind**

**9.2m**

**\$1.1  
billion**

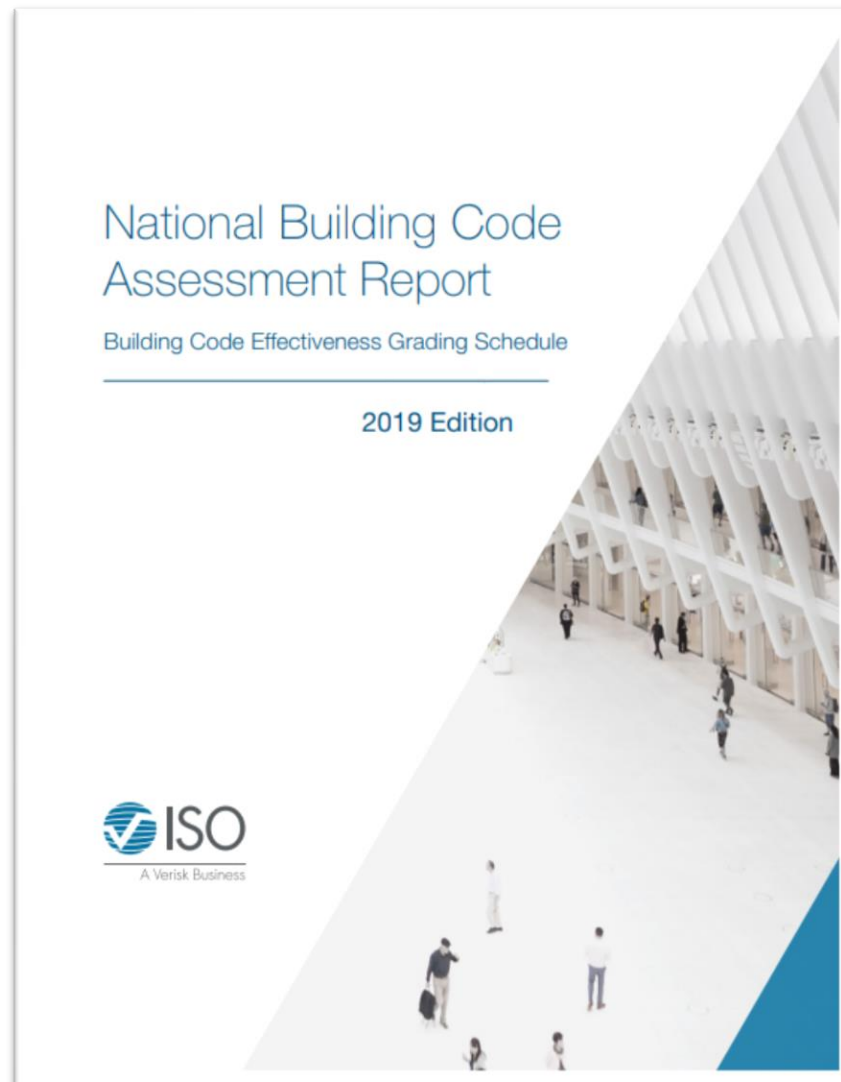
# FEMA Building Codes Save Study (cont.)

- The Nation will save **\$132B** by 2040 from the implementation of disaster-resistant codes.





