



NAIIC

# Science Communication

AT IBHS







**SEVERE STORM CENTRAL**  
8:30e **FALL FRONT** and thunderstorms midweek from the Great Lakes to the middle Mississ  
The Weather Channel **BISMARCK, ND** **50°** Partly Cloudy Wind 14 From E Feels like 45°  
NOW

Rapid City Toronto  
**STORM TEAM 12** **Satellite/Radar** Boston  
MON 1:30 AM York  
Columbus  
St. Louis Louisville  
Wichita  
Oklahoma City Memphis Chattanooga  
Dallas Atlanta  
NEWS 12 THIS MORNING  
**CHRISTINA REUILLE**  
@WXCHRISTINA







# Science to Products.

VISUALIZING THE WHY.



Insurance Institute for Business & Home Safety

@disastersafety



This is why meteorologists tell you to go to an interior room during a tornado warning. At 90 mph, even exterior brick walls can be impaled by flying debris. Learn more: [ibhs.org/wind/tornado-r...](https://ibhs.org/wind/tornado-r...) #KSwx #MOwx #IAwx



GIF

1:04 PM · May 28, 2019 · TweetDeck

110 Retweets 9 Quote Tweets 203 Likes



**REDUCING WILDFIRE RISK**

FARM & RANCH

How farm and ranch owners can reduce their unique wildfire risks.

**FIRE RETARDANT GELS**

**EVACUATE!** You and your family's life is most important, evacuate as soon as you're told to.

**Time Is Against You** Fire retardant gels dehydrate, sometimes rapidly. They can lose their effectiveness after only a few hours.

**Gels Can Become a Fire Hazard** When completely dehydrated some may create a hazardous condition susceptible to burning than untreated plywood.

**Application Issues** Applying gels can be cumbersome. It can consume precious time you and your family need to evacuate safely.

**Leave It To Professionals** Gels can be effective if applied correctly in a short period before the fire reaches you.

**BE WILDFIRE READY** A guide to help you protect your property from wildfire.

WILDFIRE-READY.COM

IBHS.ORG/WIL

**IS IT HAIL DAMAGE?**

A guide to help you understand what is hail damage...  
...and what's not.

**THUNDERSTORM READY**

THUNDERSTORM-READY.COM

Insurance Institute for Business & Home Safety

**HIGH WINDS, DERECHOS AND GRAIN BINS... OH MY!**

MANY GRAIN BIN FAILURES OCCUR DUE TO HIGH WINDS. IBHS LOOKED AT THESE STRUCTURES AND FOUND THE FOLLOWING:

**5 CRITICAL VULNERABILITIES**

1. Often grain bins are excluded from local building codes
2. Design focused on interior content forces and not enough on external wind
3. Most if not all bins are designed using outdated standards for wind loads
4. Minimal onsite installation quality control
5. No single-source solution for the assembly from the foundation pad to the grain bin

ALL OF THIS LEADS TO UNKNOWN REAL WORLD PERFORMANCE EXPECTATIONS.

IBHS.ORG

PREPARE FOR WINTER

**ARE YOU READY FOR WINTER?**

DISASTERSAFETY.ORG/WINTER-WEATHER

**Science to Products.**

**CONSUMER-FACING.**





# How to Prepare:

- ✓ WHEN REROOFING
- ✓ BEFORE HURRICANE SEASON
- ✓ BEFORE EVACUATING
- ✓ AFTER A STORM







**THUNDERSTORM  
READY**

Seasonal

Days

Hours

Minutes

Event

SPC  
Outlooks

Severe  
Thunderstorm  
Warning

Severe  
Thunderstorm  
Watch







## Commercial Wind Loss Training

				
<b>MODULE 1</b>	<b>MODULE 2</b>	<b>MODULE 3</b>	<b>MODULE 4</b>	<b>MODULE 5</b>
Introduction and Wind Effects on Buildings	Roof Cover Systems and Metal Edge Flashing	Roof Drainage Systems and Roof-Mounted Equipment	Building Openings (Windows and Doors)	Water Intrusion at Glazed Openings and PTAC Units






