



SEVERE WEATHER MITIGATION & RESILIENCY ADVISORY COUNCIL FINAL REPORT – JUNE 2025

CONNECTICUT INSURANCE DEPARTMENT



Table of Contents

03

Letter from the
Council

04

Executive Summary

05

Public Meetings

06

Council
Recommendations

13

Conclusion and
Acknowledgements

Letter from the Council

Andrew Mais
Commissioner of Insurance
State of Connecticut

Commissioner Mais

Connecticut faces an increasing threat from severe wind and flood events due to climate change. These events are causing widespread damage and financial burdens for homeowners, renters, and businesses along with a challenging and lengthy recovery period. Many property owners are left financially vulnerable, particularly those without adequate insurance, no insurance coverage, or critically needed flood insurance and a reduction in Federal aid to states and individuals impacted by these events.

In response, the Severe Weather Mitigation and Resiliency Advisory Council was established in October 2024 to study and develop recommendations to address the impact of changing weather events for the residents of Connecticut. Over the past eight months, the Council has gathered extensive input from diverse stakeholders culminating in this report.

The report outlines multiphase, multifaceted program leveraging public-private-philanthropic partnerships. Key recommendations include immediately supporting existing resilience residential home programs, launching a grant program for IBHS Fortified Roofs, and increasing awareness, education and the need for individuals and businesses to purchase flood insurance.

The recommendations, shaped by comprehensive input and collaboration, are designed to educate and assist Connecticut residents in understanding how to protect their property from substantial losses occurring as a result of wind and flood damage. While some recommendations will require legislative action and financial resources the Council believes this report includes actions that can be taken immediately and serve as a critical step towards enhancing the state's resilience to severe weather while improving access to mitigation measures and needed consumer education.

We encourage continued collaborative efforts to build a more resilient Connecticut.

Sincerely,

Sonja Larkin-Thorne and Robert Hotaling
Council Co-Chairs

Council Members

George Bradner - Assistant Deputy Commissioner of Property & Casualty Insurance CT
Richard Branigan - CEO, American Red Cross of CT & RI
Bryan Garcia - President & CEO, CT Green Bank
Joseph Mathieu - VP, Office of Chief Underwriting Officer, The Hartford
Eric Nelson - SVP of Enterprise Catastrophe Risk Management, Travelers
James O'Donnell Ph.D. - Professor of Marine Sciences & CIRCA Executive Director, UConn
Jim Perras - CEO Home Builders & Remodelers Association of Connecticut, Inc.
Joanna Wozniak-Brown Ph.D. - Climate & Infrastructure Policy Development Coordinator, CT OPM
Matthew Horvath-Wulf - Head Government Affairs Americas, SVP, Swiss Re

Executive Summary

Globally,¹ and across the United States,² the financial cost of weather-related losses is growing—and so is the need for investment in mitigation and resilience along with improvements in consumer education to understand to address them. Estimates indicate that between \$5.4 trillion and \$11.7 trillion of global investments per year will be required by 2030 to meet the combined goals of climate weather related mitigation (i.e., reducing greenhouse gas emissions), adaptation and resilience. Yet, only a small fraction of that capital, less than 10%, is currently directed toward adaptation and resilience, where the opportunity to protect lives, homes, and infrastructure is most immediate.³

The New England states with assistance from the National Association of Insurance Commissioners (“NAIC”) are beginning to confront the immediate need for investment in infrastructure mitigation and resiliency programs. States are turning to recent research and guidance from Center for Insurance Policy and Research (“CIPR”),⁴ which emphasizes state-led efforts (e.g., Alabama, Louisiana, Mississippi, North Carolina, South Carolina, California, Florida, Oklahoma) in retrofits as essential to reducing insured losses, improving building resilience to reduce the impact of weather-related losses on consumers.

In Connecticut, recent research from the University of Connecticut (“UConn”) supported by the Connecticut Institute for Research and Climate Adaptation (“CIRCA”), underscores the compounded risks that Connecticut’s coastal communities face from both wind and flood hazards. The study emphasizes that wind-induced damage to residential structures—particularly to roofs and walls of older or non-elevated buildings—can be extensive even in moderate storm events. High wind and major rain events are damaging homes and exposing residents to major financial losses, particularly those in older homes in urban cities and towns.⁵

The Severe Weather Mitigation and Resiliency Advisory Council⁶ was charged with delivering a report by mid-2025 containing recommendations to Insurance Commissioner Mais to create a more resilient Connecticut by reducing the impact of natural weather hazards on homeowners, small businesses, and renters.

¹ “This is What the Climate Crisis is Costing Economies Around the World” by the World Economic Forum (November 29, 2023). The World Meteorological Organization estimates nearly \$1.5 trillion in economic losses attributed to weather, climate and water extremes from 2010-2019 – up from nearly \$1.0 trillion from 2000-2009.

² And “2024: An Active Year of U.S. Billion-Dollar Weather and Climate Disasters” by Adam Smith of NOAA (January 10, 2025). In 2024, there were 27 individual weather and climate disasters with at least \$1 billion in damages, trailing only the record-setting 28 events analyzed in 2023.

³ “The Cost of Inaction” by Caroline Alberti of the Climate Policy Initiative (January 4, 2024)

⁴ National Association of Insurance Commissioners – Center for Insurance Policy and Research (NAIC-CIPR), *Resilience Policy Resource Guide and Retrofitting Program Playbook for State Insurance Regulators: Addendum – August 2024*. Washington, D.C.: NAIC-CIPR, 2024.

⁵ “Resilient Coastal Communities Under Wind and Flood Hazards: Understanding the Trade-Offs in Residential Building Design” by the Wei Zhang, et al. from the University of Connecticut and CIRCA.

⁶ <https://portal.ct.gov/cid/ct-severe-weather-resiliency-council>

Public Meetings

The council held two public meetings, December 18, 2024⁷, and May 8, 2025⁸, to receive comments from interested parties including, IBHS, American Red Cross, NAIC's CIPR, FLASH, NAHB and CIRCA. We had meetings and presentations from Habitat for Humanity North Central Connecticut, Energize CT, and the UConn Eversource Energy Center and School of Civil and Environmental Engineering. Materials and reports were reviewed from states currently offering or piloting mitigation programs, we reviewed computer systems and talked with Insurance Commissioners about roadblocks to legislative approval of programs.

⁷ <https://ct-n.com/ctnplayer.asp?odID=24023>

⁸ <https://www.youtube.com/live/5QeZ3m6hEig>

Council Recommendations

Through expert presentations and facilitated discussions, Council members gained crucial insights into emerging wind and flood risks, effective mitigation strategies, and the vital role of insurance in building community resilience. This comprehensive understanding shaped the final recommendations, which address affordability, risk mitigation, incentives, and education and outreach programs.

To ensure swift progress, the program is designed with immediate, mid-term, and long-term phases. This approach allows for immediate actions that do not require new legislative bills or appropriations, bypassing the need to wait for \$105 million in legislative funding over 10 years. The recommendations are as follows.

Recommendation 1. Support and Partner with Existing Mitigation and Resiliency Programs

The Council recommends immediate support of and expansion of partnerships with established Connecticut programs that directly address home resiliency, particularly those not requiring new legislation. This includes:

- **Connecticut Department of Housing's CT Homes:** Integrate mitigation and resiliency measures into existing housing programs, especially for vulnerable populations and new homeownership units.
- **Energize CT:** Enhance focus on resilient building practices within energy efficiency initiatives and incentivize upgrades that improve structural integrity against severe weather.
- **Habitat for Humanity North Central Connecticut:** Collaborate to scale their successful zero-energy and FORTIFIED home building efforts, promoting resilient construction for affordable housing.
- **Connecticut Green Bank's Smart-E Program:** Leverage Smart-E loans to finance a broader range of climate adaptation and resilience improvements, making it easier for homeowners to invest in protective upgrades like floodproofing and storm shutters.

By strengthening these existing, proven programs, Connecticut can swiftly advance its resilience goals and provide immediate support to homeowners.

Recommendation 2. Launch an Educational and Communications Campaign

The Council recommends implementation of a robust communication and education plan is crucial for the long-term success of Connecticut's Resiliency Program. An effective communication strategy ensures that key stakeholder groups are well-informed about the program's benefits, key components, and operational mechanisms and that they are empowered to actively support, participate in and benefit from the program. This section of the report outlines the main components of an effective communication and education strategy and provides recommended actions to implement that strategy.

Key components of this pilot program should include:

KEY COMPONENTS & PRINCIPLES

The communication campaign will be multifaceted, employing various channels and tailoring messages to each audience. It will leverage existing educational content from other states and maximize connectivity with current federal, state, and local resources like FEMA, CT Green Bank, and CIRCA.

TARGET AUDIENCES & CORE MESSAGES

Engage:

- **Legislators & Government Officials:** To garner support by highlighting program benefits.
- **Homeowners & Small Businesses:** To raise awareness of participation opportunities, ensuring outreach to diverse demographics (e.g., lower-income, older, non-digitally literate).
- **Contractors & Builders:** To educate on requirements, training, and certification for resilient building practices.
- **Evaluators:** To establish training and certification for property assessment and upgrade verification.
- **Municipal & Local Officials:** To enlist their help in disseminating information and supporting local program adoption.
- **Insurance Industry:** To inform carriers, agents, and brokers about mitigation benefits to influence underwriting and rates.
- **Realtors, Banks, & Mortgage Companies:** To enlist their support in educating customers about resilient homes and program access.

Core messages will cover the benefits of resilience, how to participate, program design, FORTIFIED Roof standards, flood and tree management awareness, insurance education, contractor/evaluator training, and financial assistance information.

COMMUNICATION CHANNELS & RESOURCES

A user-friendly website will serve as the central hub and program management portal. We'll implement public awareness campaigns (TV, radio, print, social media), create print materials for non-digital users, and utilize digital resources. Strong partnerships with existing organizations (e.g., FEMA, CT Green Bank, Habitat for Humanity, CIRCA, Energize CT, American Red Cross) and media engagement will broaden our reach. We'll also tailor "Get the Word Out" messaging to specific groups including HBRA of CT.

The campaign will actively utilize existing resources from organizations like NAIC-CIPR, FLASH, Smart Home America, IBHS, and learn from programs in other states like Alabama's Strong Homes Program. Key state partners include the CT Insurance Department, CT Emergency Management, DEMHS, DEEP, DECD, OPM, DOT, Energize CT, CT Green Bank (Smart-E Loans), Home Builders & Remodelers Association of Connecticut, SAFER, and the CT Association of Floodplain Managers.

RECOMMENDED ACTIONS & IMMEDIATE STEPS

1. **Develop a User-Friendly Website:** Create an intuitive, multilingual, and accessible website as the program's central information and access point, considering licensing systems like Alabama's CAPS for administrative infrastructure.
2. **Implement Public Awareness Campaigns:** Launch broad, branded campaigns using diverse media, enlisting communications experts, and tailoring content for specific stakeholders.

3. **Engage Government Officials:** Collaborate with municipal and local officials, leveraging Councils of Government, hosting workshops, and providing resources to help them champion the program.
4. **Partner with Established Organizations:** Formalize collaborations with existing resilience organizations to enhance credibility, extend reach, and leverage shared resources, including publicity and data.
5. **Develop & Implement Comprehensive Training Programs:** Offer robust training and certification for contractors and evaluators to ensure consistent, high-quality work to technical standards.
6. **Monitor & Evaluate Effectiveness:** Establish metrics to track communication and education efforts, regularly assessing impact to refine outreach and engagement.

Many aspects of this communication and education plan can begin immediately, even before formal legislative and regulatory approvals. This includes:

1. Pre-launch education campaigns on fortified roofs, flood risk, and tree management,
2. Establishing funding mechanisms through a 501(c)(3) for early efforts,
3. Leveraging existing state resiliency initiatives,
4. Funding to support training of evaluators, and
5. Engaging insurers and agents to promote fortified roofs.

An effective communication and education strategy is fundamental to the success of Connecticut's Resiliency Program. By engaging a diverse range of stakeholders through tailored messaging and leveraging existing resources, the program can achieve widespread visibility and participation. Implementing these recommended actions will ensure that all stakeholder groups are well-informed and motivated to contribute to the program's success, ultimately leading to a more resilient and prepared Connecticut.

For further detail, see the Communication & Education subgroup report in Appendix 3.

Recommendation 3. Pilot an IBHS Fortified™ Mitigation Program

To initiate the severe weather mitigation efforts without immediate legislative funding, the Connecticut Insurance Department, through its Severe Weather Mitigation and Resiliency Advisory Council, should prioritize the implementation of small-scale pilot programs. These pilots will focus specifically on roof reinforcement to the IBHS Fortified™ standard in targeted, high-risk areas across Connecticut. The primary objective is to demonstrate the efficacy and benefits of the Fortified™ mitigation standards in reducing wind and rain damage, thereby building a strong case for broader program expansion.

Key components of this pilot program should include:

FUNDING MECHANISMS

Actively seek and utilize existing, smaller grants, philanthropic contributions from foundations (e.g., Robert Wood Johnson Foundation), and initial private sector contributions including funding and investments from entities like Home Depot, Lowes and industry partners. The aim is to identify private entities willing to fund these initial pilot initiatives, thereby addressing the immediate need pending large-scale legislative appropriations.

STRATEGIC PARTNERSHIPS

Formalize and strengthen collaborations with national experts such as the National Association of Insurance Commissioners (NAIC), Insurance Institute for Business & Home Safety (IBHS) for their proven mitigation strategies and certification process, and the Federal Alliance for Safe Homes (FLASH) for their expertise in promoting resilient construction. Additionally, leverage existing state programs and organizations like the CT Department of Housing CT Homes program, Energize CT, Habitat for Humanity North Central Connecticut, Home Builders & Remodelers Association of Connecticut, and the Connecticut Green Bank Smart-E program to support the pilot's outreach and implementation.

TARGETED ELIGIBILITY

The pilot program will initially focus on:

- **Property Type:** Single-family, owner-occupied, primary resident homeowner properties.
- **Multi-family Dwellings:** Owner-occupied properties with 1-4 units, where the owner's primary residence is a unit within the structure.
- **Occupancy:** Strictly limited to primary residences; no secondary or seasonal dwellings will be considered.
- **Property Condition:** Homes must be in good repair, with evaluators assessing the current condition and developing a clear scope of work to meet the Fortified™ standard, presented in a Home Review Report to the homeowner and the program.
- **Insurance Requirement:** Properties must have in-force homeowner's or dwelling fire insurance coverage. Flood insurance may also be required if the property is in a FEMA-designated special flood hazard zone.