# ISO BCEGS Report



# Research to Practice

## Building Science *for Disaster-Resilient Communities*



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Mitigation  
Works



FEMA

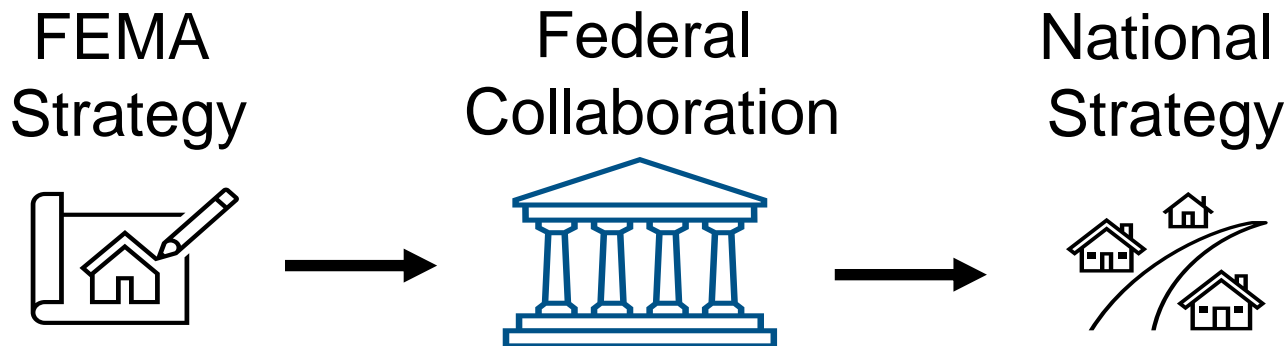


# Building Codes Strategy: Phases

**Phase 1:** Coordinate and prioritize FEMA's activities to advance the adoption and enforcement of disaster resistant building codes and standards for FEMA programs and for communities nationwide. (**Underway**)

**Phase 2:** Increase focus on disaster-resistant codes across the Federal Government, SLTTs and ensure Federal programs & policies reflect building codes to offset the rising cost of climate & weather disasters. (**Underway**)

**Phase 3:** Develop and implement a National strategy in coordination with the public and private sectors. (**Planned**)



# Building Codes Strategy: Mission and Vision

**Vision:** A resilient Nation with superior building performance in disasters.

**Mission:** To coordinate and prioritize FEMA's activities to advance the adoption and enforcement of disaster-resistant building codes and standards for FEMA programs and for communities nationwide.

# Building Codes Strategy: Goals & Objectives

## Goal 1:

### Integrate Building Codes and Standards Across FEMA

- 1.1:** Understand stakeholder needs to identify opportunities that advance building code adoption and enforcement
- 1.2:** Advance building code research, including the impacts of climate change
- 1.3:** Use data-driven decision making to guide the application of building codes in program delivery
- 1.4:** Reduce future losses by implementing current building codes across FEMA policies and programs.
- 1.5:** Leverage FEMA policies and programs to promote building codes, standards, and community resilience
- 1.6:** Improve coordination of building code activities through an Agency-wide body for information and governance

## Goal 2:

### Strengthen Nationwide Capability for Superior Building Performance

- 2.1:** Establish and maintain building code expertise across FEMA
- 2.2:** Improve HQ and Regional coordination before and after disasters
- 2.3:** Build the capability of external partners through funding, collaboration, training, and exercises
- 2.4:** Expand support to underserved individuals and vulnerable communities to increase resilience

## Goal 3:

### Drive Public Action on Building Codes

- 3.1:** Create unified, tailored, data-driven Agency messaging on building codes
- 3.2:** Leverage partnerships to promote FEMA building code message
- 3.3:** Amplify climate science messaging to increase public demand for building codes and standards
- 3.4:** Target building code adoption and enforcement outreach to the most vulnerable communities

# FEMA's Commitment

- FEMA has committed \$2.5M per year to support the Strategy.
- Created working group with representatives from 13 headquarters components and four Regional offices.
- Secured funding for Regional Building Code positions.



# FEMA Building Codes Strategy: Summary

- The FEMA Building Codes Strategy defines the goals and objectives that FEMA will follow to create a more resilient Nation through superior building performance. It calls on FEMA to align its efforts to promote the adoption and enforcement of building codes across the Nation.
- The frequency and impact of natural disasters is consistently worsening due to the effects of climate change, and there is clear evidence that the most vulnerable communities are disproportionately more likely to live in poor quality housing.
- Increasing the adoption and enforcement of building codes is a cost-effective way to save lives and protect property, with \$11 saved for every \$1 invested.
- This Strategy serves as the foundation and blueprint for future strategies that will map out a path towards increased adoption and enforcement of building codes across the Nation.
- Success requires coordination with other Federal agencies, Industry Partners and SLTTs.



# Thank you



FEMA