



Narrowing the Path: Building Resilient Homes and Healthy Insurance Markets

Fred Malik

Managing Director, FORTIFIED

Insurance Institute for Business & Home Safety

Learning Objectives

- Discover the mitigation measures that minimize damage from hurricanes, hail, and tornados.
- Learn the basic principles that can make new and existing developments more attractive risks for property insurers.
- Recognize the benefits of investing in improving key systems in buildings that lead to significantly reduced risk of property damage, increased likelihood of immediate reuse post-disaster, and lower recovery costs.



WHY?

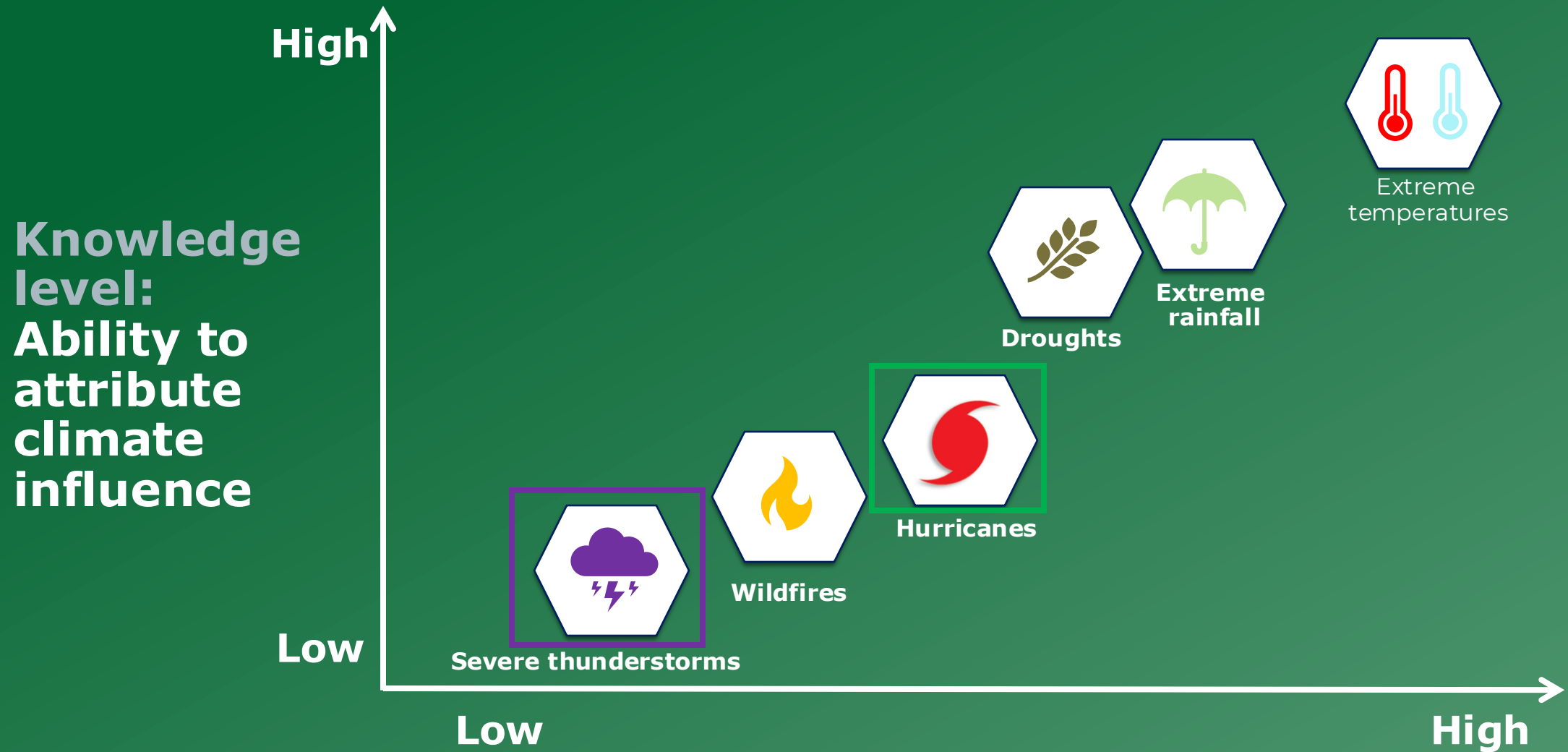
Severe weather disrupts lives, displaces families, and drives financial loss. IBHS delivers top-tier science and translates it into action so we can prevent avoidable suffering, strengthen our homes and businesses, inform the insurance industry and support thriving communities.