EQUITY AND VULNERABLE COMMUNITIES

A critical element will be to design the pilot to provide assistance for residents at or below 80% of the Area Median Income (AMI). The goal is to ensure an equitable distribution of grant funds, with a proportionate amount (e.g., 40%) specifically directed to the most vulnerable residents located in higher-risk communities. This aligns with existing Connecticut legislation and reporting.

DATA COLLECTION AND ADVOCACY

Thoroughly document the outcomes of the pilot programs, including reductions in potential damage, projected insurance savings, and direct benefits to homeowners. This data, coupled with detailed cost-benefit analyses, will serve as crucial evidence to advocate for the larger, long-term funding proposal (e.g., \$105 million over 10 years) necessary for statewide program expansion.

For further detail, see the Program Design subgroup report in Appendix 1.

Recommendation 4. Expand the IBHS Fortified™ Mitigation Program and Educational and Communications Campaign

Once the necessary legislative approval and full funding (specifically the proposed \$105 million over 10 years) are secured, the Connecticut Insurance Department should embark on a comprehensive, statewide expansion of the IBHS Fortified™ Mitigation Program, alongside a significantly expanded educational and communications campaign. This phase represents the long-term vision for building a resilient Connecticut.

Key elements of this expanded program and campaign should include:

STATEWIDE PROGRAM ROLLOUT

Fully implement the comprehensive statewide program for roof fortification, offering incentives such as up to \$10,000 or \$15,000 in grants and/or interest rate buy-down loans. This expansion will move towards the ambitious goal of fortifying a significant portion of Connecticut's owner-occupied homes, specifically targeting 900-1,000 homes per year. The program should consider a "declining incentive model" to manage long-term demand and encourage early adoption.

COMPREHENSIVE MITIGATION STRATEGIES

Broaden the scope of mitigation strategies beyond just roofs to address a wider range of wind and flood risks across the entire state. This could include exploring support for other Fortified™ standards beyond roofs, such as those related to openings (windows, doors, garages) and foundations, as well as educate and broaden flood mitigation measures to consumers.

CULTURE OF RESILIENCY

Actively work to create a lasting culture of resiliency within Connecticut. This involves increasing market demand for resiliency improvements and fostering a proactive approach to severe weather preparedness among homeowners and businesses.

EXPANDED EDUCATIONAL AND COMMUNICATIONS CAMPAIGN

Launch and sustain an intensified public awareness campaign with the following focuses:

- **Risk Mitigation Best Practices:** Provide comprehensive information to homeowners, businesses, and municipalities on the importance of adopting severe weather risk mitigation best practices.
- **Benefits of Resilient Property:** Highlight the economic and social benefits of resilient properties, including reduced economic and insured losses, enabling residents to stay in their homes, ensuring businesses and schools remain open, and lessening the burden on state support and healthcare systems.
- **Flood Awareness and Education:** Significantly enhance efforts to inform consumers about their flood risk, new legislation on disclosure of flood loss information at the time of property sale, how to determine individual flood risk, and how to obtain quotes for both National Flood Insurance Program (NFIP) and Private Flood insurance.

SMALL BUSINESS OWNER ENGAGEMENT

Actively engage with the small business community (who own their properties) including the CBIA and chambers of commerce to identify and support small business owners' mitigation and resiliency efforts where a Connecticut small business is defined as a for-profit or non-profit business that is independently owned and operated and contributes to the U.S. economy with 100 employees or less.

ANCILLARY MITIGATION CONSIDERATIONS

Research and consider possibilities of supporting tree trimming or removal by homeowners pursuing roof fortification, recognizing the role of vegetation in mitigating severe weather damage.

LONG-TERM FUNDING AND RESOURCE MANAGEMENT

Effectively manage the state funding, ensuring efficient grant disbursement and program administration. Continue to leverage the expertise of the Severe Weather Mitigation and Resiliency Advisory Council and existing Connecticut Insurance Department staff, while potentially introducing new software infrastructure as needed for program management and data analysis.

For further detail, see the Program Design subgroup report in Appendix 1.

Recommendation 5. Incentivize Home Mitigation through Tax Credits

The Council recommends the state enact legislation to provide tax credits for Connecticut homeowners and qualifying small business owners who invest in pre-approved severe weather mitigation improvements. This program would offer a powerful financial incentive, complementing existing and proposed grant programs, to drive widespread adoption of measures like those meeting IBHS Fortified™ standards.

Key components of this concise recommendation include:

- **Targeted Improvements:** Credits would apply to expenditures on proven wind and flood mitigation measures (e.g., Fortified™ roof upgrades, window/door strengthening, elevation), aligning with a clearly defined list of eligible improvements.
- **Credit Structure:** Offer a percentage-based state income tax credit on qualified expenses, up to a defined maximum, with consideration for higher incentives in high-risk areas or for lower-income households to ensure equitable access.
- **Eligibility & Verification:** Require documented proof of expenses from licensed contractors and, for standard-based improvements, third-party certification (e.g., Fortified™ certification) to ensure quality and compliance. Eligibility would extend to single-family owner-occupied homes and qualifying owner-occupied small businesses.
- **Benefits:** This program would reduce state disaster relief burdens, encourage insurance credits, increase property values, stimulate the local economy, and significantly enhance overall community resilience against severe weather.

Recommendation 6. Broaden the Catastrophe Savings Account Eligibility

To significantly enhance financial preparedness and incentivize self-funded mitigation efforts among a wider segment of Connecticut homeowners, the Council recommends the state enact legislation to broaden the eligibility for Catastrophe Savings Accounts (CSAs) to include any single-family owner-occupied homeowner, regardless of their property's flood zone designation or specific identified risk level. This expansion would transform CSAs into a universal tool for disaster preparedness, empowering more residents to save pre-tax dollars for qualified, unforeseen severe weather-related expenses, including insurance deductibles, mitigation improvements, and disaster repairs.

Key considerations and components for this recommendation include:

- **Universal Access:** Remove current or potential geographical/risk-based restrictions, making CSAs available to every single-family owner-occupied homeowner in the state.
- **Tax Advantages:** Maintain or establish attractive state tax benefits, such as tax-deductible contributions, tax-free growth, and withdrawals for qualified catastrophe expenses.
- **Qualified Expenses:** Clearly define eligible uses to include insurance deductibles, validated mitigation improvements (e.g., Fortified™ upgrades), temporary qualified living expenses, and unreimbursed repair costs from severe weather events.
- **Benefits:** This expanded program would significantly enhance financial preparedness, incentivize proactive mitigation investments, reduce reliance on State and Federal aid post-disaster, and foster greater overall community resilience.

Recommendation 7. Further Study Innovative Solutions

The Council recommends the Connecticut Insurance Department, and other relevant state agencies, nonprofits and industry partners continue actively exploring opportunities to strengthen Connecticut's wind and flood resiliency, including increasing flood insurance uptake. This continued engagement will help identify comprehensive solutions to bolster individual and collective policyholder mitigation and resiliency.

Conclusion

The Council extends its sincere gratitude to the stakeholders, members, and guest speakers whose invaluable contributions—including their time, expertise, stories, and public comments—were instrumental in shaping the final recommendations of this report. We are optimistic these recommendations will form the basis of an action plan to safeguard communities from future severe wind and flood events. We eagerly anticipate collaborating on solutions that will benefit all state residents and ensure future generations' resilience.

Acknowledgements

- Jared Kosky, J.D. – Deputy Commissioner, CT Insurance Department
- Mary Quinn – Director of Communications & Digital Media, CT Insurance Department
- Leigh Whelpton, MEng – Director of Environmental Infrastructure, CT Green Bank
- James Desantos – Associate Director of Legislative & Regulatory Affairs, CT Green Bank
- John Truscinski, CFM – Director of Resilience Planning, CIRCA, UConn
- Jeff Czajkowski, Ph.D. – CIPR Director, NAIC
- Brian Powell, MBA, CPM – Catastrophe Risk Resilience Specialist, NAIC
- Eli Russo – Enterprise Risk Management Advisor, NAIC
- Roger Claybrooke, MBA – Catastrophe Risk Data Analyst, NAIC
- Tim Barnett, FCAS, CPCU, ARE – P&C Cat Risk Actuary, NAIC
- Alexandra Cary – FORTIFIED Market Development Manager, IBHS
- Julie Shiyou-Woodard – Safe Homes America SHA
- Leslie Chapman-Henderson – President & CEO, FLASH
- Susan Asmus – SVP of Regulatory Affairs, National Association of Home Builders
- Jon Basso – Senior Director of Disaster Cycle Services, American Red Cross
- Kristopher McKelvie – CEO, Habitat for Humanity for North Central Connecticut
- Marc de Vos – Research Associate, CIRCA, UConn
- Emmanouil Anagnostou, Ph.D. – Professor, School of Civil and Environmental Engr & EEC Director, UConn
- Diego Cerrai, Ph.D. – Assistant Professor, Civil and Environmental Engr & EEC Interim Director, UConn
- Robert Fahey, Ph.D. – Associate Professor, Natural Resources and the Environment & EEC Associate Director, UConn
- Wei Zhang, Ph.D. – Associate Professor, Civil and Environmental Engineering, UConn

Appendix 1 – Program Design Subgroup Report

Severe Weather Mitigation and Resiliency Advisory Council

Executive Overview

The Connecticut Insurance Department's Severe Weather Mitigation and Resiliency Advisory Council aims to enhance the resilience of Connecticut homes and small businesses against severe weather impacts. To move forward quickly without waiting for legislative approval of \$105 million in funding over 10 years, the program can be designed with immediate, mid-term, and long-term phases, focusing on actions that can be taken without new legislative bills and appropriations.

Key Goals

- **Immediate Goal:** Initiate a program to enhance the resilience of Connecticut homes and small businesses against severe weather impacts.
- **Primary Focus:** Reinforce residential roofs to make them less susceptible to wind and rain damage, as the first stage of a broader mitigation effort.
- **Broader Impact:** Create a culture of resiliency in Connecticut. Reduce economic and insured losses, help residents stay in their homes, ensure businesses and schools remain open, reduce the need for state support and hospital visits, and contribute to a more affordable and competitive property insurance market.
- **Long-Term Target:** Aim to fortify a significant portion of properties in Connecticut and build a culture of resiliency, specifically targeting 800–1,000 homes a year, through grant programs, sales and property exemptions, and other incentives including offering up to \$10,000 in grants or interest rate buy down loans for roof fortification.

Scope & Rollout

The overarching goal of the “Constitution State Home Mitigation and Resiliency Program” is to develop practical and forward-thinking strategies to strengthen the resilience of homes and businesses in response to increasingly frequent severe weather events. The program aims to reduce financial losses, keep people in their homes, help businesses stay open, and ease the burden on the demands of healthcare and emergency systems by investing in science-based mitigation⁹ measures. The program includes elements that can be implemented in the short-term within existing state resources as well as those requiring additional policymaker action to increase the program's reach and impact. The proposed program design leverages existing resources and best practices from organizations like the National Association of Insurance Commissioners (NAIC), The federal Alliance of Safe Homes (FLASH), the Insurance Institute for Business and Home Safety (IBHS), and Smart Home America (SHA). These organizations have successfully assisted states to achieve a level of mitigation and resilience that aligns with the Connecticut goals.

⁹ In the context of insurance mitigation refers to the process of taking actions to reduce or minimize the severity of loss.

In summary:

- **Priority Perils to be addressed:** Wind and Flood
- **Rollout:** Four Phases
 - **Phase 1:** Establish partnerships and define program support roles to enhance existing mitigation and resiliency programs (i.e. CT Housing Dept, Energize CT, Habitat for Humanity, Connecticut Green Bank Smart-E, CIRCA, and others)
 - **Phase 2:** Develop and launch an educational and communications campaign to increase awareness of wind and flood risks and educate residents and property owners on the value of risk reduction measures. Identify Contractors and Evaluators and begin training appendix C.
 - **Phase 3:** Launch an IBHS Fortified™ mitigation pilot program. Identify whether there is a private partner sector willing to fund a small pilot program. Also, look to expand partnership roles and involvement with such entities as, Federal Home Loan Bank of Boston (FHLB¹⁰, Habitat for Humanity, Robert Wood Johnson Foundation, Home Depot, Lowes, etc.
 - **Phase 4:** Per a declining incentive model (Appendix F), expand the IBHS Fortified™ mitigation program, integrate flood risk mitigation measures, expand the educational and communications campaign, and create a culture of resiliency by increasing market demand for resiliency improvements within Connecticut.

Eligibility Requirements

These recommendations apply to the IBHS Fortified™ mitigation program specified above in Phases 3 & 4 and include:

- **Property Type:** Single family, owner-occupied, primary resident homeowner properties and multi-family owner-occupied properties with 1-4 units, where the owner's primary residence is a unit within the structure.
- **Occupancy: No secondary or seasonal dwellings** are being considered for eligibility, *must be the verified primary residence of the grant applicant.*
- **Condition:** Properties should be in good repair where evaluators will assess the home's condition and develop a scope of work to be performed, presented in a Home Review Report to the homeowner and the program.
 - **NOTE:** See the appendix A for more information on definitions of and requirements to meet the Fortified™ standard and receive certification.
- **Insurance:** In-force insurance (homeowner's or dwelling fire).
 - **NOTE:** Flood insurance may also be required if the property is in a FEMA-designated special flood hazard zone.
- **Means Testing/Vulnerable Communities:** The program should provide assistance for residents at or below 80% of the AMI¹¹. The goal is to direct resources to the most vulnerable population of residents located in higher-risk communities¹².
 - **NOTE:** This approach for qualifying and distribution of resources aligns with Connecticut legislation and reports. However, eligibility criteria need to be further defined.

¹⁰ The Federal Home Loan Bank (FHLB) has been a subject of discussion regarding its involvement in funding resiliency efforts and its potential role in future programs. FHLB of Dallas's Program: The Federal Home Loan Bank of Dallas has been actively providing funds for fortified programs over the last four years. They initially started with \$1 million or \$2 million in their first year and have since applied \$10 million towards both new construction and retrofit of low to moderate-income homes. Their plan includes increasing this funding to \$15 million in the fifth year. Amplifying Effect: Beyond direct grants, the FHLB of Dallas's program has an "amplifying effect". They are a significant part of the capital stack for development loans for non-profits building subsidized or affordable housing in their region. By learning about the FORTIFIED program, the FHLB of Dallas began giving extra points (5 or 10 points) to any construction that included a FORTIFIED roof when applying for capital. This incentive led to a significant uptake: after two years, 80% of their applications for capital included a proposal to have a FORTIFIED roof.

