

Building The Weather Safety Wheel

Brad Huffines

Chief Meteorologist
VP of Risk Communication

Gene Norman

VP of Marketing
Senior Meteorologist

Presented to the 2018 Southeast Community Owners Symposium

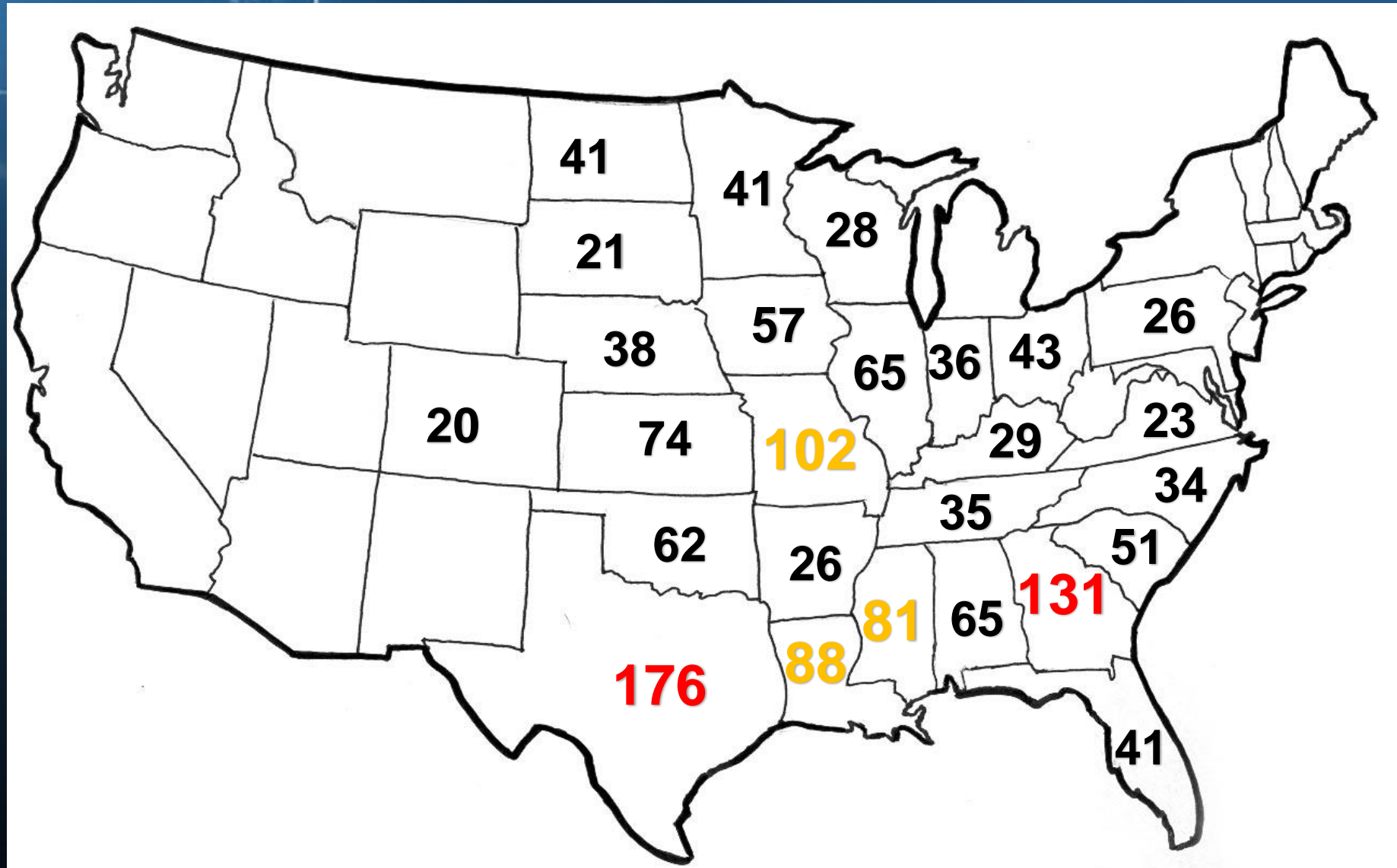
Tuesday, October 9, 2018

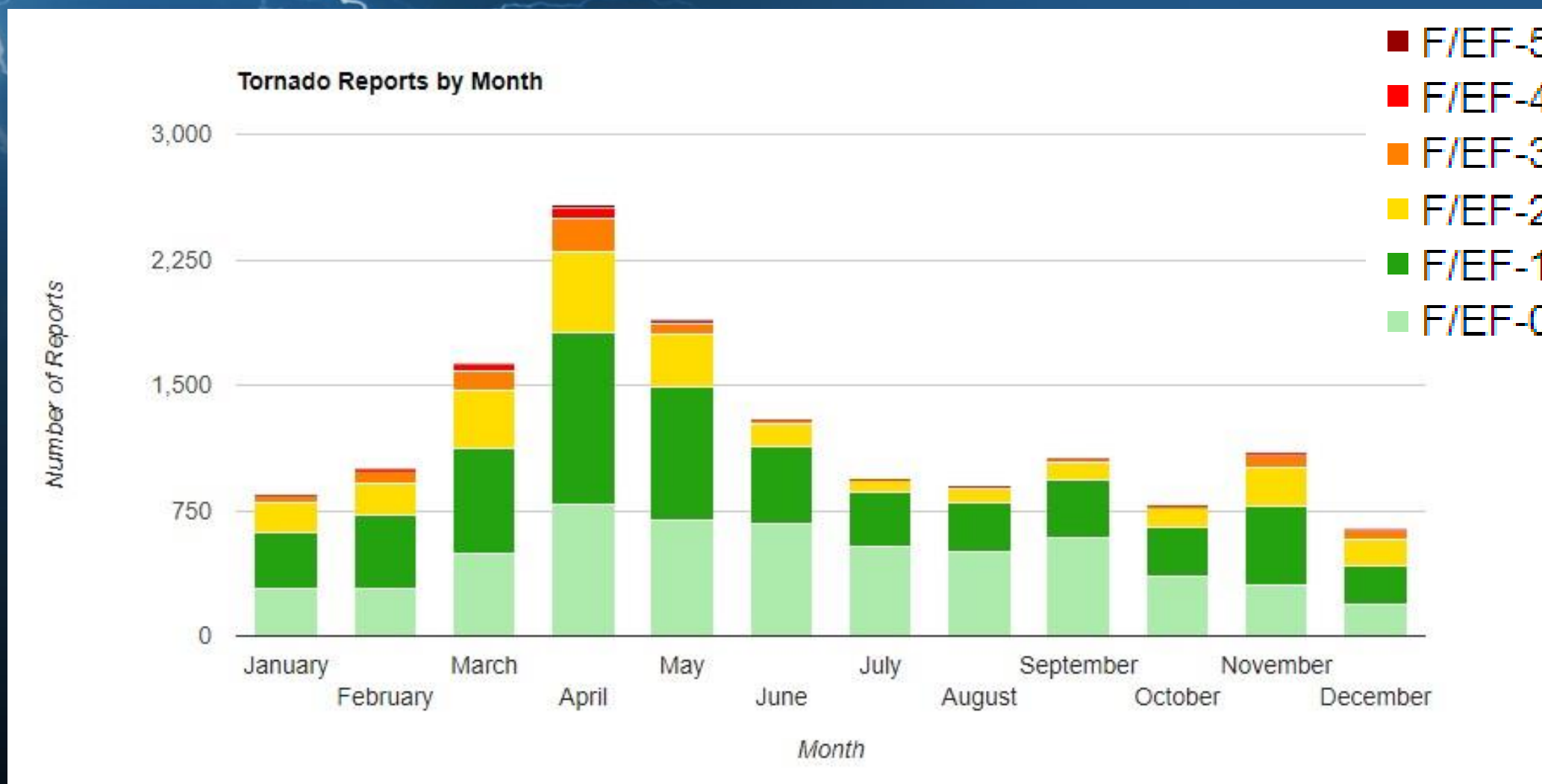
Which state had the most tornadoes in 2017?