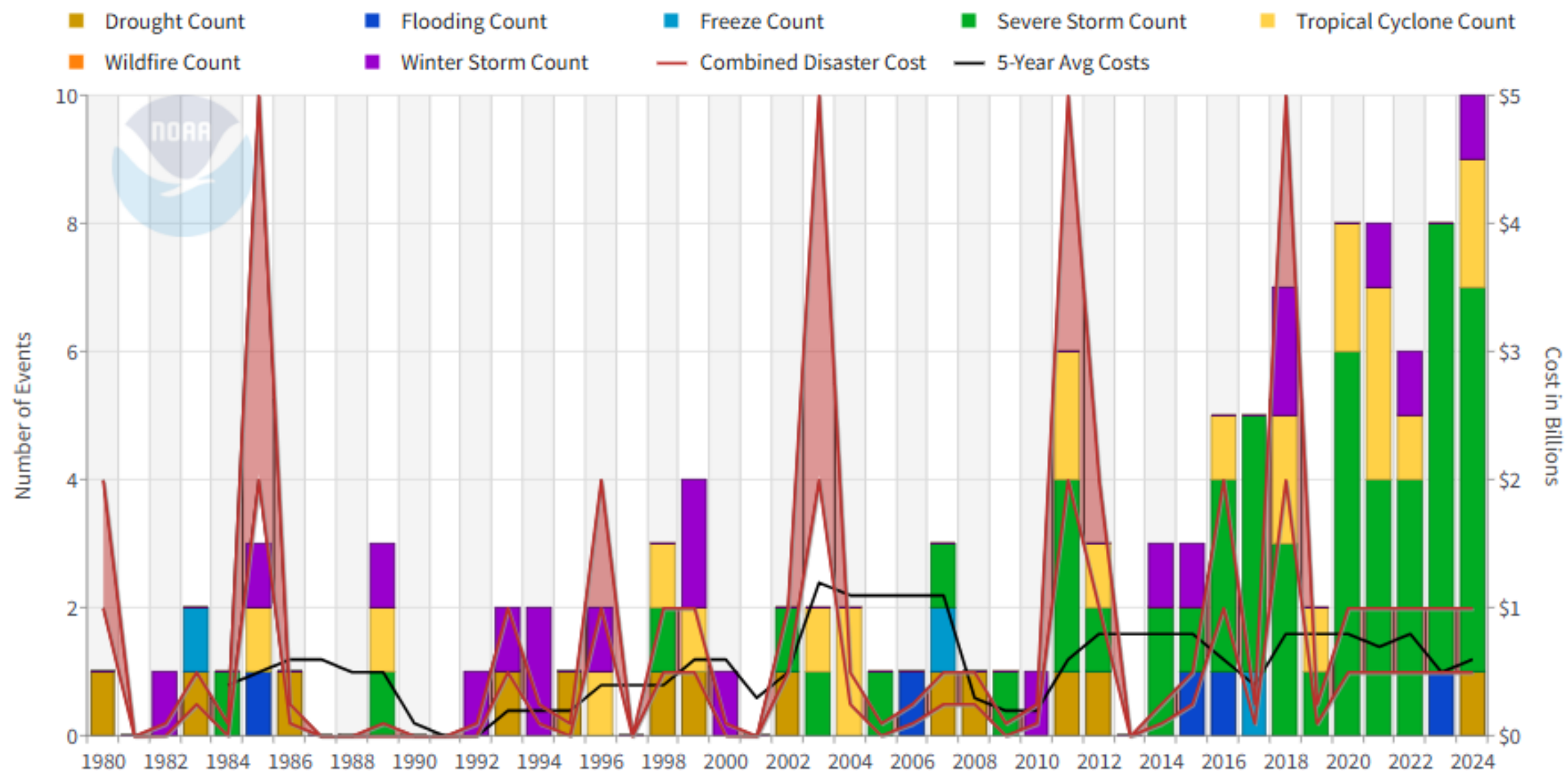
No single weather event
is *caused* by climate...

but **ALL** weather events are
influenced by climate.



**Knowledge level:
The influence of climate on the hazard**

Virginia Billion-Dollar Disaster Events 1980-2024 (CPI-Adjusted)



Updated: January 10, 2025

Powered by ZingChart

APRIL 26-28, 2011

TORNADO OUTBREAK

APRIL 28

APRIL 26

APRIL 27



APRIL 26



56 tornadoes



KY, IN, OK,
MS, TX, AR,
LA, TN



0 fatalities



7
injuries

APRIL 27



207 tornadoes
4 EF5s



MS, AL, TN,
GA, MO, AR,
VA, MD, NY



319 fatalities



2,839
injuries

APRIL 28



40 tornadoes



GA, NC, SC
VA, MD, PA
NY



0 fatalities



1
injury









**LEAD WITH
THE ROOF**



AGE is likely the
MOST IMPORTANT VARIABLE
in predicting **ASPHALT SHINGLE**
performance in high winds.



For a **10-YEAR-OLD** asphalt shingle roof:
in 42 consecutive years, there is a nearly 100% chance
of damage from a **60 MPH WIND**
from **≥ 110 MPH WINDS.**