**WILDFIRE CODES & STANDARDS**  
STATE-BY-STATE REFERENCE GUIDE - MEMBERS ONLY  
November 2019



**IMPACT TESTING OF HIGH CONCENTRATIONS OF SMALL HAIL**  
IBHS RESEARCH REPORT  
MEMBERS ONLY  
JULY 2021  
IRENNA A. MISENZARI, TAMARA M. BROWN-GARRAMANO, PHD, JANI H. GARRAMANO, PHD, FARAZ HEDAYATI, PHD



# Training Resources

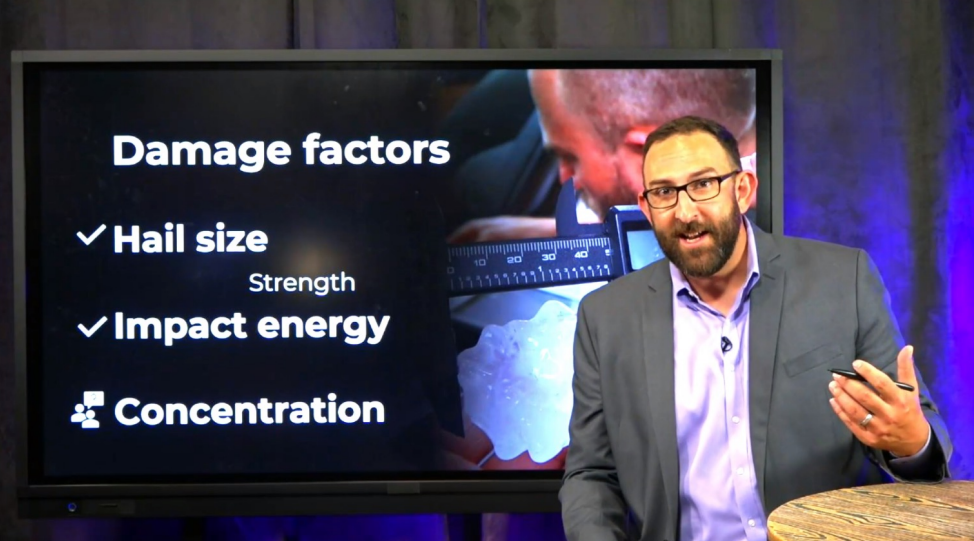












### Damage factors

- ✓ Hail size
  - Strength
- ✓ Impact energy
- ✗ Concentration



# FIELD



April 13, 2020 Chattanooga, TN  
EF-3 Tornado

# IBHS











**RATING**

**THE STATES**  
2021



**HURRICANE COAST**



**Code adoption:**

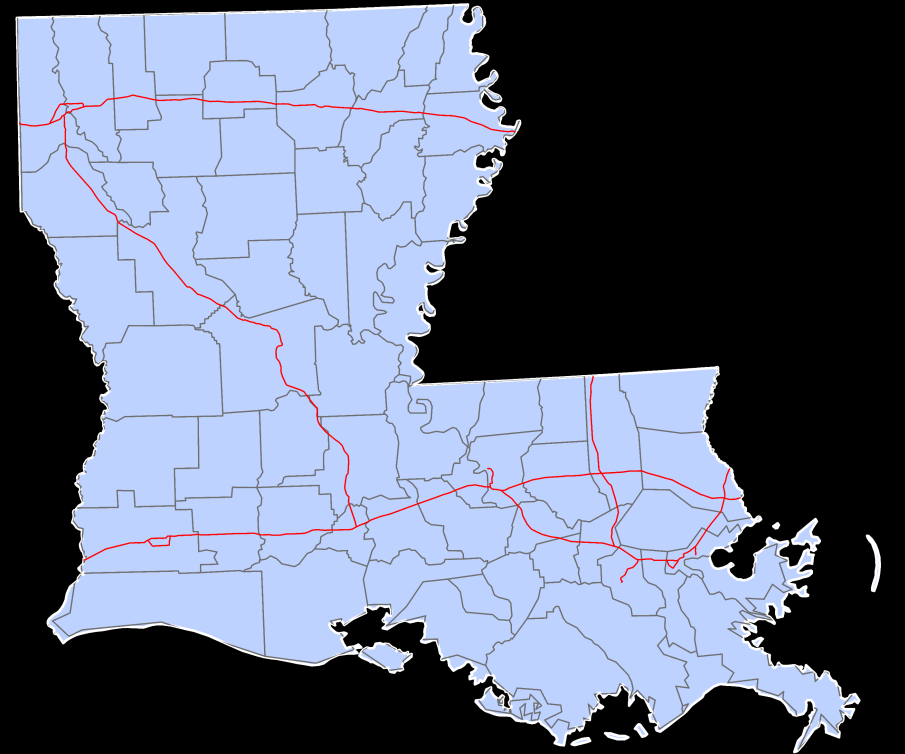
**46** out of 50

**Code enforcement &  
administration:**

**14** out of 25

**Contractor licensing &  
training:**

**22** out of 25







**IBHS HAIL RESEARCH**  
**HOW TO MEASURE A HAILSTONE**

**MEASUREMENT TIPS**

**STAY SAFE**  
Don't retrieve hailstones while it is still hailing. Once it is safe, collect hailstones off grassy surfaces to avoid those that may have broken on impact.

**MEASURE MAXIMUM DIAMETER**  
The best way to measure is with a digital caliper. Measure between the two widest points visualizing a straight line through the center of the hail between the two points—even if the hailstone is spiky in appearance. Measure from the tip of the spike feature. If using a ruler, try to estimate the maximum diameter to the 1/8 of an inch.

**WEIGH THE HAILSTONE**  
If possible, weigh the hailstone using a typical kitchen scale. Make sure the scale is on a level surface, zero the scale, and make sure no water is on the scale before weighing the hailstone.

**TAKE A PICTURE**  
If you take a picture of the hailstone, make sure to place a reference object in the frame next to the hailstone. Pictures of hailstones in people's hands can give a false perception of hailstone size. A ruler is the best reference object, but objects like a coin, golf ball, baseball, etc. are very helpful when estimating hail size from a picture. It is better to take a picture and submit the picture, rather than estimating the size from a reference object.