- A) Texas - 176**
- B) Georgia - 131**
- C) Kansas - 74**

Which state had the most tornadoes in 2017?

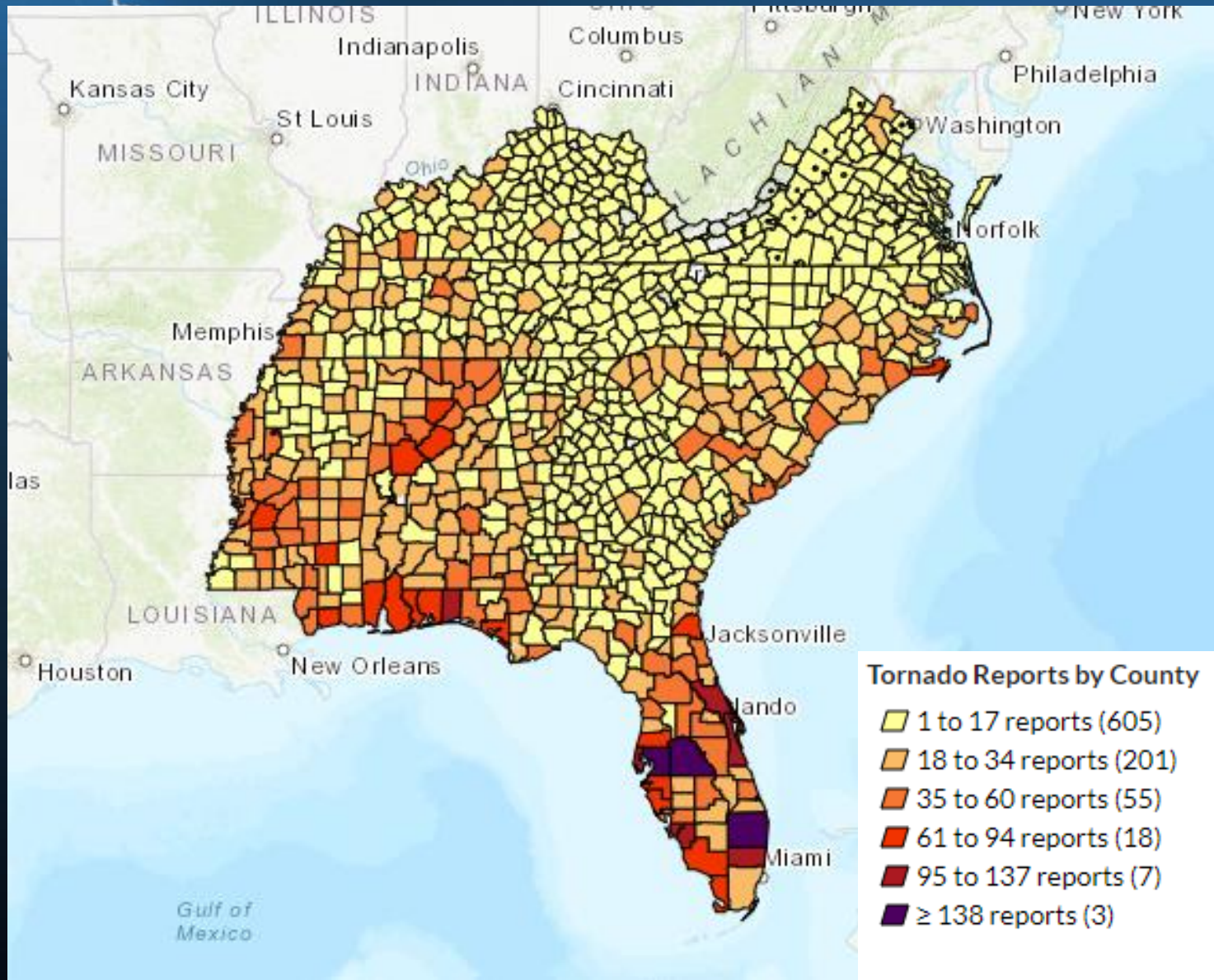
- A) Texas - 176
- B) Georgia - 131
- C) Kansas - 74











Source: SERCC

Which weather threat claims the most lives?