**Other roof covers
produce predictable
levels of reliability.**

***Not* asphalt
shingles.**



**3-Tab
asphalt
shingle**

\$

**PMA
asphalt
shingle
(regional
dependent)**

\$\$

Clay Tile

\$\$\$

**Stone-
coated
metal**

\$\$\$\$

**Concrete
Tile**

\$\$\$

**Architectural
asphalt shingle**

\$

**Standing
seam
metal**

\$\$\$

**LEAST
EXPENSIVE**
per roofing
square

**MOST
EXPENSIVE**
per roofing
square



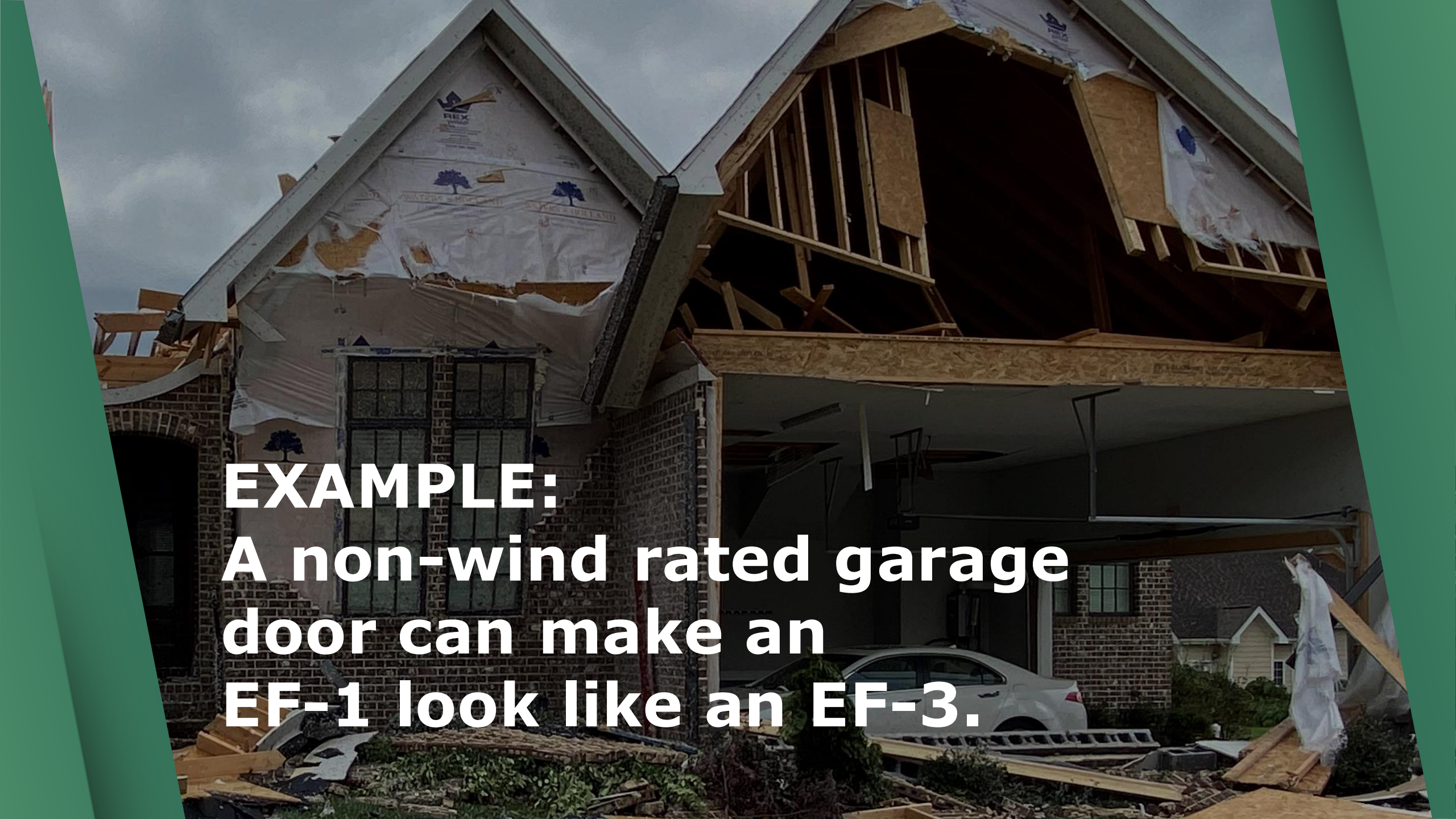
**SEALED
ROOF DECK**

UNSEALED ROOF DECK: **COST OF CLAIM**

**3X LOSS
ESTIMATE**

SEALED

UNSEALED

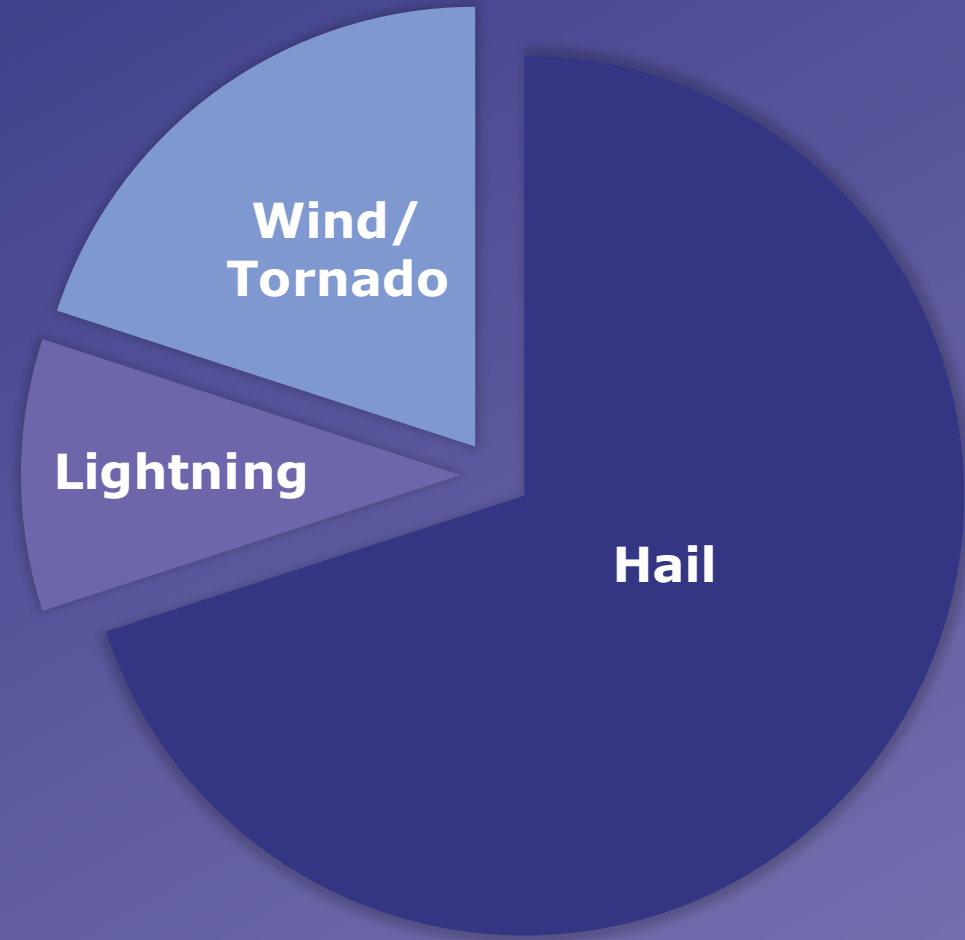


**EXAMPLE:
A non-wind rated garage
door can make an
EF-1 look like an EF-3.**





Hail accounts
for
70%
of average annual loss.















