¹¹ This Means testing requirement threshold is the established methodology e.g. CHFA Program and the CT Green Bank

¹² Per Public Act 20-05, "Vulnerable communities" means populations that may be disproportionately impacted by the effects of climate change, including, but not limited to, low and moderate income communities, environmental justice communities pursuant to section 22a-20a, communities eligible for community reinvestment pursuant to section 36a-30 and the Community Reinvestment Act of 1977, 12 USC 2901 et seq., as amended from time to time, populations with increased risk and limited means to adapt to the effects of climate change, or as further defined by the Department of Energy and Environmental Protection in consultation with community representatives

- **Future Scope:** Will include a phased in flood program along the lines of the Fortified roof program but focused on identifying flood standards that are cost appropriate.

Timeline

NEAR TERM: 6-12 MONTHS (IMMEDIATE NEXT STEPS – PRIOR TO LEGISLATIVE ACTION)

Phases 1-2 specified above:

- **Partnership Building:** Forge public-private partnerships (P3) that do not necessitate immediate new legislative funding (i.e. Habitat for Humanity, Connecticut Green Bank Smart-E).
- **Resource Allocation:** Utilize existing departmental resources and the expertise of Advisory Council members for initial planning and outreach efforts.
- **Education & Outreach:** Develop and launch public awareness campaigns for homeowners, businesses, and municipalities on the importance of risk mitigation best practices and the benefits of resilient property for wind and flood risk.
- **Program Development:** Continue to refine and develop detailed grant standards, explore emerging insurance products, and credits that encourage the use of Fortified standards establish financial thresholds, and identify diverse partnership opportunities.
- **Data Utilization:** Enhance data sharing initiatives to inform consumer decisions and land-use planning, leveraging existing state infrastructure, and identification of higher risk communities to the impacts of Hurricane, severe convective storms and flood catastrophe loss.
- **Flood awareness and education:** Develop an initial campaign to help inform consumers about their flood risk, support implementation of PA 25-33 which increases requirements for disclosure of flood loss information at the time of property sale. Assist consumers on how to determine their flood risk and access flood insurance.

MID TERM: 6-24 MONTHS (POST-REPORT & PRE-FULL LEGISLATIVE ACTION)

This relates to Phases 1-3 specified above.

- **Pilot Programs:** Implement small-scale pilot programs for roof reinforcement in targeted areas, funded through existing, smaller grants, philanthropic contributions, or initial private sector agreements.
- **Best Practice Integration:** Formalize collaborations with national experts like the Insurance Institute for Business & Home Safety (IBHS) and the Federal Alliance for Safe Homes (FLASH) and Safe Homes America (SHA) to integrate proven mitigation strategies.
- **Advocacy:** Use successes from pilot programs and detailed cost-benefit analyses to advocate for the larger, long-term funding proposal (e.g., \$105 million over 10 years).

LONG TERM: 2-5 YEARS (WITH LEGISLATIVE APPROVAL AND FULL FUNDING)

This relates to Phases 3-4 specified above.

- **Statewide Expansion:** Fully roll out the comprehensive statewide program, including the full grant initiative for roof fortification and other severe weather mitigation efforts, supported by the legislatively approved funding.
- **Comprehensive Mitigation:** Expand mitigation strategies beyond roofs to address a broader range of wind and flood risks across the state.
- **Target Achievement:** Work towards achieving the ambitious goal of fortifying a substantial number of owner-occupied homes to create a culture of resiliency in CT.
- **Small Business Owners (SBO):** Develop eligibility and program standards for SBO who qualify for a fortified program. Target businesses which own their property and not large commercial entities leasing property.
- **Tree Trimming or Removal:** Research possibilities of considering supporting tree trimming or removal for individuals at 80% AMI and vulnerable communities.

Resources Needed

PEOPLE

- **Advisory Council:** Continue leveraging the diverse expertise of the Severe Weather Mitigation and Resiliency Advisory Council members, who represent insurance, regulatory agencies, consumer advocacy, environmental and climate science, construction, academia, and emergency management.
- **Departmental Staff:** Utilize existing staff within the Connecticut Insurance Department for administrative support, program oversight, and communication efforts for the Fortified Roof and Flood programs.
- **Outside Sources:** Work with the following organizations to begin phased in support, NAIC, IBHS, FLASH and SHA
- **Volunteers/Community/industry & Agent Engagement:** Mobilize nonprofits, community groups and volunteers for grassroots education and outreach. Work with insurers and agents to enhance their knowledge of the Fortified program in CT and encourage Fortified roof replacements.
- **Identification and mobilization** of Contractors and Evaluators to train and educate on the Fortified program. Enlist assistance of the Connecticut Home Builders and Remodelers Association and the National Home Builders Association.

SOFTWARE

- **Near Term – Use Existing Infrastructure:** Utilize current state systems for data collection, analysis, and sharing to enhance decision-making and target outreach effectively. No immediate new software development or procurement is expected for the initial phases.
- **Mid to Long Term – Introduce New Infrastructure:** Research availability of existing programs within the state and outside that will enable full administrative management of the program from start to finish (see appendix B administration and IT system requirements for details)

FUNDING

- **Immediate:** Rely on existing departmental budgets for administrative costs, development of communication materials, and initial pilot program planning. Actively seek private and philanthropic contributions and engage with the private sector for immediate, smaller-scale funding of initiatives. Explore insurance-based incentives that do not require direct state appropriations, e.g. claims handling practices, and credits for fortified roof replacements.
- **Long-Term:** Pursue the proposed \$105 million in legislative funding over 10 years for full-scale program implementation and significant grant disbursements.

Legislative Approval vs. Immediate Actions

MAY NEED LEGISLATIVE APPROVAL

- To create a culture of resilience in Connecticut Establishment of a large-scale, direct grant program that involves significant new state appropriations will be needed. (e.g., the full \$105 million over 10 years).

CAN BE DONE IMMEDIATELY WITHOUT LEGISLATURE

- **Council Operations:** Continue the work and public meetings of the Severe Weather Mitigation and Resiliency Advisory Council and its various subgroups.

- **Program Design & Reporting:** Develop detailed program recommendations and issue reports, including the final report expected by mid-2025.
- **Public Engagement:** Conduct public information meetings, workshops, and comprehensive educational campaigns on wind and flood risk mitigation.
- **Research & Analysis:** Continue researching and identifying best practices for severe weather mitigation from other states and national experts.
- **Funding Mechanism Exploration:** Design and explore various funding mechanisms, such as potential grant structures and insurance incentives, without immediately disbursing large sums from newly legislated state funds.
- **Pilot Initiatives:** Launch small-scale pilot programs using existing resources, smaller grants, private donations, or current departmental outreach budgets.
- **Insurance Product Promotion:** Promote existing insurance products or identify new ones that offer incentives for homeowners and businesses to invest in resiliency measures.

Conclusion

By focusing on these immediate and mid-term actions, the state can make significant progress in enhancing severe weather resiliency without delay, while simultaneously building a strong case for future legislative funding.

Appendix A – Fortification Standards and Requirements

Connecticut to work with NAIC-CIPR to apply risk-based modeling to identify geographic and socially vulnerable locations at higher risk of wind, hail, tornadoes, and hurricane related perils.

The program plans to adopt **existing standards of the IBHS Fortified™** Program for wind resiliency. Key requirements related to standards include:

- **IBHS Standards:** Depending on the location of the home within the state, the appropriate Fortified™ program standard (Fortified™ Roof, Fortified™ Silver or Fortified™ Gold) will apply. The program will utilize the **standard for wind**, including hurricanes and severe convective storms, whichever is applicable to exposure level of the structure.
- **Connecticut Adaptation:** While adopting IBHS standards, there is a need to determine **specific requirements for Connecticut**. This involves comparing the IBHS standard to existing Connecticut building codes (which already have elements like ice water barrier/taping) and identifying the *additional* elements needed for fortified construction in Connecticut. This process will be determined and stated in the scope of work of the initial home review performed by a certified IBHS Fortified™ Evaluator.
- **Beyond Code:** The Fortified program is typically **beyond existing building codes** where previous iterations of the building code insufficiently supported mitigation efforts.
- **Specific Component Goals of Mitigation:** The primary focus of home mitigation will be installing and certifying roofs to a minimum of the **Fortified™ roof standard**. As funds are available and roofs meet certification, there is also focus on costs and approaches for **garage door retrofits or installing wind-rated garage doors**, as they are considered critical [Summary from meeting, but not directly quoted in sources].
- **Cost Determination:** The maximum grant amount will be linked to understanding the **average cost of achieving a certified, Fortified™ home in Connecticut** according to the defined standards. Initial grant range estimates are between \$10,000 to \$15,000. Additional costs to retrofit are the cost of the IBHS Certified Evaluator. In other programs across the country, the homeowner is typically responsible for paying this fee and employing the evaluator from a list of evaluators provided by the program.

Appendix B – Administration and IT System Requirements

Establishing and running the program requires a robust administrative and IT structure:

- **Administrative System:** A **management system/software package** is required to run the program. The University of Alabama’s Cent for the Advancement of Public Safety (CAPS). CAPS designed an application, used by several states across the country, to administer a mitigation grant program using Fortified™ standards. The CAPS system has become standard considering its use by several states as it is specifically designed to electronically accept applications, created roles for contractors and evaluators to document work and communicate on projects, manages the grant processes, and flow of funds. The system has integrated into its multiple processes a check and balance system to reduce the opportunity for fraud (by all parties involved) and offers a very high level of consumer protection. Other systems used by state agencies (like Energize Connecticut, which is administered by the Electric Distribution Companies (EDC)¹³) should also be evaluated.

As we look at systems capabilities, we should look for similar qualities to the CAPS system as it is a **scalable, web-based platform** designed to **manage wind mitigation grant programs comprehensively from start to finish**. Any system should be assessed based on a **proven, ready-to-deploy solution** suitable for states managing large-scale housing mitigation efforts.

The system is built with flexibility in mind, being **fully customizable to meet specific state needs** and regulatory/operational requirements. It supports **every step of the grant lifecycle**, aiming to streamline operations, reduce manual errors, and increase transparency, ultimately bringing efficiency, accountability, and user satisfaction to grant administration. Its intuitive design is intended to be easy for all users: homeowners, evaluators, contractors, and grant coordinators.

Key features and capabilities of the CAPS system include:

- **Multi-State Ready and Configurable:** The system can be tailored to meet the needs of any state or jurisdiction.
- **Promotes Program Integrity:** It includes built-in safeguards to prevent duplicate or fraudulent applications by cross-checking applicant data against existing records. This automated validation reduces administrative burden and helps maintain program integrity.
- **Online Application Portal for Homeowners:** Homeowners apply through a guided, user-friendly interface accessible via desktop and mobile, increasing accessibility and engagement.
- **Evaluator Assignment and Eligibility Workflow:** Applicants select certified evaluators who assess home eligibility and submit reports directly into the system for coordinator review.
- **Coordinator Dashboard and Application Oversight:** Grant coordinators use a centralized dashboard for reviewing applications, monitoring workflow, and managing the pipeline from intake to completion.
- **Contractor Selection and Bid Management:** Qualified applicants receive a randomized list of available contractors, choose three, and review bids submitted directly through the system; coordinators then approve or deny bids based on program criteria.
- **Digital Contract and Document Management:** The platform allows contractors to upload signed agreements and project documents, ensuring a complete and auditable trail.
- **Final Inspection and Certification:** Post-upgrade, evaluators return to verify completed work and issue a compliance certificate, which homeowners can use to obtain insurance premium reductions.
- **Insurance Premium Upload and Final Grant Closeout:** Homeowners upload updated insurance documentation, and coordinators confirm receipt to finalize the grant application process.

¹³ The EDCs, Eversource and Avangrid, oversee the Home Energy Solutions Program, which reaches 25,000–50,000 homes each year with energy audit and direct install measure programs through a group of qualified contractors.

- **Real-Time Fund Tracking and Allocation:** The system monitors available grant funds at various levels (county, zip code, program), automatically reserving or deducting funds as applications progress, which helps reduce the risk of overcommitment.
- **Integrated Messaging and Communication:** A built-in messaging system supports secure, centralized communication between coordinators, evaluators, and contractors, aiding in quick issue resolution and alignment.
- **Calibration and Consistency Tools:** Coordinators can track evaluator and contractor activity to identify outliers and ensure consistent adherence to policy, supporting fairness and quality control.
- **Detailed Reporting and Analytics:** Administrators have access to real-time and historical data on applications, funding usage, performance metrics for evaluators and contractors, and operational bottlenecks, which supports informed decision-making and legislative reporting.

In essence, the CAPS system provides an **end-to-end digital solution** for managing wind mitigation grant programs, automating and standardizing processes from application to final grant closeout and reporting.

- **Procurement:** Selecting an IT system will likely require an **RFP (Request for Proposal) process** to comply with state contracting requirements. The system must comply with existing Connecticut contracting requirements and potentially web design requirements.
- **Functionality:** The IT system needs to manage the entire process, including application, grant administration and validation, tracking money, tracking quality of work, storing forms (bid sheets, home review forms), and potentially allowing access for partners like non-profits. It should have features to help prevent fraud. A **robust web system** is a critical feature.
- **Hosting/Maintenance:** If using an external system like CAPS, the host would manage servers and security. There will be initial setup costs (estimated around \$200k for CAPS) and annual maintenance costs (estimated around \$75k for CAPS).
- **Certificate Management:** A method to **retain fortified certificates** is needed, which is largely handled through the IBHS program.