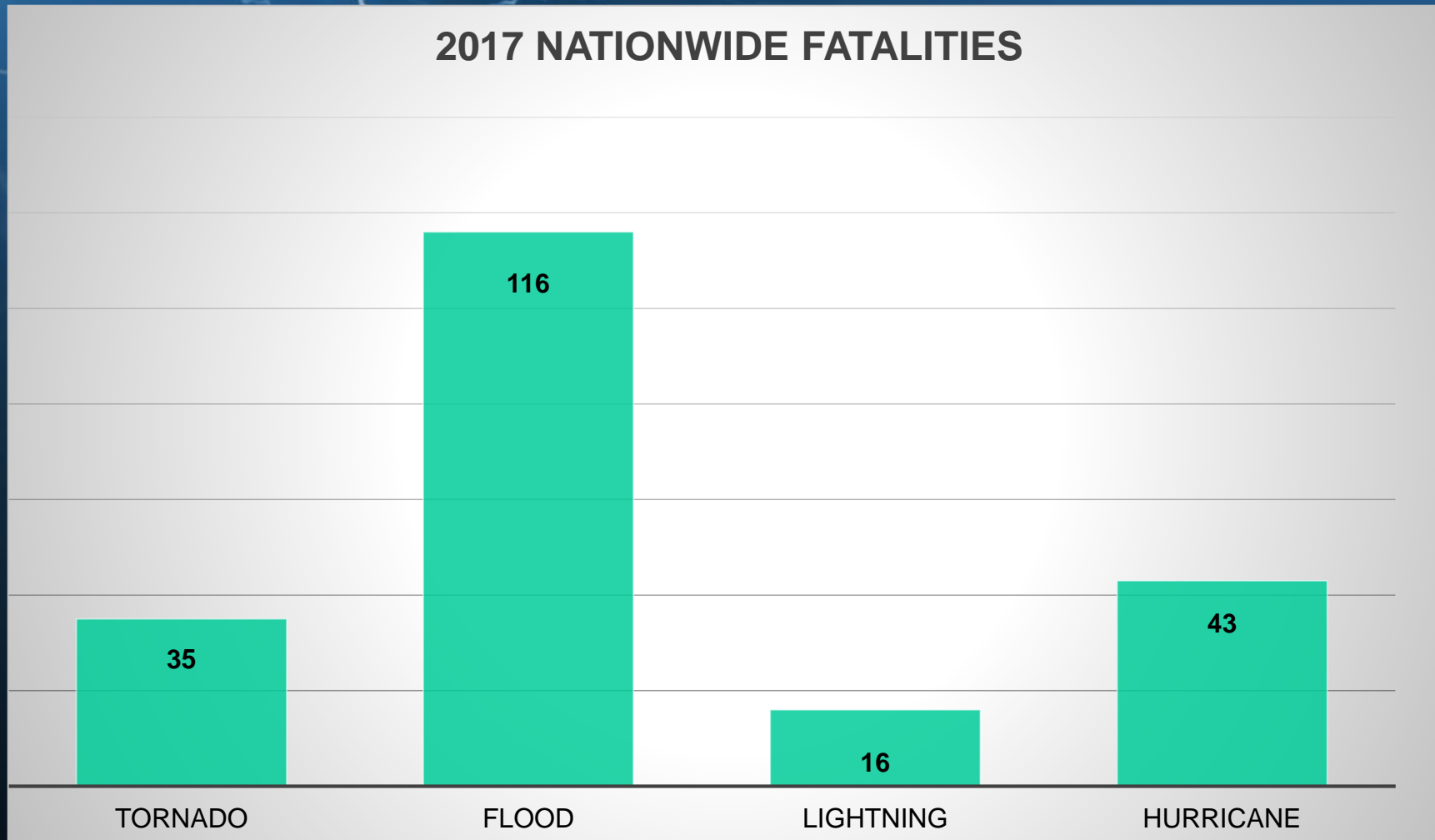
- A) Flooding**
- B) Tornadoes**
- C) Lightning**

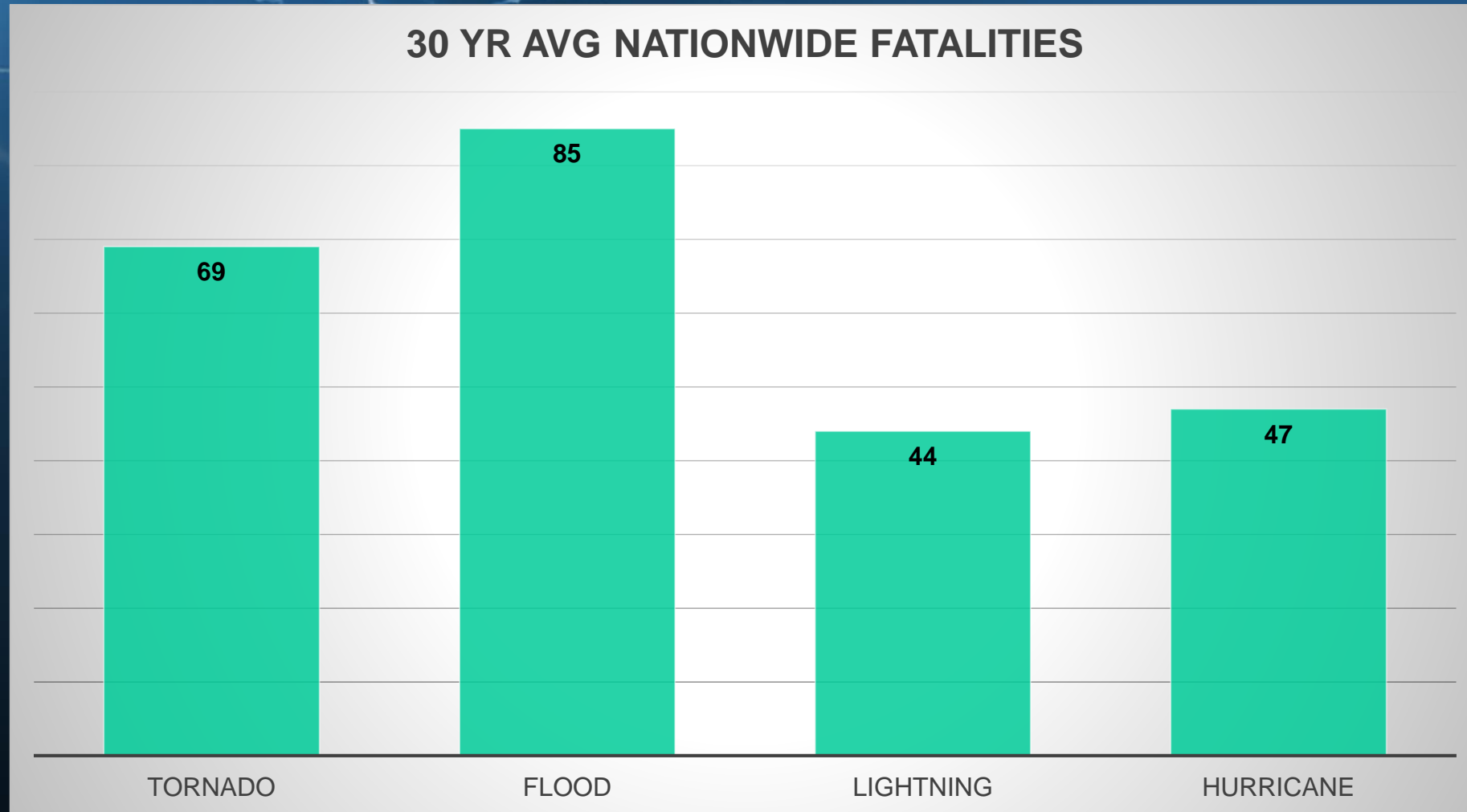
Which weather threat claims the most lives?

