

HB 80: State Residential Building Code

House Labor & Commerce Committee

State Residential Building Code

The State of Alaska has local jurisdictions with building codes: outside local jurisdictions with these legal authorities, the state's only major guidance is the International Code Council, which is followed by some authorities such as the Alaska Housing Finance Corporation (AHFC). AHFC adopted the latest version in 2018 and is considering the 2024 code. That code is updated on three year cycles.

House Bill 80 would allow AHFC to promulgate regulations to implement this code in areas outside those jurisdictions. The result would be a residential building standard that protects property, life and secure investments across Alaska.

Building Codes: Overview

- Building codes generally create minimum standards for aspects like structural design, design standards to withstand environmental factors such as temperature, wind, earthquakes as well as energy efficiency. Most minimum standards are designed with safety of the occupants as top priority.
- According to nationwide studies by the International Code Council and FEMA, 65% of counties, cities and towns across the US have not adopted modern building codes; only 50% of construction post-2000 follows the I-Codes (International Code Council), and 30% of new construction occurs in communities with no codes at all, or approx. 20 years outdated.^{1}
- AHFC adopts and follows the International Building Code (IBC) as well as the International Residential Code (IRC). They have modified them to meet the local context.

^{1} *International Code Council, 2024*

Benefits of Building Code

- Buildings that are built to IRC codes have higher value.
- Other nationwide studies found that the adoption of IRC or similar code results in a national benefit of \$11 for every \$1 invested.
- Building codes improve resiliency in situations involving weather events such as cold snaps and rolling blackouts.

Summary of Findings

BCRs for Mitigation Strategies Studied

(from Highest to Lowest)






- Adopting Model Codes Saves \$11 per \$1 Spent
- Federal Mitigation Grants Save \$6 per \$1 Spent
- Private-Sector Building Retrofit Saves \$4 per \$1 Spent
- Exceeding Codes Saves \$4 per \$1 Spent
- Mitigating Infrastructure Saves \$4 per \$1 Spent

Institute of Building Sciences: *Natural Hazard Mitigation Saves*, 2019.

Benefits of Building Code: Con't

- Findings by the National Institute of Building Sciences and the International Code Council found that building codes had powerful impact on resiliency of structures in multiple disasters or threats.
- Beyond building to code, other benefits flow from retrofits and improvements to existing structures. The result is a more durable housing stock for Alaskans in a variety of scenarios.
- Building new structures to higher code will save state dollars in long term outcomes.

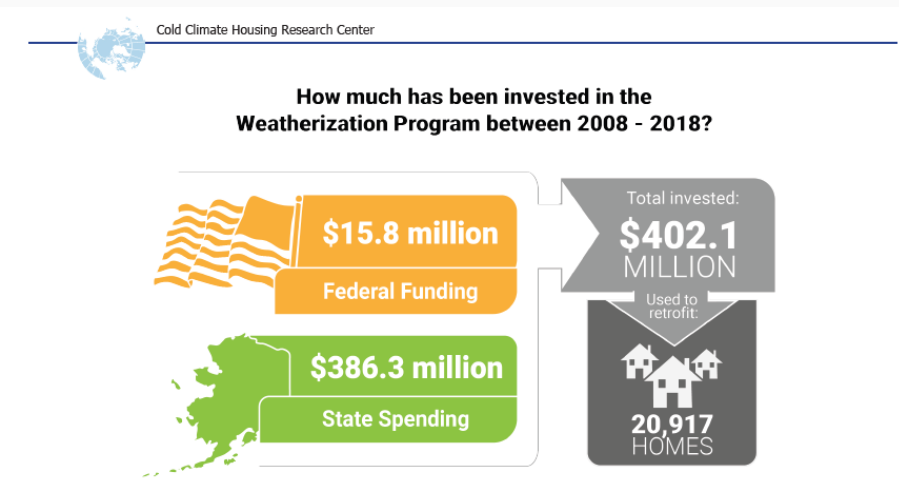
Table 2-1: Benefit-cost ratio by Hazard and Mitigation Measure.

	ADOPT CODE	ABOVE CODE	BUILDING RETROFIT	LIFELINE RETROFIT	FEDERAL GRANTS
Overall Benefit-Cost Ratio	11:1	4:1	4:1	4:1	6:1
Cost (\$ billion)	\$1_{/year}	\$4_{/year}	\$520	\$0.6	\$27
Benefit (\$ billion)	\$13_{/year}	\$16_{/year}	\$2200	\$2.5	\$160
 Riverine Flood	6:1	5:1	6:1	8:1	7:1
 Hurricane Surge	not applicable	7:1	not applicable	not applicable	not applicable
 Wind	10:1	5:1	6:1	7:1	5:1
 Earthquake	12:1	4:1	13:1	3:1	3:1
 Wildland-Urban Interface Fire	not applicable	4:1	2:1	not applicable	3:1

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Alaska Cold Climate Housing Research Center

- Retrofits are one aspect of building code adoption that can improve long term outcomes of existing housing stock.
- More expensive than building to code the first time, but still important tool to preserve existing homes.
- 20k homes were retrofitted from 2008-2018, benefiting 59,160 Alaskans, approx. 8% of Alaska's population.



Cold Climate Housing Research Center, *Weatherization Program Impact Report, 2019*

Energy savings and cost benefit

- A US Dept. of Energy study conducted across seven states found that the adoption of a modern code – and the education of contractors and homebuilders -- resulted in significant savings.
- The International Code Council estimates that with each code cycle (3 years) there is 5-7% efficiency gained by the adoption of new technology or standards.

Table ES.1.2 Summary of Annual Statewide Energy Cost Savings

State	Annual Potential Savings		Statewide Savings Achieved from Phase II (Phase I – Phase III)	
	Phase I	Phase III	Annual Energy Cost Savings	% Change
Pennsylvania	\$3,198,846	\$3,013,497	\$185,349	5.8%
Maryland	\$1,542,788	\$311,414	\$1,231,374	79.8%
Kentucky	\$1,219,856	\$928,586	\$291,270	23.9%
North Carolina	\$2,025,958	\$2,368,044	-\$342,086	-16.9%
Georgia	\$4,516,678	\$1,751,143	\$2,765,535	61.2%
Alabama	\$1,299,382	\$978,585	\$320,797	24.7%
Texas	\$4,847,797	\$1,243,958	\$3,603,839	74.3%
Total	\$18,651,305	\$10,595,227	\$8,056,078	43.2%

US DOE: Residential Energy Code Field Studies: Assessing Implementation in Seven States, September 2022

Consumer protections: HB 80

- Requires residential contractors to test and show expertise in state building code for ongoing licensing in residential contracting.
- Exempts owner-builds and recreational cabins.
- Creates protections for consumers by ensuring compliance by residential constructors with a uniform code outside of local jurisdictions.

Alaska Housing Finance Corporation

- Adopted prior 2018 ICC Standards; reviewing 2024 standards now. Requires all mortgages and loans to meet these standards.
- HB 80 would place AHFC in charge of promulgating these regulations.
- Would also house the Alaska State Residential Building Safety Council.
- This advisory council would advise the AHFC in regard to regulations and updates, with feedback through a public process on the proposed changes.

Thank you!

Questions?