Appendix C – Stakeholder Roles and Training Requirements

To establish a program for success, key players on the program must be trained and understand their responsibilities, the goals of the program and then enabling them to perform in a concerted efforts as they are consumers as well and their work affect their lives in many ways. Key players in a grant program that follows the IBHS Fortified™ standards consist of the Homeowner, IBHS Certified Fortified™ Evaluators, IBHS Certified Fortified™ Contractors and the Connecticut Department of Insurance. Each player will have an independent, yet dependent role to play in the program. Successful programs have proven that well vetted evaluators and contractors is an important step in ensuring quality and timely work is done, protecting the consumer in each step of the grant process. Successful programs have also shown equity in work distribution based on performance creates a better product for consumers and a more efficient operation for departments. In the example of selecting Fortified™ Evaluators and Contractors, creating eligibility requirements like those listed below are essential in ensuring consumer protection. Conversely, allowing evaluators and contractors equitable access to work competitively is an effective way to control monopolizing efforts and creating equity amongst the workforce. An example of this in other programs has been to create a randomized list (already imbedded in the CAPS system), electronically generated and presented to the grant applicant when time to select evaluators and contractors for consideration for work. From there, applicants may choose evaluators and contractors that best for their economic and geographic needs. Selection of the evaluators and contractors by applicants allows them to control some aspects of the process and places responsibility on the homeowner to the extent that following through with the program is likely.

Although the responsibility should be placed on the program to vet the evaluators and contractors, clear and obtainable requirements should be established to begin the pathway to workforce development. Below are

baseline recommendations of eligibility requirements for establishing a pathway for workforce development of evaluators and contractors.

Contractors:

- Contractors shall be vetted according to criteria set by the commissioner to participate in the program. Requirements recommended for program participation are:
 - Contractors need to be in good standing with the state, properly registered with the Secretary of States Office and not be under any disciplinary actions by any state or federal agency.
 - Be appropriately credentialed to perform the work that includes the level of construction associated with the Fortified™ standard being achieved.
 - Be able to register with the state’s central payment platform.
 - Certified through IBHS as a certified contractor and pay all fees associated with the training and certification.
 - **Standards for contractors** are required.
 - Training can potentially begin **before enabling legislation is passed** by partnering with entities like the Connecticut Green Bank, the Housing Department (leveraging their grant), and Habitat for Humanity.
 - Need a strategy to **identify and certify more contractors** in the state who can perform fortified work. There are currently five certified contractors in the state, although some builders (like Habitat for Humanity) may have experience with fortified construction:

[Fortified Contractors Connecticut](#)

- The contract for work will be directly **between the homeowner and the contractor**, not the state. Note: Payments will be made to the program grant manager directly to the contractor once the evaluator has determined the work was completed satisfactorily.

Evaluators:

As total annual grant funds available and a distribution strategy of a grant program is determined, a strategy should be created to develop a workforce adequate to meet program project goals. Certified IBHS Fortified Evaluators are a critical role of the workforce. Resources are available through the NAIC Resilience HUB resources to develop this workforce based on several factors such as the grant distribution strategy, funding schedules, and program partnership demands. Evaluators will typically come from the existing workforce of insurance adjustors, home inspectors and appraisers. Trade organizations, licensure boards, code official offices, etc. are engaged by Resilience HUB partners to educate and recruit evaluators. Training for evaluators is available online through IBHS and takes approximately a day to complete. However, there is a stringent application for the course that vets the experience and knowledge of potential evaluators. Departments of insurance and grant programs offices also typically create a pathway for interested parties to access the necessary applications and training to become evaluators through a website portal. This way, they can also communicate program participation requirements imposed by the department/state and ensure interested parties meet those requirements before incurring expenses to become evaluators and not be able to work on a state program.

Evaluator Description:

IBHS Fortified Evaluators are engaged by consumers, for a fee, to collect data points on a structure to help visually confirm for IBHS engineers that a structure complies with the Fortified standard. Evaluators do not make the determination that a structure is within compliance standards but rather provide photo and visual verification documentation to IBHS on specific data points of the retrofit standard. Examples of evidence an evaluator will submit to IBHS for the Fortified roof standard and photo and documentation of labels and bills of lading, photo evidence of the application of mitigation components to a structure such as a waterproof barrier immediately after installation as it will not be visible for verification after the roof covering is installed. They also provide photo evidence of nailing patterns obtained in the attic of a structure to verify that the correct nails are used to install

roof decking and roof coverings were properly placed and meet stringent nail spacing requirements. The ends of the nails are visible from this perspective to document in photos. Evaluators in most DOI grant programs perform an additional task for the programs of completing a report that reflects the current condition of the home. Current condition reporting gives consistency in identifying the scope of work needed to obtain a Fortified certification for a home when competitive bidding is a practice for the program. This way, each contractor providing bids are bidding on the same tasks identified in the scope of work. Parameters of the current condition report are determined by the individual program and are designed to offer a level of protection to the consumer and the department, helping to prevent fraud and preserve the integrity of the program. The evaluator is typically a programs first line of defense in the field against fraud and ensuring the consumer is protected by the contractor in completing the work for certification. This also translates to verifying that funds issued for mitigation projects are being spent according to the contract and agreement with the program.

- Evaluators shall be vetted according to criteria set by the commissioner to participate in the program. Requirements recommended for program participation are:
- Contractors need to be in good standing with the state, properly registered with the Secretary of States Office and not be under any disciplinary actions by any state or federal agency.
- Be appropriately licensed to perform the work that includes the level of construction associated with the Fortified™ standard being achieved.
- Certified through IBHS as a certified contractor and pay all fees associated with the training and certification.
- Homeowners would choose from a list of eligible evaluators provided by the program.
- Cost of an evaluation visit ranges between \$200-\$600 (varies based on size of home and extent of evaluation needed) and is generally paid by the homeowner. The certification lasts 5 years for a roof that has a useful life of 20-30 years.
- Once a home has been certified IBHS Fortified™ insurers should provide an actuarially supported credit which will help incentivize the Fortified program in CT.

Program Staff:

The administration of a grant program may need to take different forms depending on the amount of grants available for consumers. Understand that as a program expands, there may need to be additional operations added to the program such as fraud investigators, independent accounting operations, outreach and education, non-profit liaisons, marketing and messaging/social media administrator resources, etc.

The initial administrative needs will consist of securing adequate office space for staff. The program will need to identify a director to oversee the day-to-day management of the program initially. Additional staff for start-up may need to consist of coordinators that work as liaisons between homeowner, evaluator, contractor and the department to ensure that the grant process is forward moving. Typically, 2-3 staff members are needed to launch a mitigation grant program.

It is recommended that there are employees within the department identified as support-as-needed to assist the program fulfill its obligations. An example of this is a designee in accounting to assist with processing payments and contracts between the program and vendors. Another need is within the IT division to help support any program-related IT needs and support. There should be consideration of additional staff to perform administrative duties such as answering phones, emails and assisting with various administrative needs to support other staff on the program.

Through the development of partnerships, mitigation grant programs can effectively create a force-multiplier in administering a program through a block-grant authority. Partnership development in areas that serve demographics of greatest need play a crucial role in helping to identify homeowners that meet the eligibility requirements of the program. What's more is that the partner may be positioned to help administer and manage the grant process from beginning to end. An example of this is Habitat for Humanity (Habitat). Habitat has played a crucial role in other states assisting with the administering of grants to include application and working as the

contractor of record to ensure sub-contractors adhered to the grant process and obtained the Fortified™ certification.

Leveraging other partnerships is an effective way to create awareness of the program and to garner support in areas the program affects such as building codes and other government agencies that may partner with the program to fulfill their obligations to protect consumers.

Financial institutions provide invaluable partnerships when supporting mitigation grant programs. It has been experienced by programs that financial institutions bring to bear opportunities for funding such as deployment of Community Reinvestment Credits to cover or even match needed funds on individual mitigation projects beyond grant amounts. Financial institutions create products to fill needs when working closely with programs. Low interest loan opportunities have been established in states with mature mitigation grant programs. Offering of favorable terms on home equity loans have come into existence around these programs. Financial institutions have also created attractive products for business owners such as evaluators, and contractors working on the program and have provided lines of credit and interest bearing, no fee operation accounts for small businesses.

Appendix D – Flood Risk Reduction Requirements

A dedicated component for flood risk reduction is considered crucial. This needs further development but includes:

- **Flood Risk Awareness Education:** A **public education program** targeting residential/small business owners, municipal leaders, builders, and developers is required. This program needs to inform consumers about their **flood risk** (not just if they are in a FEMA zone, as any area can flood) and the **availability of flood insurance** through public (NFIP) and private entities. Statewide communication initiatives are needed.
- **Property-Level Mitigation Program:** An **analogous program to the Fortified Roof program for Flood** is needed. This requires:
 - Identifying **meaningful, cost-effective, property-scale flood risk reduction measures** (e.g., elevating utilities, temporary barriers, French drains, sump pumps, etc.).
 - Identifying **barriers to deployment** of these measures (e.g., costs, zoning).
 - Establishing **standards for practical property-level flood risk reduction retrofit strategies**.
 - Working with organizations like **FM Global and the Connecticut Association of Flood Managers (CAFM)** to identify effective measures and develop standards.
 - Executing a **pilot program** for flood risk reduction measures.
 - Developing a **roadmap** for the further expansion of flood risk reduction measures and integration into the program.

Appendix E – Legislative and Regulatory Requirements

Enabling legislation is anticipated to be necessary for key aspects of the program:

- **Establishing Authority:** Legislation would be needed to establish the authority to create a **resiliency program within the Connecticut Insurance Department**, or within an appropriate existing Office of Resiliency where CID must have approval/signoff/oversight potentially creating a dedicated office.
- **Funding:** The method for **funding the program** would need to be included in the legislation.
- **Program Details:** Depending on Connecticut's rule-making process, a large portion of the legislation may need to be **fairly descriptive** about program elements. This could include eligibility requirements for homeowners, contractors, and evaluators, and the adoption of the IBHS standard. Alternatively, authority for administering many details might be granted to the Commissioner via rules or regulation.

- **Flood Awareness:** Related legislation already has been proposed in the current legislative session (SB-9) concerning informing consumers about flood risk and insurance at the time of property purchase and requiring insurers to notify policyholders if flood coverage is not included.

Appendix F: Declining Incentive Block Structure

Incentive Step	Tier I	Tier II	Tier III
	>60 or >80% AMI*	Vulnerable Communities**	Open***
1 e.g. first year(s) of offering	\$15,000 Grant	\$12,500 Grant	6.99% IRB (0% loan) Smart-E 6.99% IRB to 0% 10 yr \$15k loan. NPV of IRB = \$4,655
2	\$12,500 Grant	\$10,000 Grant	4% IRB (2.99% loan) Smart-E 6.99% less 400 basis pts = 2.99% 10 yr \$15k loan. NPV of IRB = \$2,816
3	\$10,000 Grant	\$7,500 Grant	3% IRB (3.99% loan) Smart-E 6.99% less 300 basis pts = 3.99% 10 yr \$15k loan. NPV of IRB = \$2,151

Appendix 2 – Financing and Funding Subgroup Report

Severe Weather Mitigation and Resiliency Advisory Council

Executive Summary

Globally,¹⁴ and across the United States,¹⁵ the financial cost of climate impacts is growing—and so is the need for investment in resilience¹⁶ to address them. Estimates indicate that between \$5.4 trillion and \$11.7 trillion of global investment per year will be required by 2030 to meet the combined goals of climate mitigation (i.e., reducing greenhouse gas emissions) and adaptation and resilience.¹⁷ Yet, only a small fraction of that capital—less than 10%—is currently directed toward adaptation and resilience, where the opportunity to protect lives, homes, and infrastructure is most immediate. Climate adaptation and resilience investments require trillions in capital each year—but only a small share is reaching households on the front lines of risk.

New England states are beginning to confront this investment gap with targeted resilience initiatives. Maine’s Infrastructure Rebuilding and Resilience Commission,¹⁸ New Hampshire’s proposed Granite State Home Mitigation and Resiliency Program,¹⁹ and Rhode Island’s proposed legislation on resilience financing reforms,²⁰ highlight a regional commitment to protecting homes from wind, snow, and flood damage. These efforts reflect guidance from the National Association of Insurance Commissioners’ (“NAIC”) Center for Insurance Policy and Research (“CIPR”),²¹ which emphasizes state-led efforts (e.g., Alabama, California, Florida, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina) in retrofits as essential to reducing insured losses, improving household resilience, and stabilizing climate-impacted insurance markets.

Here in Connecticut, high-wind events are damaging homes and exposing residents—particularly those in older or underinsured homes—to financial and physical risk. Recent research from the University of Connecticut, supported by the Connecticut Institute for Research and Climate Adaptation (“CIRCA”), underscores the compounded risks that Connecticut’s coastal communities face from both wind and flood hazards. The study emphasizes that wind-induced damage to residential structures—particularly to roofs and walls of older or non-elevated buildings—can be extensive even in moderate storm events. Structural failure often begins with sheathing detachment, which increases the vulnerability of the entire building envelope. These insights reinforce the urgency of targeted resilience investments in building retrofits—especially roof fortification—to reduce structural vulnerabilities and improve overall community resilience to severe wind events.²²

One method to reduce the number and magnitude of exposure to this hazard is targeted investment in wind resilient rooftops through the market adoption of the FORTIFIED Roof™ standard of the Insurance Institute for Business & Home Safety (“IBHS”).

¹⁴ “This is What the Climate Crisis is Costing Economies Around the World” by the World Economic Forum (November 29, 2023). The World Meteorological Organization estimates nearly \$1.5 trillion in economic losses attributed to weather, climate and water extremes from 2010-2019 – up from nearly \$1.0 trillion from 2000-2009.

¹⁵ And “2024: An Active Year of U.S. Billion-Dollar Weather and Climate Disasters” by Adam Smith of NOAA (January 10, 2025). In 2024, there were 27 individual weather and climate disasters with at least \$1 billion in damages, trailing only the record-setting 28 events analyzed in 2023.

¹⁶ Per Public Act 20-05, “Resilience” means the ability to prepare for and adapt to changing conditions and withstand and recover rapidly from deliberate attacks, accidents or naturally occurring threats or incidents, including, but not limited to, threats or incidents associated with the impacts of climate change.

¹⁷ “The Cost of Inaction” by Caroline Alberti of the Climate Policy Initiative (January 4, 2024)

¹⁸ <https://www.maine.gov/future/infrastructure-commission>

¹⁹ <https://indepthnh.org/2025/02/05/grant-program-would-help-lower-insurance-premiums-committee-told/>

²⁰ <https://treasury.ri.gov/press-releases/treasurer-diossa-legislators-infrastructure-bank-urge-passage-resilient-rhody>

²¹ National Association of Insurance Commissioners – Center for Insurance Policy and Research (NAIC-CIPR), *Resilience Policy Resource Guide and Retrofitting Program Playbook for State Insurance Regulators: Addendum – August 2024*. Washington, D.C.: NAIC-CIPR, 2024.