A) Flooding

B) Tornadoes

C) Lightning





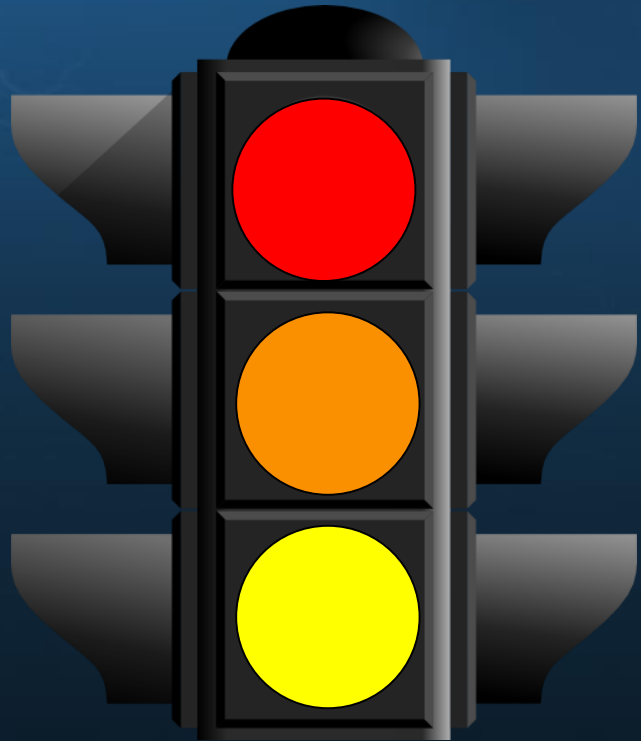




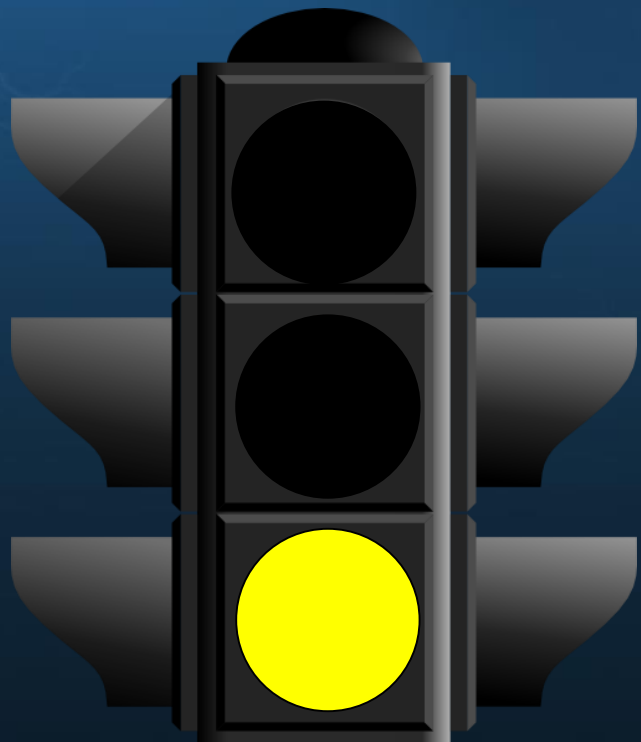
EXTREME Weather Is A **LOW**
Probability

But **HIGH** Risk Event





**READY,
SET,
GO!
SAFETY
PROCESS**



**READY
STEP**



**Storm Prediction Center,
located in the National Weather
Center in Norman, OK
assesses threats several
days in advance**





Understanding Severe Thunderstorm Risk Categories

THUNDERSTORMS (no label)	1 - MARGINAL (MRGL)	2 - SLIGHT (SLGT)	3 - ENHANCED (ENH)	4 - MODERATE (MDT)	5 - HIGH (HIGH)
No severe* thunderstorms expected	Isolated severe thunderstorms possible	Scattered severe storms possible	Numerous severe storms possible	Widespread severe storms likely	Widespread severe storms expected
Lightning/flooding threats exist with <u>all</u> thunderstorms	Limited in duration and/or coverage and/or intensity	Short-lived and/or not widespread, isolated intense storms possible	More persistent and/or widespread, a few intense	Long-lived, widespread and intense	Long-lived, very widespread and particularly intense
					
<ul style="list-style-type: none"> • Winds to 40 mph • Small hail 	<ul style="list-style-type: none"> • Winds 40-60 mph • Hail up to 1" • Low tornado risk 	<ul style="list-style-type: none"> • One or two tornadoes • Reports of strong winds/wind damage • Hail ~1", isolated 2" 	<ul style="list-style-type: none"> • A few tornadoes • Several reports of wind damage • Damaging hail, 1 - 2" 	<ul style="list-style-type: none"> • Strong tornadoes • Widespread wind damage • Destructive hail, 2" + 	<ul style="list-style-type: none"> • Tornado outbreak • Derecho

* NWS defines a severe thunderstorm as measured wind gusts to at least 58 mph, and/or hail to at least one inch in diameter, and/or a tornado. All thunderstorm categories imply lightning and the potential for flooding. Categories are also tied to the probability of a severe weather event within 25 miles of your location.