Severe Convective Storm Hazards and Loss

Loss by SCS hazard from Moody's Risk Management Solutions





ROOF SHINGLE HAIL IMPACT RATINGS

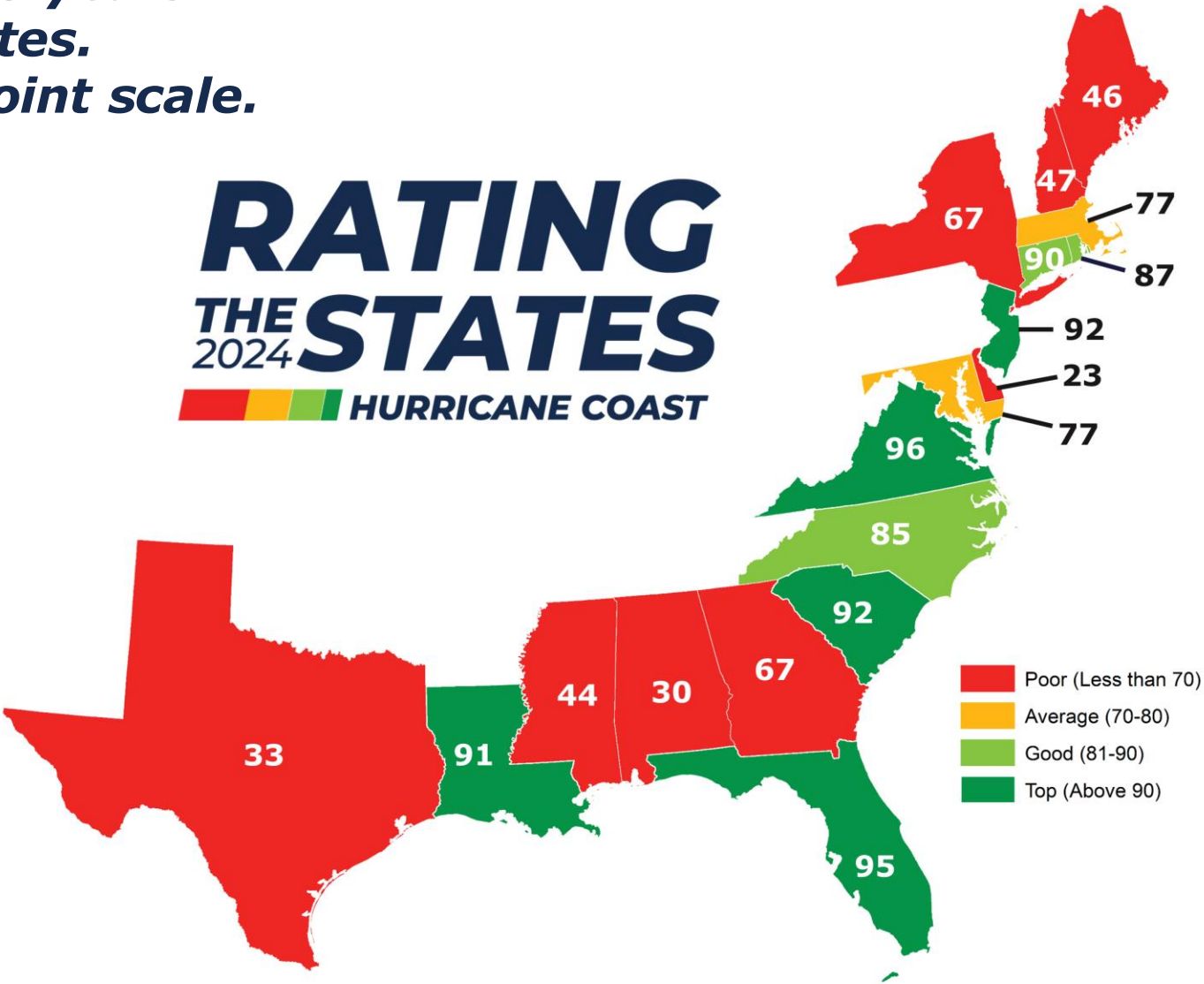
Manufacturer/ Brand	Overall Rating	Dents/ Ridges	Tears	Granule Loss
 StormMaster® Shake				
 Roofing NorthGate®				
 Roofing Products Legacy®				
 Roofing Products Vista®				
 Timberline® ArmorShield™ II				
 TruDefinition® WeatherGuard® HP				
 Roofing Landmark® IR				
 Cambridge™ IR				
Key  Excellent  Good  Marginal  Poor				



BUILDING CODES specify
basic standards for the design
and construction of buildings to
protect life safety, *but do not*
account for loss reduction.

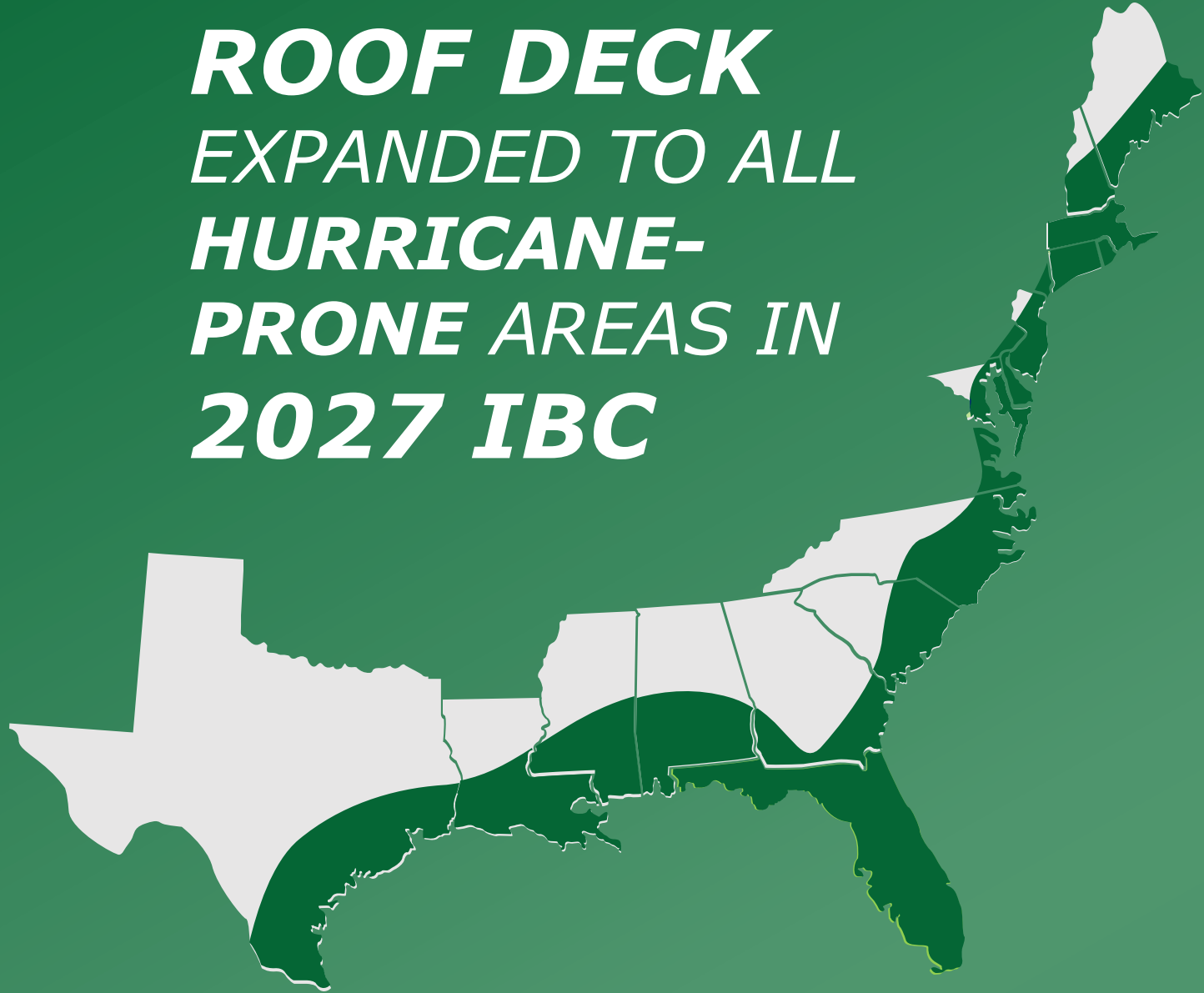
	State	Score
1	Virginia	96
2	Florida	95
3	South Carolina	92
4	New Jersey	92
5	Louisiana	91
6	Connecticut	90
7	Rhode Island	87
8	North Carolina	85
9	Massachusetts	77
10	Maryland	77
11	Georgia	67
12	New York	67
13	New Hampshire	47
14	Maine	46
15	Mississippi	44
16	Texas	33
17	Alabama	30
18	Delaware	23