²² “Resilient Coastal Communities Under Wind and Flood Hazards: Understanding the Trade-Offs in Residential Building Design” by the Wei Zhang, et al. from the University of Connecticut and CIRCA.

In Connecticut, nearly 90 percent of owner-occupied single-family households are insured.²³ In 2022, there were approximately 800,000 insurance policies being provided by over 90 insurers, with families paying nearly \$2,000 in premiums a year on average²⁴ – totaling nearly \$1.7 billion in total premiums and over \$650 billion in coverage.²⁵ There were nearly 32,500 paid claims of on average \$21,500 per claim, for insured damages from weather-related events such as wind, hail, and storms. Those Connecticut homeowners with insurance policies receiving claims, paid in general,²⁶ about \$4,750 in deductibles – receiving over \$700 million in paid losses. Although Connecticut has a stable insurance market, there is an increasing trend in average paid claims and paid losses in Connecticut, and therefore a desire to increase avoidable losses through the market adoption of wind resilient programs such as FORTIFIED Roof™.

In response to this, the Financing and Funding Working Group (“the Working Group”) organized its recommendations around three (3) tracks to synthesize funding and financing mechanisms to increase investment in wind resilient single-family owner-occupied homes, including:

1. **Public Sector Incentives and Grant Programs** – to catalyze the market for FORTIFIED Roofs with funding from one or more sources such as federal funds, state funds/bonding, Surplus Lines Premium Tax,²⁷ sales and property tax exemptions, nonprofit funds, financing from a quasi-public, and other public sources, to support grants and incentives, program administration, and education and communications.
 - a. Participation by Connecticut’s Office of Policy Management (OPM) in this Council and public investment is not a guarantee or implication that OPM has signed off on such funding.
2. **Private Sector Financing Tools and Market-Based Solutions** – to leverage public sector investments, at a ratio of \$5 of private investment to \$1 of public funds, support the development of a FORTIFIED Roofs market of qualified contractors and evaluators, homeowner access to capital for loans through local lenders, and insurance industry discounts.
3. **Strategic Integration and Scaling Mechanisms** – to enable the market transformation²⁸ of wind-resistant roofs through sustainable funding mechanisms, interagency coordination, and industry research and development, and development of a statewide market for FORTIFIED Roofs.

For details on recommendations within each track – see the breakout sections below.

Creating a culture of resilience in Connecticut can be strengthened by the market adoption of the insurance industry-backed FORTIFIED Roof standard for single-family owner-occupied homes. In Connecticut, there are approximately 930,000 households whose roofs have an average lifespan of 12 to 30 years.²⁹ To achieve a FORTIFIED Roof™, depending upon the size of a roof, an additional investment of \$1,000 to \$2,000 would be needed beyond the usual expected cost of a roof replacement,³⁰ or up to an estimated \$1.86 billion to upgrade all owner-occupied homes with wind-resilient roofs if they were to adopt the FORTIFIED Roof™ standard.³¹ This is a

²³ “Nearly 1 in 7 Homes Across US Are Uninsured” by Lending Tree (March 17, 2025). Lending Tree estimates that in Connecticut, there are about 10.4% of single-family owner-occupied homes without home insurance.

²⁴ Premiums vary, including by location (e.g., coastal vs. inland), value of property, etc.

²⁵ NAIC-CIPR

²⁶ Deductibles data are preliminary and range depending upon the peril (e.g., hail, wind, tropical storm, hurricane).

²⁷ In Connecticut, a premium tax that applies to surplus lines insurance policies at a tax rate of 4% on the gross premium charged to the insured and collected and remitted by surplus lines brokers.

²⁸ Market transformation refers to initiatives that aim to bring about lasting changes in the structure or functioning of a market, or in the behavior of market participants. It focuses on reducing barriers to the adoption of certain practices or technologies, leading to a more sustainable or efficient market. US Department of Energy

²⁹ “How Much Does a Roof Replacement Cost” by Pamela Mahler of ctpost - <https://www.ctpost.com/best/home-services/roofers/roof-replacement-cost-ct/>

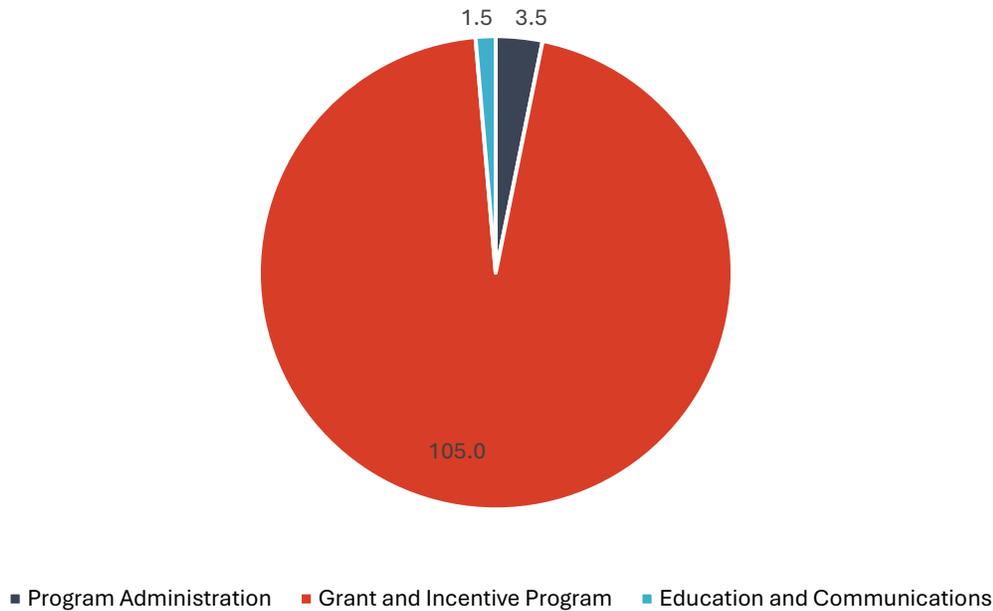
³⁰ Insurance Institute for Business & Home Safety (“IBHS”) use of Xactimate for reroofing in the Hartford and New Haven markets. The incremental cost between code and the FORTIFIED standard is \$942 for small homes (i.e., 1,575 ft2) and \$1,757 for large homes (i.e., 2,908 ft2). To achieve the FORTIFIED standard for hail-resistant roofs, the incremental cost is double.

³¹ Incremental cost of FORTIFIED Roof™ is \$2,000. There are 930,000 single-family and owner-occupied households in Connecticut – US Census Bureau American Community Survey, 2021.

manageable investment compared to the long-term costs of inaction – including a rising trend in annual paid losses (i.e., up to \$700 million in 2022) and losses per claim (i.e., up to \$21,500 in 2022).

Through a combination of approximately \$105 million of public investment (see Figure 1) seeking to leverage 5 times more in private investment (i.e., \$1 of public funds unlocks \$5 of private investment), in a decade there will be no less than 10,000 homes³² that will have received grants from public investment through the recommended program, and five-times that amount (i.e., 50,000 homes) that will not have received a publicly supported incentive,³³ with FORTIFIED Roofs (i.e., about 6% of single-family owner-occupied homes) in Connecticut.

Figure 1. Public Investment in FORTIFIED Roofs in Connecticut (\$MMs)



While the recommendations of the Working Group focus specifically on residential single-family owner-occupied homes, the Working Group acknowledges that **Connecticut’s most vulnerable residents—including renters and those in multifamily or unsubsidized affordable housing—are often at even greater risk and face greater barriers to mitigation.** These recommendations are not intended to exclude those needs but rather to establish a practical foundation for action that can be **expanded and adapted** in future phases to address the broader housing ecosystem including the market adoptions of the FORTIFIED Multifamily standard.³⁴

For details on Methodology – see Appendix A

For details on Source Materials and Inputs – see Appendix B

³² Average incentive of \$10,000 per home with 10-year grant budget of \$100MM (i.e., \$10MM per year)

³³ “Performance of IBHS FORTIFIED Homes™ Construction in Hurricane Sandy” research study by the Alabama Department of Insurance and the Center for Risk and Insurance Research at the University of Alabama (May 5, 2025). Through the Strengthen Alabama Homes program, from 2016 through 2024, \$86 million in grants were provided to help 8,700 homes become IBHS certified FORTIFIED (i.e., approximately \$10,000 average grant per home). In addition to the grant program, an additional 44,300 homes (i.e., five times more than the grant program) were certified as FORTIFIED – for a total of 53,000 IBHS certified FORTIFIED homes.

³⁴ <https://fortifiedhome.org/fortified-multifamily/>

Track 1: Public-Sector Incentives and Grant Programs

Focus on investing public funds to catalyze a market for FORTIFIED Roof by reducing upfront homeowner costs and targeting vulnerable households.³⁵

- Establish a Fortified Roof grant program with awards averaging \$10,000 that would spur no less than 1% of single-family owner-occupied homes (i.e., approximately 10,000 homes) over 10 years. By creating a culture of resiliency like other states, this grant program could directly incentivize up to 10,000 homes and, indirectly, another 50,000 homes from non-state sources³⁶.
- Partner with a federal home loan bank (i.e. Federal Home Loan Bank of Boston or FHLBB) to establish a program for FORTIFIED Roof™ grants up to \$15,000 to replace an existing roof with a FORTIFIED Roof and/or a program for FORTIFIED Construction grants up to \$7,500 to build a FORTIFIED Roof on a newly constructed home³⁷. These programs would benefit Connecticut financial institutions by (a) providing funding that can be stacked with other funding sources for roofing projects, (b) creating relationships with housing developers, nonprofits and other community organizations, and (c) generating new business opportunities for customers in the construction and roofing business.
- Implement a declining incentive model over 10 years to provide incentives that decline over time and will foster the sustained, orderly development of a state-based fortified roof program to encourage early adoption, including sales and property tax exemptions. The goal is to create a marketplace for resiliency and mitigation where Fortified Roofs become the standard for private industry.
- Use 25% of the 5-year average of surplus lines premium tax revenue, and other fees (e.g., application fees), each year over a 10-year period, to support grant and incentive funding, program administration, and education and communications.
- Prioritize grant funding based on income, insurance status, home condition, and geographic and social vulnerability.
- Continue to explore catastrophe savings accounts³⁸ as a tax-advantaged savings vehicle designed to help individuals prepare for and pay for expenses related to natural disasters or other emergencies. These accounts could possibly allow for state tax deductions on contributions, tax-exemption on interest earned, and tax-free withdrawals for qualified expenses.
- Alternatively, contractors could be incentivized to encourage utilization of IBHS Fortified Roof standards.

Track 2: Private-Sector Financing Tools and Market-Based Solutions

³⁵ Consistent with Public Act 20-05's definition of "vulnerable communities," which means populations that may be disproportionately impacted by the effects of climate change, including, but not limited to, low and moderate income communities, environmental justice communities pursuant to section 22a-20a, communities eligible for community reinvestment pursuant to section 36a-30 and the Community Reinvestment Act of 1977, 12 USC 2901 et seq., as amended from time to time, populations with increased risk and limited means to adapt to the effects of climate change, or as further defined by the Department of Energy and Environmental Protection in consultation with community representatives.

³⁶ Alabama's Wind-Mitigation Program Celebrates 50,000 Fortified Homes in the State, <https://www.insurancejournal.com/news/southeast/2024/09/18/793472.htm>

³⁷ Federal Home Loan Bank (FHLB) Dallas Fortified Fund: <https://www.fhlb.com/community-programs/homeownership-and-homebuyer-programs/fhlb-dallas-fortified-fund>

³⁸ SB 1401 "An Act Establishing Disaster Savings Accounts" was proposed during the 2025 legislative session of the Connecticut General Assembly

Leverage private capital to invest in the market development of FORTIFIED Roof qualified contractors and evaluators and expanding homeowner access to affordable financing and insurance incentives.

- Expand Connecticut’s Smart-E Loan program to include wind retrofits in support of FORTIFIED Roof™ with loan loss reserves, interest rate buy-downs, and/or investment capital from the insurance industry to finance such retrofits, including immediate support from the insurance industry for training and certifying FORTIFIED Roof contractors and evaluators, while working towards a goal of \$5 of investment from the private sector to \$1 of funding from the public sector to support the market’s development.
- Partner with philanthropic (e.g., Robert Wood Johnson Foundation), nonprofit (e.g., Habitat for Humanity), and for-profit (e.g., Home Depot, Lowes) organizations to provide financial, in-kind, materials, and other contributions (including community engagement) to support vulnerable households and businesses that want to support their employees. We encourage or recommend a state and/or insurance industry partnership with Habitat for Humanity North Central Connecticut to expand the Fortified Roofs program they are currently operating in the state.
- Continue to explore catastrophe savings accounts³⁹ as a policy to increase the resilience of all single-family owner-occupied homeowners regardless of their financial status.
- Commissioner should explore how to incentivize expansion of premium discounts for homes with FORTIFIED Roof™ certified wind upgrades. Currently, there are a limited number of insurance companies offering discounts in Connecticut.

Track 3: Strategic Integration and Scaling Mechanisms

Provides the structural framework for phasing, integration, and long-term sustainability of funding efforts to achieve market transformation.

- Sequence program activities across near-, mid-, and long-term horizons to ensure strategic growth by providing \$500,000 in funding per year for program administration, including funding for education and communications.
- Align funding collaborations across government agencies and coordination of existing programs (e.g., Smart-E, CT Home Funds) for market efficiency.
- Identify, share and use cost data and risk-based modeling from the insurance industry through NAIC-CIPR and prioritization criteria from Connecticut Insurance Department to guide equitable investment and market development. Through the collaboration, we can identify data gaps in existing data while preserving the confidentiality of individual customers’ information.
- Support market transition by recognizing the importance of and validation by evaluators through the FORTIFIED Roof™ standards working with the insurance industry, National Association of Home Builders, and Home Builders & Remodelers Association of Connecticut.
- Establish sustainable funding mechanisms for long-term program viability, including support for program administration, education and communications, and grants and incentives.

³⁹ SB 1401 “An Act Establishing Disaster Savings Accounts” was proposed during the 2025 legislative session of the Connecticut General Assembly

Appendix A – Methodology

The Financing and Funding Working Group met weekly over several months in the winter and spring of 2025 to develop targeted recommendations focused solely on **funding and financing mechanisms** to support wind resilience improvements in Connecticut’s single-family, owner-occupied homes. These discussions were transcribed and summarized using AI tools to help track key themes, refine ideas, and support efficient collaboration.