Severe Weather Info for: **Glendale**
MHP Inc

Severe storms are possible in your area today. Remain alert and stay aware of weather conditions.



**SET
STEP**

A watch means dangerous weather is occurring now, requiring immediate safety action.

A) True

B) False

A watch means dangerous weather is occurring now, requiring immediate safety action.

A) True

B) False

So that you know the difference...



Tornado Watch



Tornado Warning

Watch – Issued
hours before a
possible threat

Warning – Issued
minutes before an
imminent threat

Confusion of those terms
has cost **lives!**

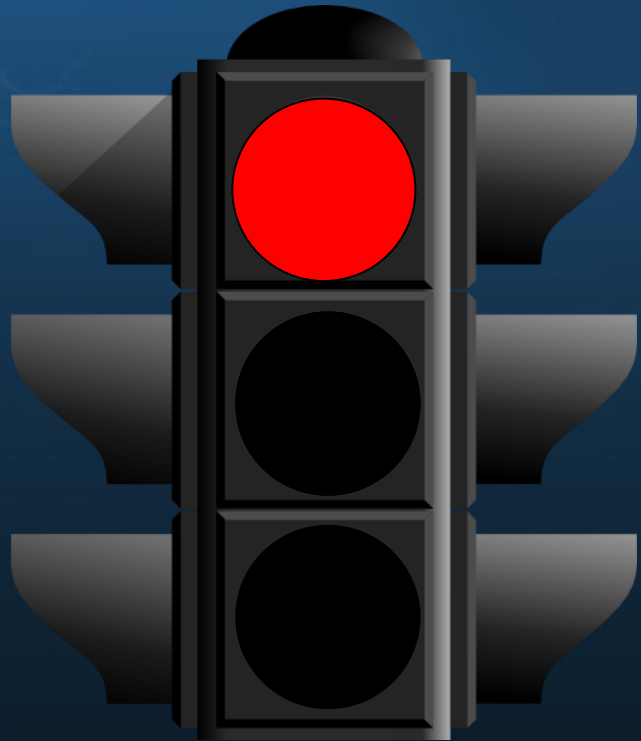
Issued 6 to 8 hours before storms **may** develop.

There is the **potential** for severe weather. It's your "heads up" to prepare.



Tornado Watch for Location:
THA Office

Tornadoes are possible in the next few hours. If a warning is issued, know where to shelter.



**GO
STEP**

11 Years Ago

**Something Very Important Happened
That Few People Know About**

If a tornado warning is issued for Gwinnett county, you should assume it applies to the entire county:

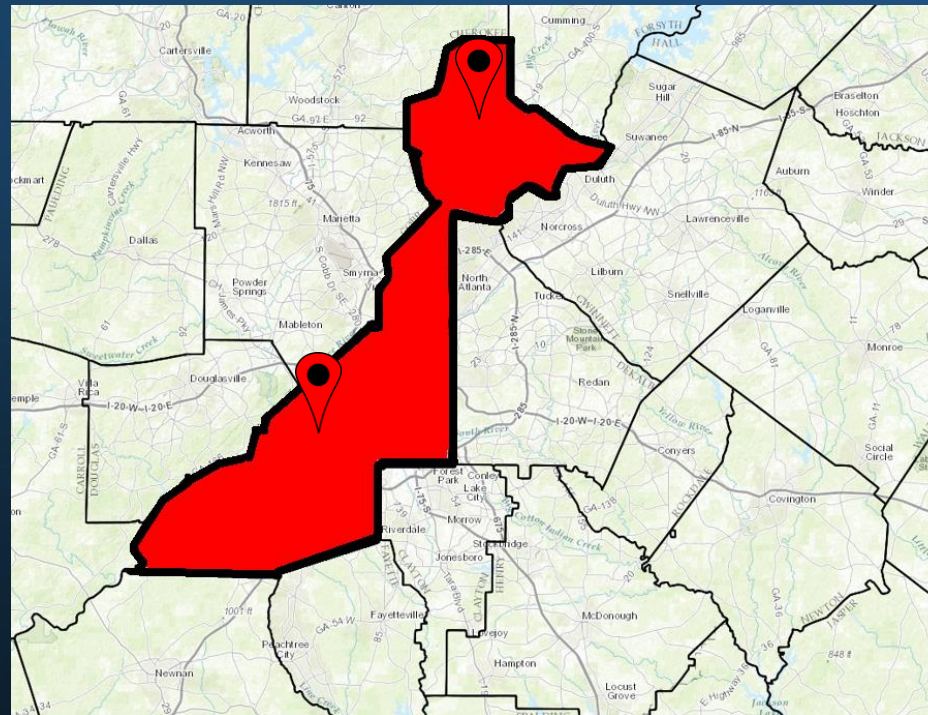
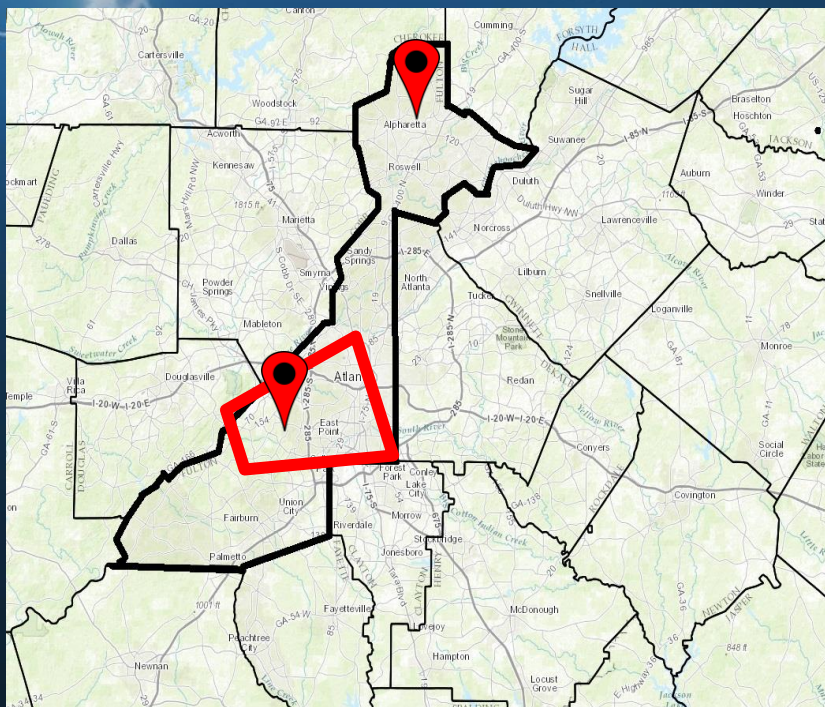
True