*Every 3 years.
18 states.
100-point scale.*





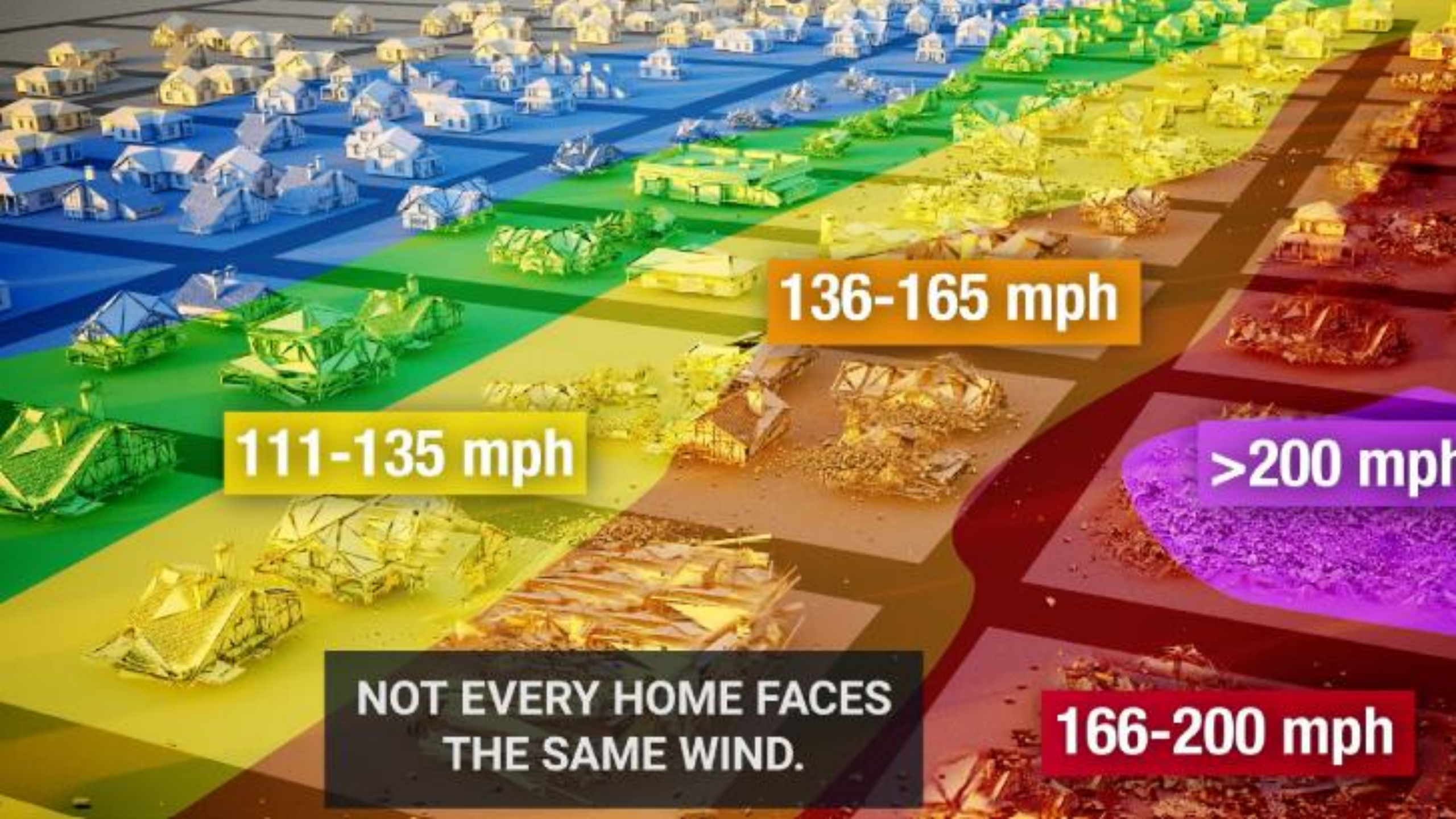
***SEALED
ROOF DECK
EXPANDED TO ALL
HURRICANE-
PRONE AREAS IN
2027 IBC***





**WE CAN'T PREVENT WHAT CAN
ALL DAMAGE EVENT THIS.**





136-165 mph

111-135 mph

>200 mph

**NOT EVERY HOME FACES
THE SAME WIND.**

166-200 mph

PROGRESSION OF DAMAGE



Roof cover, soffits, fascia

Wall cover

Roof sheathing, roof structure

Total collapse



You Get What You Inspect, Not What You Expect

Three Levels of Protection



Keep the roof on and the water out.
Reduce damage amplifiers:
Strengthen gable walls and porches.
Strengthen garage doors.
Protect openings against debris impact.



Keep the roof on and the water out.
Enhanced by a sealed roof deck and a high performing wind rated roof cover.



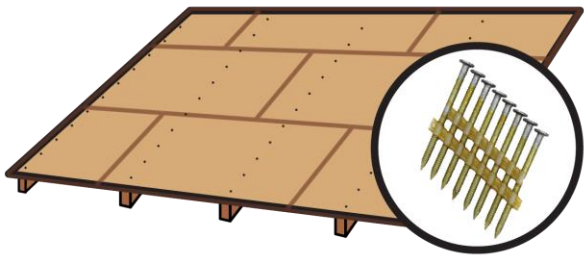
Keep the roof on and the water out
Reduce damage amplifiers
Keep the entire building intact with a continuous load path and protect against debris impact.