During the working group process, members invited guest speakers to present on topics including residential retrofit program best practices, green financing tools, various state policies and programs, and public-private partnership models. Many of these presentations helped the group evaluate existing models and adapt lessons to Connecticut’s housing, regulatory, and fiscal context.

The core of this report is derived directly from the working group’s internal materials—particularly transcripts of meetings and a slide presentation summarizing its evolving recommendations and other reports (see Appendix: Source Materials and Inputs).

To prioritize which recommendations to advance, the working group developed a set of **targeting criteria**, including source of funding (i.e., public or private), required action (e.g., administrative, regulatory, and/or legislative), impact (i.e., low, medium, or high), and ease of implementation (i.e., easy, moderate, or hard). These were used to guide the design of **phased pilots and funding strategies**.

Recommendations were also categorized according to **timing of impact**:

- **Near-term (0–6 months):** foundational investments, outreach, and pilot design;
- **Mid-term (6–18 months):** incentive rollouts, financing tool expansion, and contractor engagement;
- **Long-term (18+ months):** sustainability mechanisms and bond structures.

AI was used throughout the process to support synthesis of transcripts, documentation, and reference materials, and to assist in drafting and refining this report.

While the current focus is limited to single-family, owner-occupied homes, the group remains mindful of the need to extend future programs to renters, multifamily residents, other highly vulnerable households, and small businesses. This report is a first step toward building a broader, more inclusive resilience finance system—**beginning where the state can act now**.

Appendix B – Source Materials and Inputs

This report was developed by the Working Group under the Severe Weather and Mitigation Advisory Council during winter and spring 2025. All recommendations are drawn from the Working Group deliberations and internal working materials unless otherwise noted. The content of the report reflects a synthesis of the following inputs:

1. Working Group Meetings and Presentations

- **Weekly Working Group Meetings (Winter–Spring 2025):**
Presented, transcribed and summarized using AI tools; used to extract key themes, recommendations, and consensus priorities.

2. State and Regional Program Models Reviewed

Working Group reviewed various residential wind resilience programs and policies from other states to inform Connecticut-specific recommendations:

- **Alabama:** *Strengthen Alabama Homes* grant program
- **New Hampshire:** *Granite State Home Mitigation and Resiliency Program*
- **Rhode Island:** Policy provisions related to the state’s property and casualty guaranty association
- **Maine:** Resilience commission recommendations and program planning
- **Oklahoma, Alabama, and South Carolina:** Catastrophe savings account legislation (reviewed for long-term private savings strategies)
- **Texas:** FHL Bank (FHBL) Dallas FORTIFIED Fund for Building Stronger Homes with two grant types (roof grant and construction grant)

3. Connecticut-Specific Reference Materials

- **Connecticut Green Bank:** Smart-E Loan platform (structure, eligibility, lending partners)
- **Connecticut Department of Insurance:** Premium tax structure and surplus lines revenue mechanisms
- **Connecticut Natural Hazard Mitigation Plan (2023)**
- **CCM Wind and Flood Risk Study (2024)**
- **OPM Grand List Data:** Used for housing unit and property value estimates
- **First Street Foundation (2025 Risk Assessment):** Contextual modeling of property-level risk and insured exposure
- **CT Department of Energy & Environmental Protection:** DEEP Resilience Funds
- **Department of Economic and Community Development (DECD) & Women’s Business Development Council (WBDC):** to help small businesses recover from the August 2024 widespread flooding across western Connecticut.
- **UConn Connecticut Institute for Resilience & Climate Adaptation:** Climate Change Vulnerability Index, Physical Climate Assessment, and resilience opportunity area methodology
- **UConn Eversource Energy Center**
- **Home Builders & Remodelers Association of Connecticut**

4. National and Technical Sources

- **CIPR Retrofitting Program Playbook (2024):** National Association of Insurance Commissioners
- **US Climate Change Resilience Report (USCC 2024):** Allstate and partner organizations
- **Global Landscape of Climate Finance (CPI 2023):** Climate Policy Initiative
- **Insurance Institute for Business & Home Safety (IBHS):** FORTIFIED Roof™ standards and cost-benefit research

- **Federal Alliance for Safe Homes (FLASH)®**
- **National Association of Home Builders**

5. AI-Assisted Drafting and Synthesis

OpenAI's AI tools were used throughout the process to:

- Synthesize transcripts from Working Group meetings
- Organize and format draft sections
- Translate key takeaways into accessible policy language
- Support crosswalks between Connecticut needs and national best practices

All AI-generated content was reviewed, edited, and validated by the working group's project lead and advisory team.

Appendix 3 – Education and Communications Subgroup Report

Severe Weather Mitigation and Resiliency Advisory Council

Introduction

Implementation of a robust communication and education plan is crucial for the long-term success of Connecticut's Resiliency Program. An effective communication strategy ensures that key stakeholder groups are well-informed about the program's benefits, key components and operational mechanisms and that they are empowered to actively support, participate in and benefit from the program. This section of the report outlines the main components of an effective communication and education strategy and provides recommended actions to implement that strategy.

Background: Key Components of the Communication and Education Plan

The Connecticut Resiliency Program requires a comprehensive communication and education plan to be effective. The overarching goal of the communication plan is to inform and engage various stakeholder groups, including program applicants, contractors, and government officials, to foster support and active participation in the program. Guiding principles that should be considered in developing the communication plan include:

- Adopting a broad-based approach using multiple communication channels to address the needs of different stakeholder groups.
- Leveraging educational content from other states with similar programs and external resources such as NAIC and FLASH.
- Maximizing connectivity with existing federal, state, and local resources and communication channels (i.e., FEMA, CT Green Bank, CIRCA) to promote the program.

An effective communication plan will need to be multifaceted, identifying key stakeholder groups, the messaging that will need to be communicated to each group and the most effective means of doing so. Key plan components include the following:

A. KEY STAKEHOLDERS

- Legislators & Government Officials. Garner support for the program from public officials and policymakers by providing insights into the potential benefits and impacts of the program for state residents.
- Homeowners & Small Business Owners: Raise public awareness of the program's existence, its benefits and how to participate. Focus on reaching diverse demographics, including those with lower income, older populations and those who may not be digitally literate.
- Contractors & Builders Associations: Educate them on the program's requirements, training and certification opportunities and enlist their support in promoting resilient building practices.

- Evaluators: Establish training and certification processes for professionals who will assess properties and certify fortification upgrades.
- Municipal Governments & Local Officials: Engage local authorities, building officials and regional groups in disseminating information and supporting the program within their communities.
- Insurance Industry: Educate insurance carriers, agents and brokers on the benefits of mitigation efforts to influence underwriting and rate setting practices.
- Realtors, Banks and Mortgage Companies: Enlist their support in educating their customers about the benefits of resilient homes and how to access the program.

B. CORE MESSAGES

- Benefits of Resilience: Educating the public on the importance of protecting homes and businesses from severe weather through the resiliency program.
- How to Participate: Providing clear instructions on how individuals and contractors can access the program.
- Program Design: Clearly explain the program's eligibility criteria, grant amounts, application process, and requirements.
- Fortified Roof Standards: Explain the technical requirements and benefits of IBHS fortified roof standards.
- Flood Awareness: Use education and communication channels to also educate the public about flood risk, potential mitigation measures and additional funding opportunities for flood mitigation (FEMA, Green Bank, flood insurance, etc.).
- Tree Management: Like flood risk, tree falls can present a significant risk of damage to homes as a result of severe weather. Educate the public on this risk and how tree management techniques can mitigate it.
- Insurance Education: Educate consumers on how resiliency measures can potentially impact insurance policies.
- Contractor Training and Certification: Educate the contractor population on benefits of program, how to participate and how to become certified to perform resiliency retrofits.
- Evaluator Training and Certification: Develop a program to train and certify individuals who will assess properties for resilience upgrades.
- Financial Assistance Information: Make individuals and businesses aware of other potential sources of financial assistance for resiliency upgrades (i.e., Green Bank's Smart-E loans.)

C. COMMUNICATION CHANNELS

- Program Website and Program Management portal: A user-friendly website would serve as the primary source of information about the program the primary access point for various stakeholders (homeowners, contractors, evaluators) to enroll and participate in the program.
- Public Awareness Campaigns: Broad outreach efforts will be necessary to make the public aware of the program's existence and benefits; assess multilingual needs based on target audiences.
- Print Materials: Recognizing that not everyone is digitally literate, the program will need to develop accessible print materials that can be distributed through libraries and other community resources.
- Digital Resources: Utilizing online platforms and potentially social media to reach a wider audience.
- Partnerships with Existing Organizations: Collaborating with established entities like FEMA, Connecticut Green Bank, Habitat for Humanity, CIRCA and Energize CT to broaden awareness of the program and its benefits.
- Press Releases and Media Engagement: Utilizing the Insurance Department's communication channels for announcements and updates.
- Targeted "Get the Word Out" Messaging: Tailoring communication methods and content to the specific needs of different stakeholder groups (i.e., leverage faith-based organizations and community groups for outreach in urban areas; multilingual materials).

D. UTILIZE EXISTING RESOURCES AND PARTNERSHIPS

- NAIC Materials: Ready-to-use educational content on insurance and resilience measure available to states at no cost.
- FLASH Resources: Consumer awareness materials, guides and practical preparedness checklists related to disaster preparedness.
- Smart Home America: Technical assistance and training programs that support establishment and administration of resiliency programs, including Fortified roofs.
- IBHS Expertise: Standards for fortified roof construction and training resources for evaluators and contractors.
- Alabama's Strong Homes Program: Their online platform (CAPS) for managing grants, connecting homeowners with evaluators and contractors, and tracking progress is being considered as a potential logistical backbone for the Connecticut program.
- Connecticut Insurance Department: Existing preparedness information and communication channels.
- Connecticut Emergency Management: Resources and information related to disaster preparedness.
- Energize Connecticut: Existing infrastructure for home visits and consumer engagement that could potentially incorporate resiliency messaging.
- Connecticut Green Bank (Smart-E Loans): An existing loan program that can be leveraged for resilience upgrades.
- American Red Cross: Preparedness education programs and resources available to consumers.
- Connecticut Institute for Resilience and Climate Adaptation (CIRCA): Existing resources for outreach and communication of flood and heat risks through the Resilient Connecticut program.
- Connecticut Association of Floodplain Managers (CAFM): Professional association with membership across the state and expertise in flood mitigation.
- Other States' Programs: Learning from the experiences and materials developed by other states like Alabama, Louisiana, and Maine.

Recommended Actions

1. DEVELOP A USER-FRIENDLY WEBSITE

Create an intuitive and informative program website that serves as a central hub for all information related to the Connecticut Resiliency Program. Ensure the site is accessible to individuals with disabilities and provides resources in multiple languages. Strongly consider investing in a license to the University of Alabama's CAPS system as the backbone of the administrative infrastructure.

2. IMPLEMENT PUBLIC AWARENESS CAMPAIGN

Launch broad awareness campaigns using various media channels, including TV, radio, print, and social media that can highlight the benefits of the program, share success stories, and provide clear instructions to the public on how to participate in the program.

To ensure the effectiveness of the campaign, identify and enlist the expertise of media and communications resources who can help design and execute successful outreach programs.

Additionally, consider creating a recognizable brand for the campaign that includes a logo and slogan. This brand should be designed to resonate with the public and convey the core values of resilience and community strength. Ensure that all communication materials, including brochures, social media posts, and advertisements, feature this branding prominently. Develop tailored communication materials for specific stakeholder groups, such as legislators, homeowners, contractors, and the insurance industry. Address their unique needs and concerns to ensure that the messaging is relevant and impactful. Take advantage of social media and digital platforms to reach a wider audience. Create engaging content, such as videos, infographics, and interactive tools, to educate and motivate stakeholders to participate in the program.

3. ENGAGE WITH GOVERNMENT OFFICIALS

Collaborate with municipal governments and local officials to disseminate information within their communities. Consider hosting town hall meetings, workshops, and seminars to educate community leaders and residents about the program. Engage with Councils of Government (i.e. CCM, COST, regional COGs) as a means of equipping public officials with detailed information on the program, including its goals, benefits, and implementation plan. Provide them with talking points, brochures, and other resources to help them champion the program within their communities. Also establish feedback mechanisms to gather insights and suggestions from public officials as the program is implemented in their communities. Systematically engaging public officials will establish the program on a solid foundation that will enhance its credibility and expand its reach.

4. PARTNER WITH ESTABLISHED ORGANIZATIONS

Partner with established organizations such as FEMA, Connecticut Green Bank, Habitat for Humanity, CIRCA State of Connecticut resiliency organizations (i.e. DEEP, DEMHS, DECD, OPM, DOT, SAFER) and the American Red Cross to enhance the program's credibility and extend its reach. Conduct ongoing research to identify other potential organizational partners that align with the program's goals and values, focusing on entities with a proven track record of success in community resilience, disaster preparedness, and sustainable development. Develop strategic collaboration plans with identified partners, setting objectives and establishing operating routines. Utilize the resources, expertise, and networks of partner organizations to enhance the program's implementation, including publicity, sharing data and best practices and exploring funding opportunities. Collaborate on events, workshops, and public awareness campaigns to reach a broader audience, demonstrating a united front to increase public trust and participation.

5. DEVELOP AND IMPLEMENT COMPREHENSIVE TRAINING PROGRAMS

Offer robust training programs for contractors and evaluators to ensure work is consistently executed to meet technical standards. Develop easily accessible certification processes and provide ongoing education to ensure that all participants are well-informed and capable of implementing resilient building practices.

6. MONITOR AND EVALUATE PROGRAM EFFECTIVENESS

Establish metrics to track the effectiveness of the communication and education efforts. Regularly assess the program's impact and make adjustments as needed to improve outreach and engagement.

Sequencing and Pre-Launch Activities

While many features of the Connecticut Resiliency Program will require legislative and regulatory action, there are many aspects of the communication and education plan that are not dependent on formal approvals and could be initiated before the program is formally launched. Examples include:

1. PRE-LAUNCH EDUCATION CAMPAIGN

Identify key messages that can be communicated to stakeholder groups prior to formal launch of the program to begin educating the public on key resiliency themes. Raise awareness of the benefits of fortified roofs, mitigation of flood risk and tree management practices. Provide practical advice on how consumers can engage with existing public and private groups to mitigate severe weather risk.