False

If a tornado warning is issued for Fulton county, you should assume it applies to the entire county:

True

False

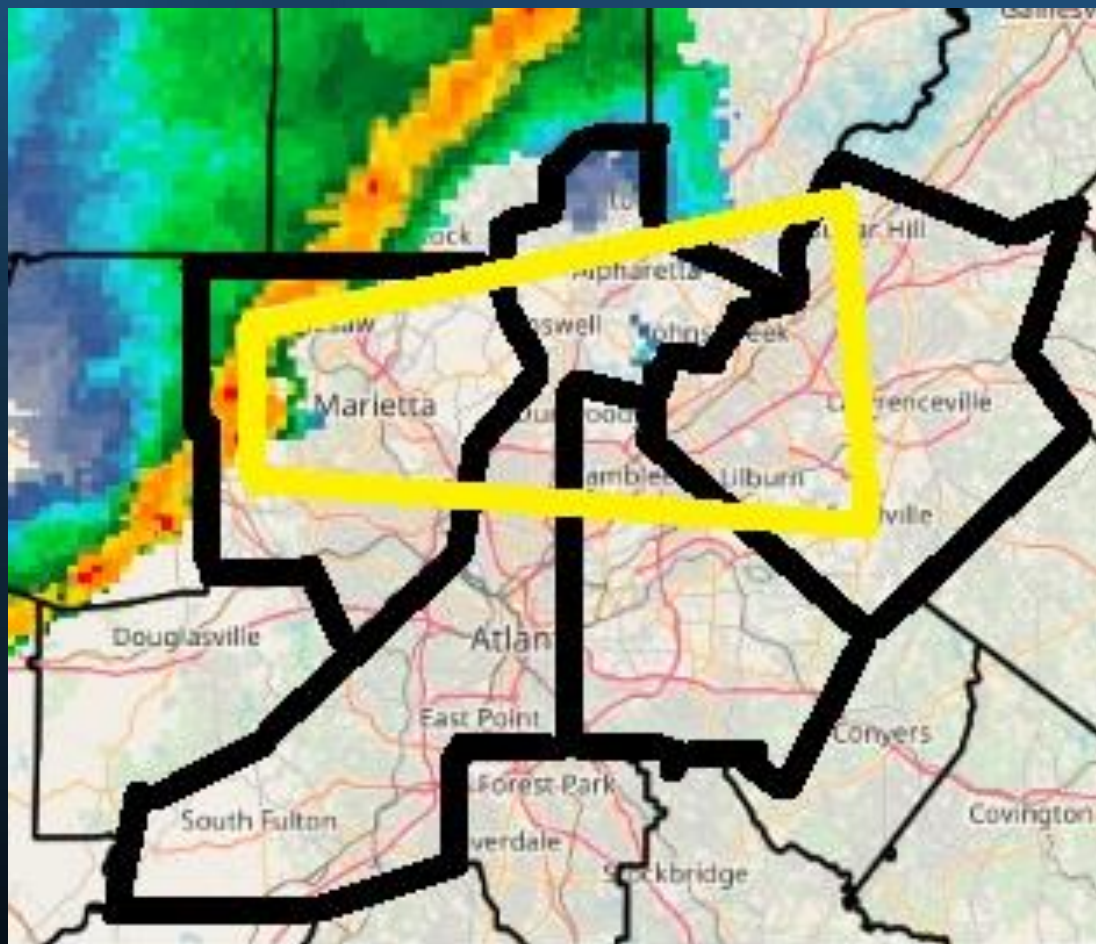


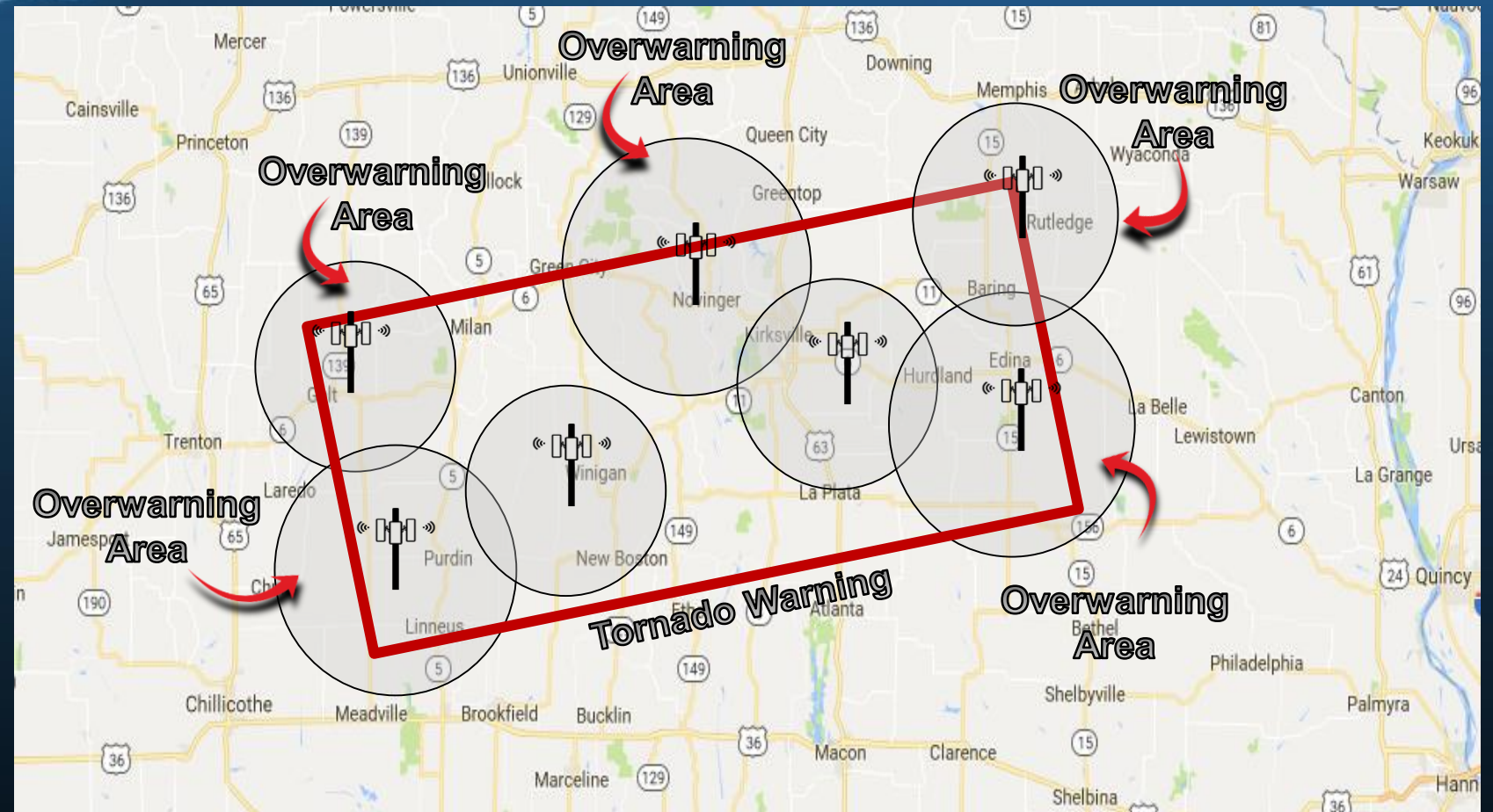