**MINIMIZE MELTING**  
Avoid excessive handling of hailstones for measurement. If possible, wear gloves (latex, nitrile, rubber, wool, cotton) as this helps minimize melting. Do not place the hailstone on metallic objects—this speeds up melting.

**STORE HAILSTONES**  
To store hailstones for later measurement, place them in separate sealable plastic bags (freezer/sandwich bags) to keep them from freezing together. Squeeze excess air out of the bags before sealing, and then place in freezer. It is best to measure hailstones that have been stored in a freezer within 72 hours, before sublimation begins to accelerate.

**ESTIMATE HOW MANY**  
If possible, estimate the concentration of hailstones per square foot that are on the ground (i.e. 15 stones per square foot) or consider estimating the concentration within a 10 foot by 10 foot square. This is helpful in assessing total damage.

**SUBMIT MEASUREMENT**  
Submit your hail measurement to the local National Weather Service office and/or local broadcast meteorologists via phone, email, social media, or mobile device app. Include your location and be specific. Latitude/longitude are best, but you can also reference your location to the nearest intersection, or use the distance and direction from a nearby landmark. Do NOT post specific address information on social media. If you are a home or business owner, make sure your cell phone location service is turned on and your photos have the appropriate time and location data. This can be helpful if you need to file an insurance claim.

In general, humans overestimate the size of small hailstones (less than 1/2 inch) but underestimate large and very large hailstones (over 2 inches). It is better to estimate diameter in inches than to relate the hailstone to a reference object (e.g., hail estimated as 1.5 inches rather than "golf ball-size hail").

For more information, visit [IBHS.ORG/IBS-RESEARCH/HAIL](http://IBHS.ORG/IBS-RESEARCH/HAIL)

DATE MEASURED
3/7/2018
6/15/2015
1/20/1999
4/22/2008
1/23/2008
5/27/1962
8/13/2019
7/10/1989
5/26/1923
3/8/2012
6/20/2015
5/17/1933
4/8/2000
6/16/1982
8/16/2010
4/9/1974
6/17/1986
4/22/1918
1/27/1996
1/16/1968
1/28/1986
4/23/2003
4/23/1966
8/16/2011
4/23/2011
4/26/1910
4/16/2011
12/22/1983
4/20/11
10/19/82
2/8/2011
2/7/1987
10/20/99
2/20/11
2/1/01