2. ESTABLISH FUNDING MECHANISMS FOR EARLY EFFORTS

Establish or engage an existing 501(c)(3) organization to begin searching for funding opportunities from industry and other sources. Non-profits could also partner with existing workforce development organizations to start training contractors and evaluators before the program's official launch.

3. LEVERAGE EXISTING RESILIENCY EFFORTS

Collaborate with other agencies already involved in resiliency work, such as the Housing Dept. \$30M grant for homeowner repairs and assistance, CT Energize, Green Bank Smart-E loan resilience program, Habitat for Humanity, Robert Wood Johnson Foundation (RWJF), CIRCA's Resilient Connecticut program and DEEP's resiliency office. Use their ongoing projects to educate residents about the value of a fortified roof and assist in meeting fortified roof standards.

4. CERTIFY EVALUATORS

The state of Connecticut currently does not have IBHS certified evaluators who can execute this critical component of the fortified roof program. Consider funding an advance training program for evaluators so that there are sufficient evaluator resources in place when the program is launched.

5. ENGAGE INSURERS

Work with insurers to enhance their role in educating property owners about fortified roofs when a roof claim is made. Ensure insurers collaborate with homeowners to select contractors who comply with current code requirements, ensuring adherence to roof taping and other standards.

Conclusion

An effective communication and education strategy is fundamental to the success of Connecticut's Resiliency Program. By engaging a diverse range of stakeholders through tailored messaging and leveraging existing resources, the program can achieve widespread visibility and participation. Implementing these recommended actions will ensure that all stakeholder groups are well-informed and motivated to contribute to the program's success, ultimately leading to a more resilient and prepared Connecticut.

Appendix 4 – Performance of IBHS FORTIFIED Home Construction in Hurricane Sally

**Alabama Department of Insurance and Center for Risk and Insurance Research – University of Alabama;
May 5, 2025**

Forward

“You’re not going to do anything about property insurance and insurance rates until you change the economics of what happens after the storm hits”.

– Jim Ridling, former Commissioner, Alabama Department of Insurance

Those few words from Jim Ridling while surveying the damage of a one-two punch by Hurricanes Ivan and Katrina, started it all.

It seemed so simple. Common sense, in fact. Maybe that’s why it had not been tried, at least not on a broad scale. Ridling, then a private citizen and former insurance executive, knew the storms would come no matter what. That meant we had to find ways to build stronger before the storm so we can have less damage after the storm. Less damage means fewer insurance claims. Less damage means less debris for local governments to pick up. Less damage means fewer displaced residents. Less damage means students can go back to school. Less damage means local businesses stay open for business. Less damage means employees can show up for work. Less damage means life can go on. Less damage means lives and livelihoods are potentially saved. The dominos of progress and positive change just keep on falling.

Fast forward just a few years. Jim Ridling had become Alabama’s insurance commissioner and could work from that base to put those few words into action. What followed, among other important efforts, including a broad-based study on homeowners insurance and the establishment of a first-class academic research center, was a data-driven, state-based, home fortification grant program for Alabama homeowners, *Strengthen Alabama Homes* (SAH). The program was broadly supported by agents and industry, academia, nonprofits, consumer groups, governors, legislators, local governments and many others.

The Alabama Legislature approved a bill creating the program in 2012, funded it in 2015, and the Insurance Department issued its first set of grants in 2016. Lives were changed and the market began to stabilize. Since that first grant, the department has issued more than \$86 million in grants and fortified more than 8,700 homes. Our state is now home to more than 53,000 IBHS certified FORTIFIED homes. So, as we had hoped it would all along, the private sector has caught on and is far outpacing the state grant program. All it took was Jim Ridling’s few words along with, of course, a *great deal of grit and determination* by an awful lot of people, all pulling the wagon together, to see it through.

This report validates all that work, spanning some two decades. With this report, we see for the first time, in clear empirical data, the benefits of all that work, effort, determination, and commitment by all those people, far too many to name here.

For me, it has been the privilege of a lifetime to see this program go from idea to national model, to work for almost a decade beside former Commissioner Jim Ridling and many others here at the Insurance Department and beyond. Further, it is my honor of a lifetime to now serve as Alabama’s insurance commissioner, carrying on his legacy and his vision and that of so many others who worked together to do something good by doing something different. That vision,

their vision, has grown from a single state grant program to a resilience movement here at home in Alabama to one is catching on all over the nation. Make no mistake, we in Alabama didn't start the resilience movement, but we've had a hand in. For that, we are proud.

How this report came about is fairly simple. Hurricane Sally, a strong category 2 tropical cyclone, made landfall in Gulf Shores, Alabama, in September of 2020. It was the first hurricane that passed over a critical mass of the IBHS certified FORTIFIED roofs, many of which had been funded by SAH grants. Not long afterwards, we at the Insurance Department began receiving reports from insurers that the fortified roofs in our coastal counties, those in Sally's path, had performed very well, especially south of I-10. However, the data was mostly proprietary, so we couldn't use it. If the data was as good as the insurers were reporting, we needed something we could share publicly. In short, I wanted to shout the good news from the rooftops ... FORTIFIED rooftops preferably.

Therefore, we decided to work with those same insurers to develop a data call that would give us the empirical basis for what you see here, a top quality, peer-reviewed study that proves fortification works. From this study, we have learned that the IBHS certified FORTIFIED roofs not only performed as advertised, but they also exceeded our expectations in terms of claim frequency, claim severity and loss ratio. We learned that IBHS certified FORTIFIED roofs even performed substantially better than those on houses built to an identical building code but not receiving the FORTIFIED designation. I think this report will rock the insurance world, in a good way, of course.

Thank you to Dr. Lars Powell, Director of the Center for Risk and Insurance Research at the University of Alabama for outstanding work in crafting this report and analyzing the data that was collected by the amazing, dedicated state employees at the Alabama Department of Insurance. They are without question among the finest professionals I have ever known. Thank you also to all those many people and organizations I referred to above, far too many to name, who worked so hard over the years in developing the SAH program and the larger concepts of resilience that will allow the people of our great state and beyond to build stronger, recover quicker, and live safer.

Mark Fowler
Commissioner of Insurance
State of Alabama

Executive Summary

Coastal property insurance has presented a challenge along the gulf coast since the active hurricane seasons of 2004 and 2005. Following a series of concerted efforts to address the problems of availability and affordability, Alabama chose to address the root cause of insurance market dislocations by promoting and funding the Insurance Institute for Business and Home Safety (IBHS) FORTIFIED Home™ (Fortified) program. Fortified prescribes a system of building features that mitigate hurricane wind and wind-driven-water damage in incremental levels of Fortified Roof, Fortified Silver, and Fortified Gold.

The Alabama Department of Insurance, in cooperation with the Alabama Legislature and the insurance industry, created and funded the Strengthen Alabama Homes program, which provides grants to help homeowners retrofit their houses to the Fortified standard. They also implemented benchmark insurance discounts for houses that earned Fortified designations. As this report is drafted in early 2025, Alabama leads the nation with more than 50,000 Fortified designations.

Hurricane Sally in 2020 was the first hurricane to strike a critical mass of Fortified houses, providing an important opportunity to evaluate the performance of Fortified construction. Although Fortified has been evaluated in state-of-the-art laboratory conditions, many insurers remain skeptical of the expected performance, because it has not been tested in real-world hurricane conditions. This report fills that void in the scientific literature by measuring and documenting the performance of Fortified during Hurricane Sally.

The Alabama Department of Insurance issued a data call for Hurricane Sally as Bulletin 2024-3.1 The Bulletin required admitted insurance companies to provide detailed data on policies and claims in the area affected by Hurricane Sally. Eighty-six insurance companies responded to the data call, including a handful of non-admitted carriers who voluntarily provided data. The final sample of policies covering wind perils for single-family owner-occupied houses included 40,195 policies. Of these, 8,629 reported claims totaling \$181,466,480. If we include deductibles paid by policyholders, the total cost of damage was \$243,566,706.2 Our sample includes 7,417 Fortified houses, of which 1,705 were designated Fortified Roof and 5,712 were Fortified Gold.

There is not a single obvious and best way to analyze insurance claims for our purposes. Instead, we employ several methods to produce a range of results that are useful to insurance companies, regulators, consumers, and engineers who continue to improve the Fortified system. For example, the houses in our sample faced different levels of wind and rain. As shown in Table 4, the levels of wind and rain differed across the categories of construction. We also note that 46% of the claims in our sample were caused by trees falling on houses. Although Fortified systems are not designed to mitigate treefall damage, insurers still must pay for treefall damage. Thus, the treefall claims are relevant to insurance companies and consumers, but not to the scientists and engineers who want to know how well Fortified construction standards performed for the intended purpose.

We follow three empirical strategies, which share common performance metrics and construction categories, but differ by sample selection. The performance metrics are claim frequency, claim severity, and loss ratio. Claim frequency is the number of claims divided by the number of policies. Claim severity is the total amount of losses paid divided by the number of claims. Loss ratio is losses divided by premiums. The construction categories are conventional (not Fortified), Fortified Roof, and Fortified Gold.

The first empirical step is to compare the simple average of the three key performance metrics across the three construction categories. Next, we remove the treefall claims from the sample to measure performance in the intended setting. Finally, we control for location – and thereby wind speed and rainfall – by comparing the averages of the performance measures of each Fortified house to those of the nearest non-Fortified house within 0.25 miles.

We find that Fortified-designated construction performed better than conventional construction in Hurricane Sally. Depending on the selected designation, sample, and measure, Fortified construction reduced loss frequency by 55% to 74%, loss severity by 14% to 40%, and loss ratio by 51% to 72%.³

Insurance companies are not the only beneficiaries of Fortified construction. Policyholders also save money on deductibles they would otherwise pay. We calculate the expected savings for each party in Hurricane Sally if all the conventional houses were Fortified Roof, and if all houses were Fortified Gold. For simplicity, we use the average frequency and severity reduction percentages across the three analyses to estimate the alternative scenarios. Thus, the frequency reduction is 66% for Fortified Roof and 69% for Fortified Gold, and the severity reduction is 18% for Fortified Roof and 32% for Fortified Gold.

Policyholders represented in our sample paid \$53.6 million in deductibles for damage caused by Hurricane Sally. If the 25,093 conventional houses had been built or been retrofitted to the Fortified Roof standard, we estimate that policyholders would have saved \$32.6 million (61%) in deductibles paid. If all the houses were built to the Fortified Gold standard, policyholders would have saved \$34.6 million (65%) in deductibles paid.

Insurance companies paid \$149.3 million for claims in our sample of policies from Hurricane Sally. We estimate that if all conventional houses were built or retrofitted to the Fortified Roof standard, insurers would have saved \$99.9 million (67%) in losses. If all the houses had been built to the Fortified Gold standard, they would have saved \$111.8 million (75%) of the total they paid as claims for policies in our sample.

Next, we compare the average damage ratio for each construction type over wind speed and rainfall bins. The damage ratio is the ground-up loss divided by the total insured value (TIV). The ground-up loss is the total amount of losses paid for all coverages (including the wind deductible). TIV is the sum of all limits of insurance that apply to the house, plus the wind deductible.

The benefit of using the damage ratio, rather than the loss ratio or severity ratio, is that it describes the amount of damage done to a house, relative to total possible damage. It is not biased by choices of deductibles or coverage. Figure 1 presents the average damage ratio for each construction category across bins of wind speed.

In each construction category, the average damage ratio demonstrates a non-monotonic but general upward trend over wind speeds, indicating that the wind speed bins are reasonable, but not perfect representations of the damage function.

Results in Figure 1 are consistent with improving performance from conventional to Fortified Roof to Fortified Gold. In each wind speed bin, the average damage ratio for conventional construction is greater than that of either Fortified category. The average damage ratio for Fortified Roof houses is also greater than that of Fortified Gold houses in each wind speed bin.

Another purported benefit of the Fortified designation program, in addition to its construction standards, is the private enforcement mechanism. Houses built or retrofitted to a Fortified standard are evaluated and inspected by Fortified Evaluators, and the information collected by Evaluators is verified by IBHS.⁴ In several jurisdictions included in the data call, municipalities have enacted building codes that are very similar to the Fortified standards. The only difference is the enforcement process. The houses built to similar codes are inspected by local code officials rather than Fortified Evaluators. The Fortified inspection process requires verification of every aspect of the Fortified standard, whereas the code inspection process may not be able to observe every detail on a common inspection schedule.

The data call offers an opportunity to compare houses that receive a Fortified designation to those built to a local code that is similar to Fortified. In Section 4, we find that houses built to local codes similar to Fortified generally outperformed conventional houses, but that Fortified-designated houses outperformed conventional houses by a substantially larger margin. On average, the Fortified Roof-designated houses performed more than 50% better than similar code houses.

Adding the Code Fortified categories to the average wind speed analysis, Figure 2 presents the analysis across the five construction categories and four levels of wind speed. The Fortified categories and the code categories consistently outperform conventional construction, and the Code Gold houses performed similar to the Fortified Gold houses. However, the houses built to the supplemental Roof code (dashed black line in the figure) did not perform as well as the Fortified Roof designations (solid brown line). For robustness, we completed several iterations of this analysis, drawing the same conclusion in each.

In conclusion, we find that Fortified construction lived up to its promise in Hurricane Sally. Claims and deductibles paid by insurers and policyholders were much lower for the Fortified houses than for the conventional houses. We also find that Fortified houses and houses built to similar building codes are not equal. Fortified Roof houses perform at least 50% better than the similar code houses, and the difference is likely due to the private enforcement element of the Fortified program.

As Alabama continues to retrofit and build its coastal housing stock to Fortified standards, its residents can look forward to less weather damage and a more resilient economy in years to come.