Warnings Are Now
VERY Precise

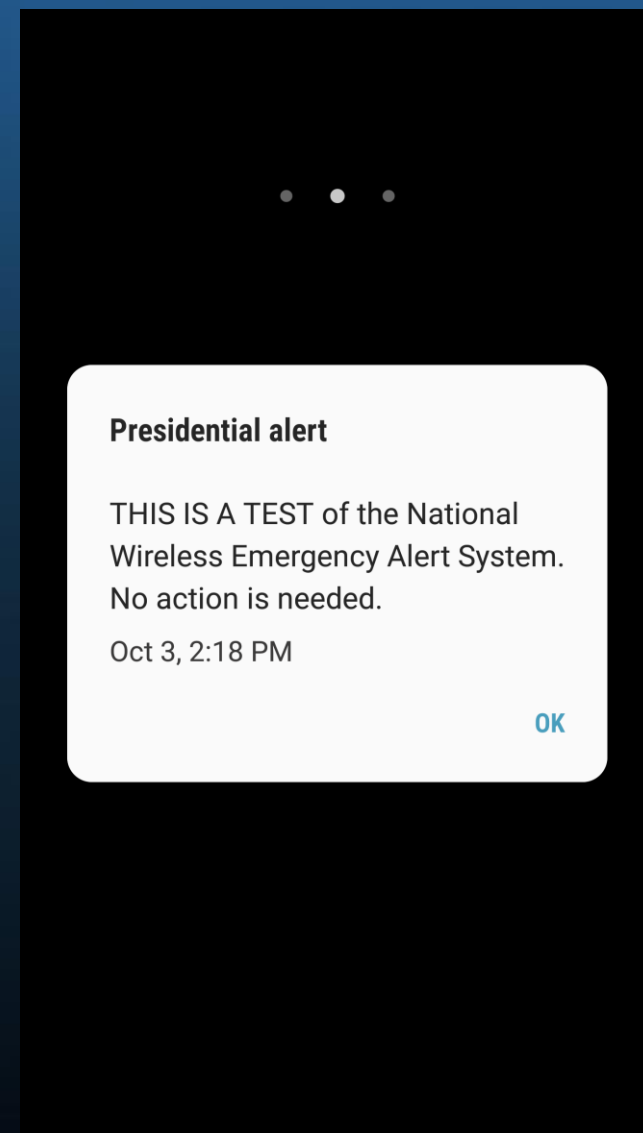
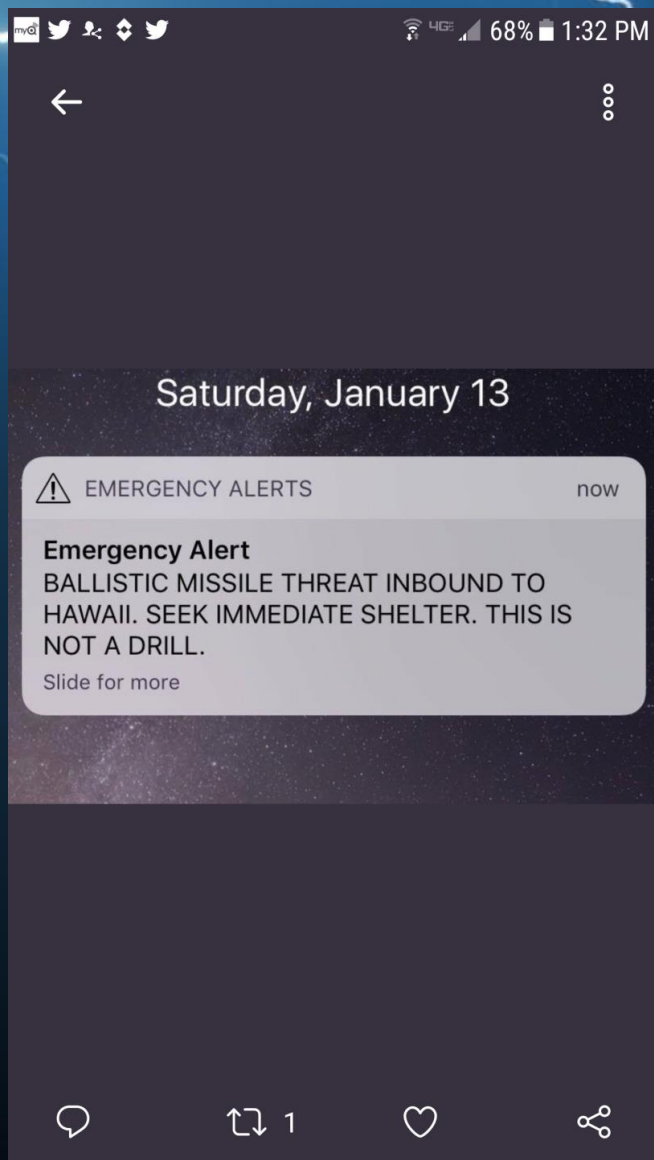
Sirens, Phone Apps &
Weather Radios Alert
The Entire County