Three FORTIFIED Programs

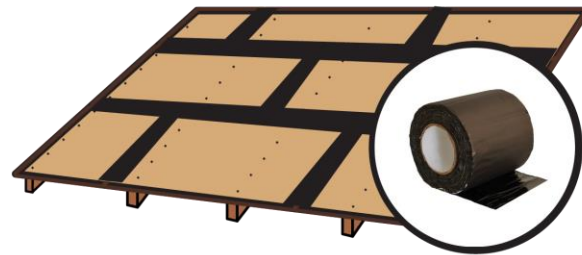


1. KEEP THE ROOF ON.



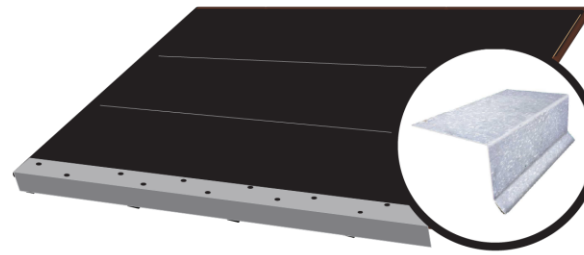
Stronger Connections

2. KEEP THE WATER OUT.



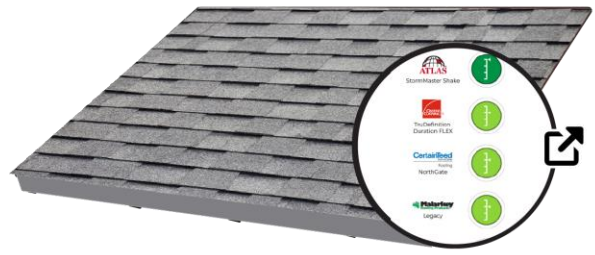
Sealed Seams

3. KEEP THE WIND OUT.



Lock the Edges Down

4. DEFEND THE SHINGLES.



Choose an Impact-Rated Shingle**







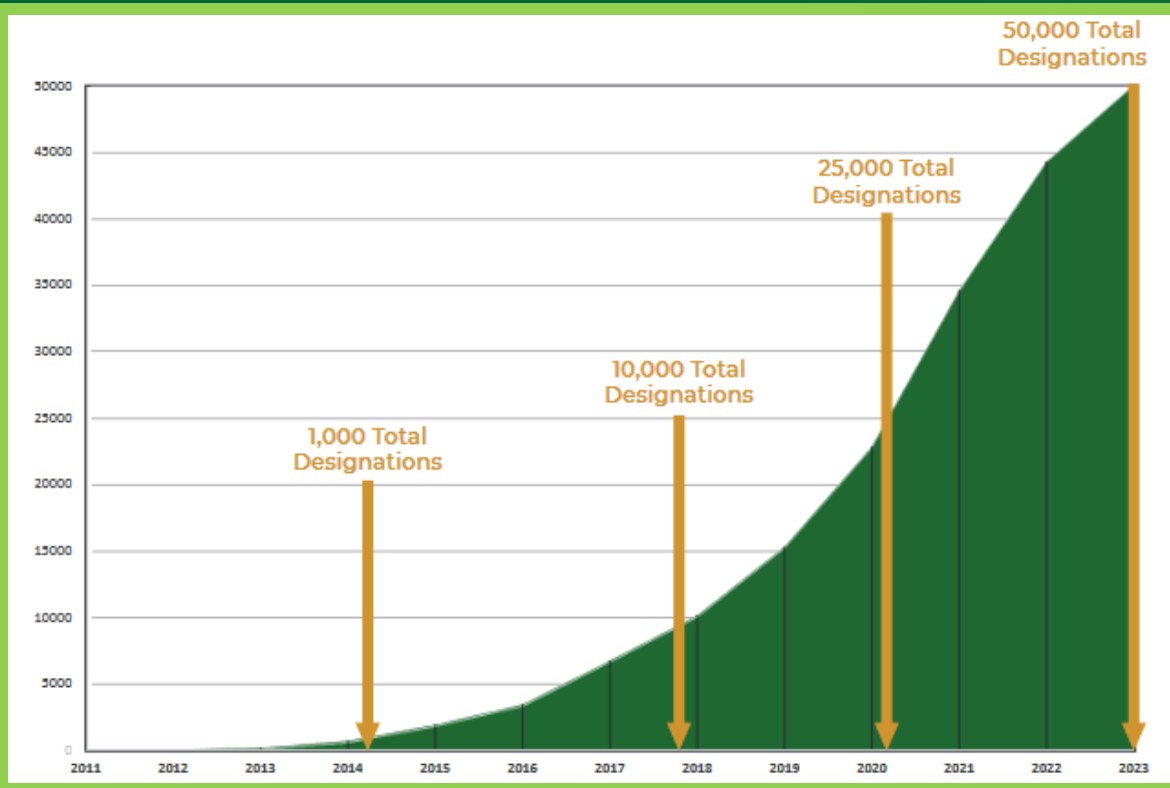
Designation Term Limit and Re-Designations



FORTIFIED designation certificates:

- Transferable between homeowners
- Valid for five years
 - Re-designatable after five years
- Homeowners/Property Owners receive a renewal notice from IBHS prior to expiration
- Costs vary, majority just require a simple exterior update to photo documentation