For the full report, see: <https://www.aldoi.gov/PDF/News/PerformanceBHSFortifiedHomeConstructionHurricaneSally.pdf>

Appendix 5 – National Association of Insurance Commissioners 2023 State Mitigation Programs

Link: https://content.naic.org/sites/default/files/inline-files/State%20Mitigation%20Programs_2.pdf

State	Alabama	California	Florida	Louisiana	Minnesota	North Carolina	South Carolina
Mitigation Program	Strengthen Alabama Homes (SAH)	Brace and Bolt – California Earthquake Authority	MySafe Florida Home	Louisiana Fortify Homes Program	Strengthen Minnesota Homes	NCIUA Strengthen Your Roof	SC Safe Home
State Law Reference and Website	AL Code § 27-31E-2 (2012) https://strengthenalabamahomes.com	https://www.earthquakebracebolt.com	https://myfloridacfo.com/mysafehome Bill text: https://trackbill.com/bill/florida-house-bill-881-my-safe-florida-home-program/2370303/	Bill text: https://trackbill.com/bill/louisiana-house-bill-612-insurance-department-provides-for-the-louisiana-fortify-homes-program-en-see-fisc-note-sd-ex/2242808/	https://www.revisor.mn.gov/laws/2023/0/Session+Law/Chapter/57/ https://www.revisor.mn.gov/laws/2023/0/Session+Law/Chapter/60/	https://strengthenyourroof.com/Home/Index	https://doi.sc.gov/605/SC-Safe-Home
Summary	Provides grants to Alabama residents for residential wind mitigation on existing, owner-occupied, single-family homes.	Earthquake Brace + Bolt (EBB) helps homeowners lessen the potential for damage during an earthquake. EBB offers a grant of up to \$3,000 toward a seismic retrofit for qualifying older houses.	The program has two primary components: 1. Provide, free of charge, a home inspection that identifies recommended improvements a homeowner may take to mitigate hurricane damage. 2. Eligible homeowners within defined areas of the state may apply for a matching grant to perform work on their home to retrofit their properties to make them less vulnerable to hurricane damage.	Authorizes the commissioner to make financial grants to retrofit roofs of insurable property with a homestead exemption to help the property resist loss and meet or exceed the "fortified roof" standard of the Insurance Institute for Business and Home Safety. It becomes effective January 1, 2023 and terminates June 30, 2025.	Established program within the Department of Commerce to provide grants to retrofit insurable property based on the IBHS Fortified standard to resist loss due to common perils, including but not limited to tornadoes or other catastrophic windstorm events.	Offers grants to help eligible policyholders in beach communities better protect their homes against the threat of hurricanes through roof replacement with an IBHS FORTIFIED Roof™.	The South Carolina Safe Home program, administered by the South Carolina Department of Insurance, provides matching and non-matching grant funds to help coastal property owners retrofit their homes to make them more resistant to hurricane and high-wind damage.

State	Alabama	California	Florida	Louisiana	Minnesota	North Carolina	South Carolina
Qualified Recipients	Must own and occupy a single-family home in qualifying county as primary residence and provide proof of in-force homeowners policy, wind policy, and flood policy (if home is in special flood hazard area).	Must be a primary residence in a designated ZIP code, built before 1980 with a raised foundation and on level or a slightly sloping gradient.	The homeowner must have been granted a homestead exemption on the home. The home must be a dwelling with an insured value of \$500,000 or less or qualify as low-income. The home must have undergone an acceptable hurricane mitigation inspection after July 1, 2008.	The commissioner shall promulgate rules governing eligibility requirements for grants and the administration of the program.	Grants are issued on a first come first served basis. The commissioner must develop criteria to determine whether an applicant is eligible for a grant.	NCIUA Homeowners, Homeowners Windstorm or Hail, Dwelling, and Dwelling Windstorm or Hail policyholders with covered property along the Outer Banks and Barrier Islands. Policyholders must have a current, eligible policy that was effective on or before June 1, 2022 and meet eligibility criteria described in the 2020 FORTIFIED Standard.	Must be a primary residence owner-occupied home, with an active insurance policy covering the property, site built or manufactured/modular, must not have existing previous damage, and the home and homeowner together must not have previously received and utilized a SC Safe Home grant.
Grant Limits	100% of project cost up to \$10,000	Up to \$3,000 toward a seismic retrofit for qualifying older houses. Plus, supplemental grants for low-income households (\$72,080 or less). Supplemental grants range from \$1,125 - \$7,000 depending on home location.	Grants will provide up to \$10,000 for the actual cost of the mitigation project. The program will provide \$2 in grant funds for every \$1 the homeowner provides. In order to receive the maximum grant amount, homeowners must be able to provide \$5,000 of their own funds toward the project.		Grant amount is not determined through the legislature, but instead at the discretion of the Department as they establish the program.	Up to \$6,000.	Matching \$4,000 Non-matching \$5,000 Grant awards are based on the total annual adjusted gross household income of the applicant, adjusted for family size relative to the county area median income or the state median family income, whichever is higher.

State	Alabama	California	Florida	Louisiana	Minnesota	North Carolina	South Carolina
Inspectors	A FORTIFIED™ evaluation is a required. A certified FORTIFIED Evaluator™ will perform an initial review of the current condition of the home and provide documentation of the steps needed to reach either the FORTIFIED™ Roof or Silver level.	The house must successfully pass a final inspection by a local building inspector, confirming the retrofit was done in accordance with CEBC Chapter A3. If a homeowner chooses to hire a contractor to do the EBB retrofit, the contractor must be listed on the EBB Contractor Directory.	The Department of Financial Services will provide an approved list of inspectors. Homeowners must utilize an inspector from this list.	The grantee shall obtain all permits required by law or ordinance for construction, arrange and pay for inspections required by law or ordinance and the terms of the grant, which shall include inspection and certification by an IBHS certified inspector.	Contractors must complete Fortified Roof for High Wind and Hail training provided by IBHS, among other requirements. Evaluators must be in good standing with IBHS and maintain an active certification as a fortified home evaluator for high wind and hail, among other requirements.		The program requires a homestead exemption and an acceptable wind certification and hurricane mitigation inspection.
Retrofits	The mitigation standard adopted by the Strengthen Alabama Homes program is known as the FORTIFIED Home™ program and it was developed by the Insurance Institute for Business and Home Safety (IBHS). To receive this grant, you must reach the IBHS FORTIFIED Roof or Silver standard.	In a brace + bolt retrofit, the foundation is bolted to the frame of the house, and if there is a crawl space (or cripple wall), it is braced with plywood or OSB sheathing. This helps prevent the house from sliding or toppling off its foundation during an earthquake.	Grants may be used for the following improvements: Opening protection; Exterior doors, including garage doors; Brace gable ends; Reinforcing roof-to wall connections; Improving the strength of roof-deck attachments; Upgrading roof covering from code to code plus; and Secondary water barrier for roof.		The mitigation work must be completed to IBHS Fortified standards and grants will be awarded after	Grants go toward the installation of a FORTIFIED Roof.	Bracing gable ends, roof-to-wall connectors, secondary water barrier, exterior doors (including garage doors), roof covering, Repair or replacement of manufactured home piers, anchors and tie-down straps, opening protection (window replacement, hurricane shutters), roof deck attachment, issues associated with weak trusses, studs and structural components.

State	Alabama	California	Florida	Louisiana	Minnesota	North Carolina	South Carolina
Funding	Funding for this program comes from the insurance industry (\$10M annually) in Alabama and is not funded from the state's general budget, nor is it tied to a federally funded program.	Funding for EBB retrofit grants comes from two different sources: the California Residential Mitigation Program (CRMP) or the Federal Emergency Management Agency (FEMA).	Initial funding provided by the state, up to \$10,000,000.	La. Fortify Homes Fund was created as a special fund within the state treasury. It received an appropriation of \$30 million.	\$500,000 is appropriated from the general fund to strengthen Minnesota homes account in the special revenue fund. This is a onetime appropriation.		Funded through premium taxes paid by the SC Wind and Hail Underwriting Association and 1% of the commissions paid to producers annually.
Additional Incentives⁴⁰	Through the mitigation program, dwellings constructed and certified as FORTIFIED for Safer Living receive a 50-60% credit of wind portion of premium. Dwellings certified as FORTIFIED for Existing Homes receive the following credits: Bronze – 20-35% Silver – 35-45% Gold – 40-50% AL has an income tax credit of up to \$3,000 for mitigation work.	California encourages insurers to offer discounts for wildfire preparedness action and provides consumers with the list of insurers, most are based on the National Fire Protection Agency Firewise Program: http://www.insurance.ca.gov/01-consumers/105-type/95-guides/03-res/Insurers-Currently-Offering-Discounts.cfm	The Legislature has also provided tax exemptions for home hardening initiatives. Please click here for additional information on tax breaks . Beginning July 1, 2022, until June 30, 2024, sales tax is exempt on purchases of impact-resistant doors, impact-resistant garage doors, and impact-resistant windows.	Storm Mitigation Incentives Homeowners in LA may be eligible for a state tax deduction or insurance premium discount for voluntarily strengthening their homes against storms and hurricanes in compliance with the LA State Uniform Construction Code https://www.ldi.la.gov/consumers/insurance-type/homeowners/hurricane-resource-center/storm-mitigation-incentives	Insurance premium discounts are required (based on actuarially justified rates) for IBHS Fortified properties with a hail supplement.	Wilmington area homeowners can get discounts for FORTIFIED Roof or Home program (6-19%). Eligible policies with NCIUS can qualify for a free FORTIFIED roof endorsement.	Premium Discounts for Mitigation Measures. Tax Incentives Catastrophe Savings Accounts Tax Credit for Fortification Measures Tax Credit for Excess Premium

⁴⁰ Mississippi offers a catastrophe savings account and FORTIFIED and BCEGS discounts on property insurance as well as a special endorsement for roof replacement. See list here: www.smarthomeamerica.org/fortified/discounts-and-incentives/list-of-fortified-discounts-and-incentives#Mississippi

Georgia offers an insurance discount on FORTIFIED roofs. <https://www.smarthomeamerica.org/fortified/discounts-and-incentives/list-of-fortified-discounts-and-incentives#Georgia>

See full list of FORTIFIED DISCOUNTS HERE: <https://www.smarthomeamerica.org/fortified/discounts-and-incentives/list-of-fortified-discounts-and-incentives>

Appendix 6 – PA Report

Flood Insurance Premium Assistance Task Force Final Report

July 2024

Letter From the Task Force Chair

Governor Shapiro and Honorable Members of the General Assembly,

Flood events are predicted to continue to increase in severity and frequency in the Commonwealth and throughout the Northeast as our climate continues to change⁴¹. Floodwaters can wreak havoc on homes, causing structural damage to foundations, walls, and floors. Unmitigated flooding can also lead to mold growth in flooded homes, causing or exacerbating respiratory illnesses and allergies for homeowners and residents. Further, recovering from flood damage can be financially crippling, especially if a homeowner does not have a flood insurance policy to assist in recouping losses and making the necessary home repairs. It is a common misconception that standard homeowners insurance policies cover flood damage. After a major flooding event, homeowners without flood insurance are left to rely on federal disaster assistance, contingent upon a Presidential Disaster Declaration to activate the funds, or state disaster assistance, if any is available in their state.

Act 22 of 2023 established the Flood Insurance Premium Assistance Task Force to review and analyze existing statutes, procedures, practices, processes, and rules pertaining to flood insurance. In the last six months, the Task Force met five times to gain insight into the evolving flood insurance marketplace from consumers, insurance producers, real estate agents, lenders, subject matter experts, and federal partners. The Task Force seeks to raise awareness of the availability of flood insurance, educate consumers and industry representatives, and to recommend initiatives aimed at improving affordability of flood insurance.

The members of the Task Force are pleased to present this report. This report lists several recommendations designed to protect Pennsylvanians from incurring untold flood damage resulting in thousands of dollars of uncovered losses. These recommendations capture public input, agency collaboration, external stakeholder engagement and are based upon thoughtful consideration of the vast amount of information gathered throughout the process.

We recognize that implementing these recommendations may necessitate legislative action, funding, and additional resources, yet the Task Force firmly believes these recommendations are a first step toward enabling the Commonwealth to effectively tackle challenges concerning flood risk throughout Pennsylvania, while also enhancing the accessibility and availability of flood insurance. I look forward to continuing this work together to determine the best course of action to ensure our Commonwealth becomes more flood resilient.

Sincerely,
Michael Humphreys
Insurance Commissioner

⁴¹ The White House | Fact Sheet: Fifth National Climate Assessment Details Impact of Climate Change on Regions Across the United States
CID SEVERE WEATHER ADVISORY COUNCIL FINAL REPORT

Executive Summary

The Flood Insurance Premium Assistance Task Force (Task Force) was established through section 1.1 of Act 22 (P.L. 154. No. 22) in November 2023. The Task Force was created to review and analyze existing statutes, procedures, practices, processes, and rules relating to the administration of flood insurance in Pennsylvania. Seven individuals comprised the Task Force including two state Representatives, two state Senators, representatives from both the Department of Banking and Securities and Pennsylvania Emergency Management Agency (PEMA), and the Pennsylvania Insurance Commissioner serving as chairperson.

The Task Force was charged with delivering a report containing recommendations to the Governor and the General Assembly to increase flood insurance awareness, accessibility, and affordability. Specifically, recommendations in the report are to address the following:

- Potential programs that provide premium discounts;
- Potential programs that create incentives for local governments to undertake or continue flood mitigation efforts;
- The implementation of necessary changes in statutes or practices relating to the administration of flood insurance;
- How to educate residents about the risk of flooding and ways to mitigate flood occurrences;
- Steps that should be taken to inform residents about options available when purchasing flood insurance; and
- How to increase the number of people that purchase flood insurance.

Prior to the first convening of the Task Force, the Pennsylvania Insurance Department (PID), on behalf of the Task Force, issued Bulletin Notice 2024-01 soliciting public comments from the public to assist in the formation of recommendations to increase awareness and access to affordable flood insurance coverage in the Commonwealth. This public comment period ran from January 5, 2024 – February 5, 2024. In total, the Department received 38 comments from consumers, industry representatives, realtors, and independent insurance agents.

The Task Force held five public meetings between February 2024 and June 2024. Through facilitated discussions and presentations from experts in the field, Task Force members gained a deeper understanding of emerging flood risks, effective mitigation measures, and the importance of insurance in bolstering community resilience. These meetings ultimately led to final recommendations that encompass key pillars of affordability, risk mitigation, incentives, and education and outreach programs. The recommendations are as follows:

1. Establish an Office of Community Rating System Assistance (CRSA)/Expand Grant Funding
2. Improve Disclosures During the Home-buying Process
3. Incorporate Continuing Education Across Professional Roles
4. Enhance Education/Outreach
5. Incentivize Home Mitigation through Tax Credits
6. Enhance Coverage for Water Damage
7. Incorporate Flood Resiliency into Building Codes
8. Propose a Pennsylvania Flood Insurance Relief Act
9. Further Study Innovative Solutions

For the full report, see: <https://www.pa.gov/content/dam/copapwp-pagov/en/insurance/documents/coverage/flood/documents/flood-insurance-task-force/floodinsurance-premiumassistance-taskforce-finalreport-07-2024.pdf>