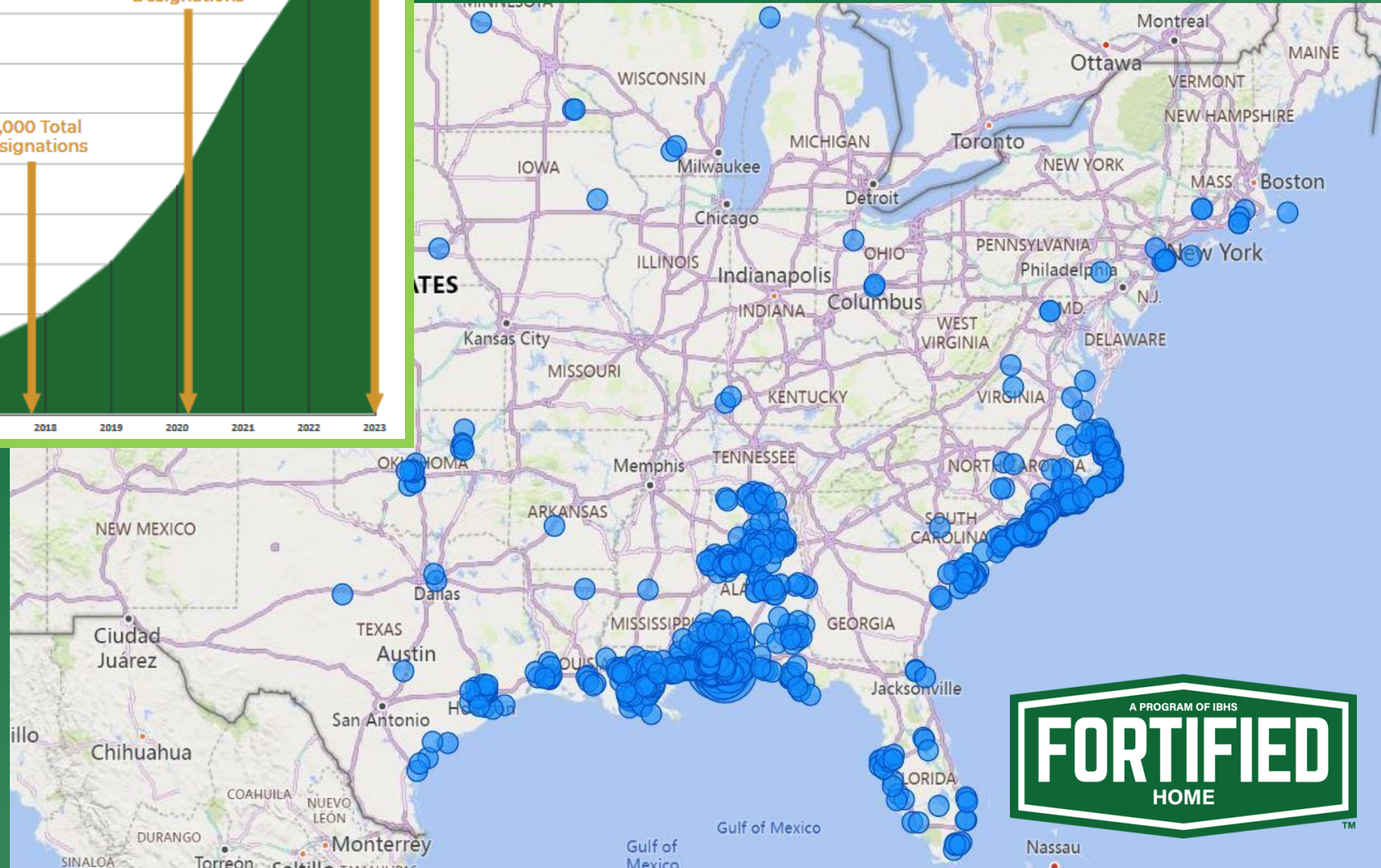
FORTIFIED Growth Across the Country



**Approaching 80,000
designations nationwide**

**Growing by more than
1,700 per month**

**Designations issued to
homes in 31 states**



North Carolina Hurricanes Results

MATTHEW, FLORENCE, DORIAN, ISAIAS



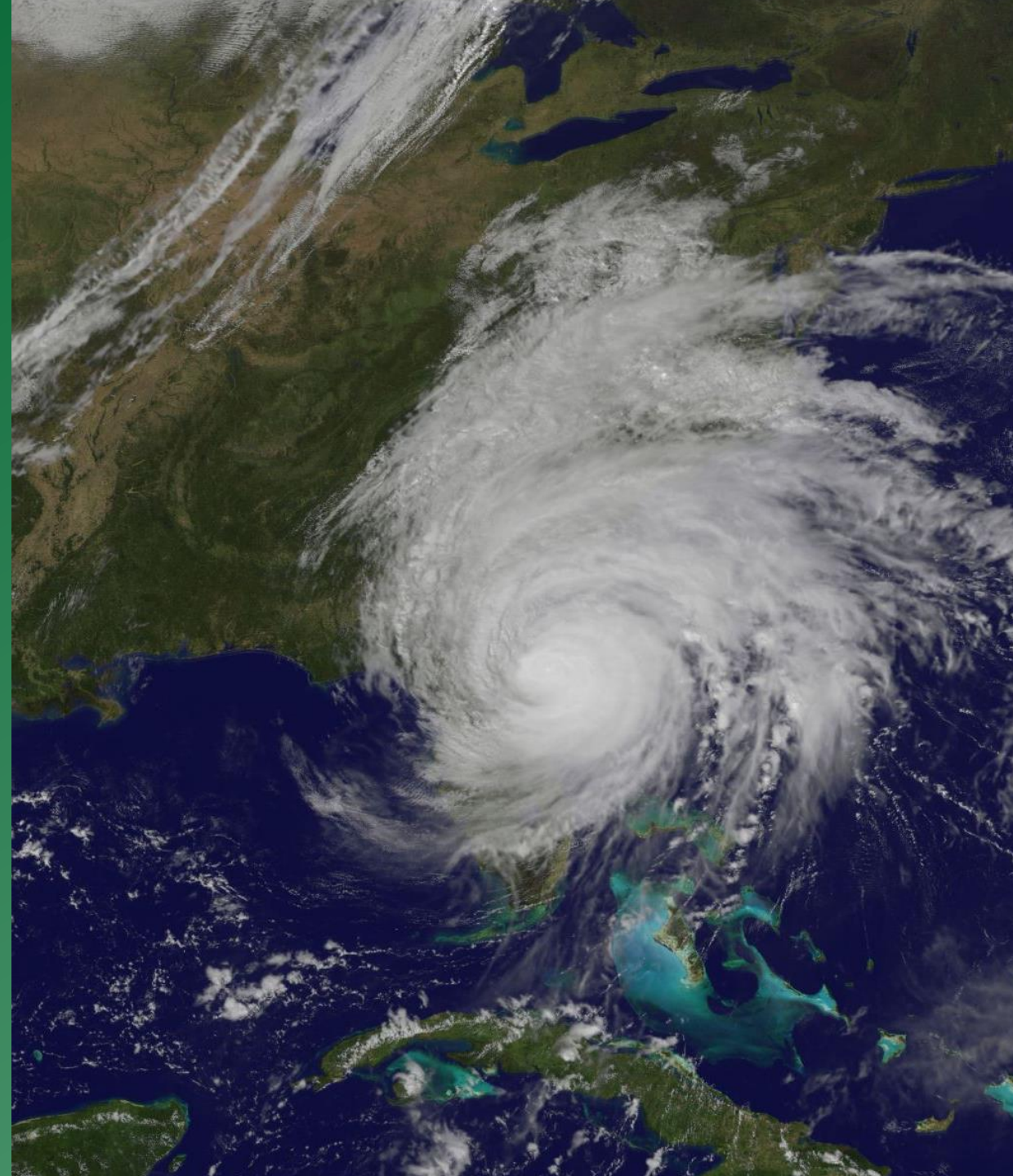
**22% less damage
on average**



**35% less likely
to have a claim**



**\$3,000 smaller claim
on average**



Hurricane Ida



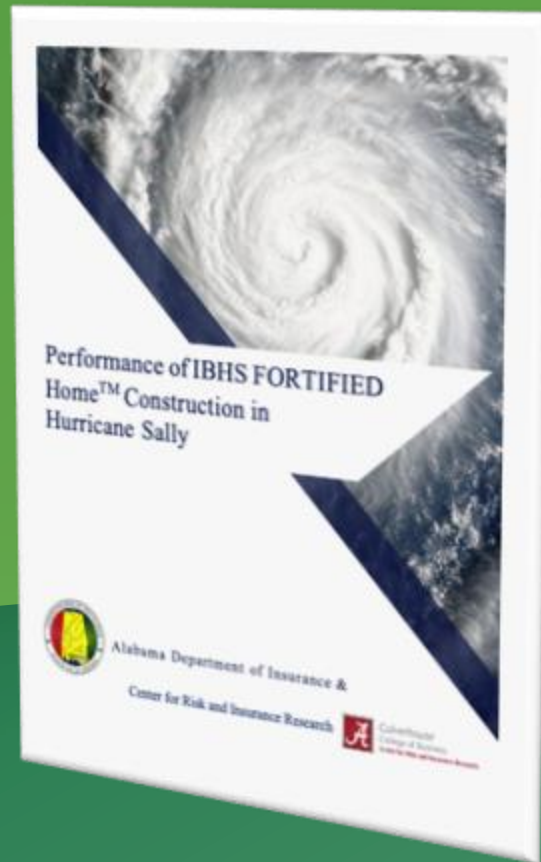
Brian Emfinger @brianemfinger



Grant Ethridge Construction, <http://www.gchp.net>

HURRICANE SALLY Results

40,000
Properties



70%¹ of total DAMAGE
in claims have been
reduced by
22% reduction
\$42M amount
Homeowners
FORTIFIED
\$105.6M in insured
losses by more than **50%.**

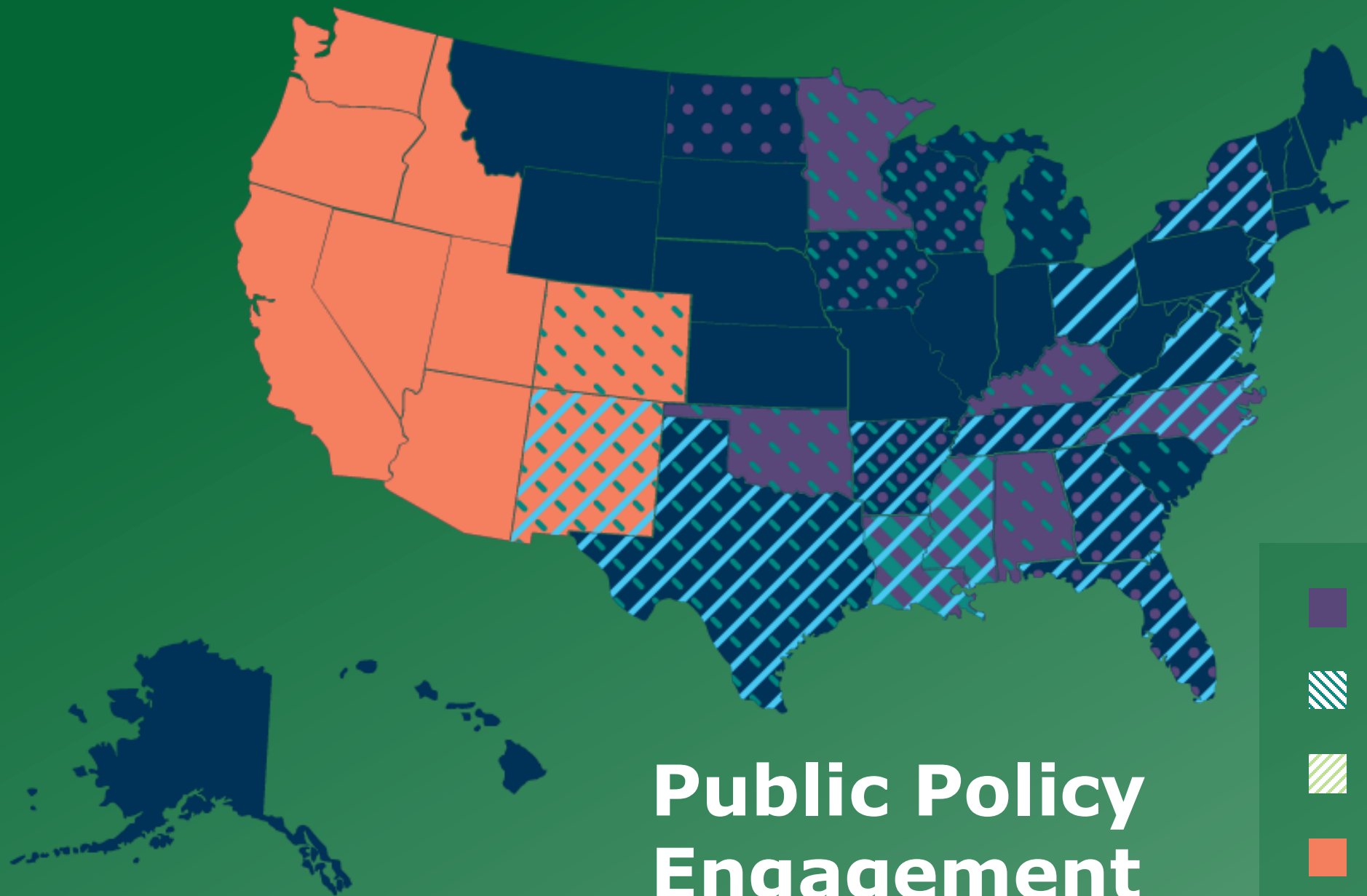
FORTIFIED HOUSES ARE MORE VALUABLE

Study shows value of
FORTIFIED homes up to
7% HIGHER
than typical construction





THE UNIVERSITY OF
ALABAMA

Culverhouse
College of Commerce
Alabama Center for Insurance
Information and Research





Public Policy Engagement

-  Grant Programs
-  Affordable Housing Tax Credits
-  FLHB
-  Wildfire

The National Standard for Resilient Construction





*IT ALL COMES BACK TO **FAMILIES.***



Fred Malik, MBA

Managing Director, FORTIFIED

Fmalik@ibhs.org



➤ fortifiedhome.org



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