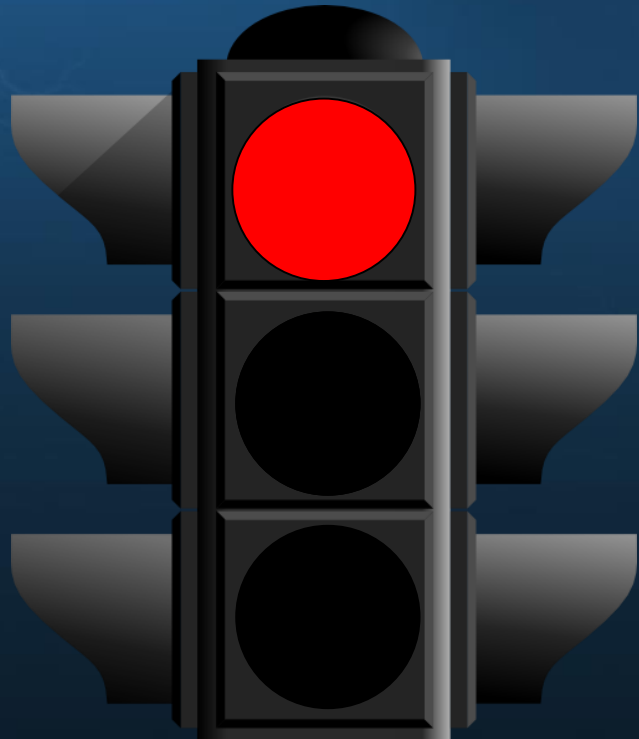


Warning touches parts of 4 counties



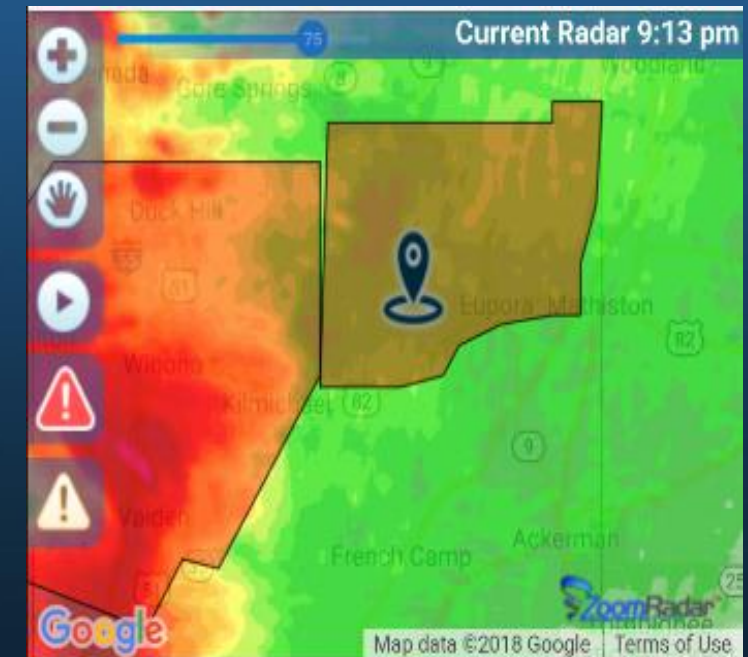






3 Main Types Of Warnings

- Tornado has been sighted or has been detected by radar
- Tornadoes can and do occur **WITHOUT** a watch in effect



Tornado Warning for Location:
Pleasant Grove

TAKE COVER NOW! A tornado warning is in effect for your area.

NOT ALL **TORNADOES** ARE THE SAME



EF0: 65-85 mph



EF1: 86-110 mph



EF2: 111-135 mph



EF3: 135-165 mph



EF4: 166-200 mph



EF5: >200 mph

When the NWS issues a tornado warning, they know how strong it is.

True

False

When the NWS issues a tornado warning, they know how strong it is.

True

False

TORNADO WARNING FOR...
SOUTHEASTERN TALBOT COUNTY IN WEST CENTRAL GEORGIA...
NORTHWESTERN TAYLOR COUNTY IN WEST CENTRAL GEORGIA...

UNTIL 1130 AM EST

AT 1103 AM EST, A SEVERE THUNDERSTORM CAPABLE OF PRODUCING A
TORNADO WAS LOCATED OVER GENEVA, OR NEAR TALBOTTON, MOVING EAST
AT 45 MPH.

HAZARD...TORNADO.

SOURCE...RADAR INDICATED ROTATION.

IMPACT...FLYING DEBRIS WILL BE DANGEROUS TO THOSE CAUGHT WITHOUT
SHELTER. MOBILE HOMES WILL BE DAMAGED OR DESTROYED.
DAMAGE TO ROOFS, WINDOWS, AND VEHICLES WILL OCCUR. TREE
DAMAGE IS LIKELY.

* LOCATIONS IMPACTED INCLUDE...
BUTLER, JUNCTION CITY, GENEVA, HOWARD, BALDWINVILLE, WESLEY CHURCH
AND FICKLING MILL.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

TAKE COVER NOW! MOVE TO A BASEMENT OR AN INTERIOR ROOM ON THE LOWEST
FLOOR OF A STURDY BUILDING. AVOID WINDOWS. IF YOU ARE OUTDOORS, IN A
MOBILE HOME, OR IN A VEHICLE, MOVE TO THE CLOSEST SUBSTANTIAL SHELTER
AND PROTECT YOURSELF FROM FLYING DEBRIS.

..A TORNADO WARNING REMAINS IN EFFECT UNTIL 330 AM CST FOR NORTHEASTERN HOLMES COUNTY...

At 259 AM CST, a **confirmed tornado** was located near Bonifay, moving northeast at 30 mph.

HAZARD...Damaging tornado.

SOURCE...Radar confirmed tornado.

IMPACT...Flying debris will be dangerous to those caught without shelter. Mobile homes will be damaged or destroyed. Damage to roofs, windows, and vehicles will occur. Tree damage is likely.

Locations impacted include...

Caryville, Esto, Westville, Noma, Black, Miller Crossroads, Bethlehem, Tendil Crossing, Gritney, Holland Crossroads, Ards Crossroads, Cobb Crossroads and Noma Junction.

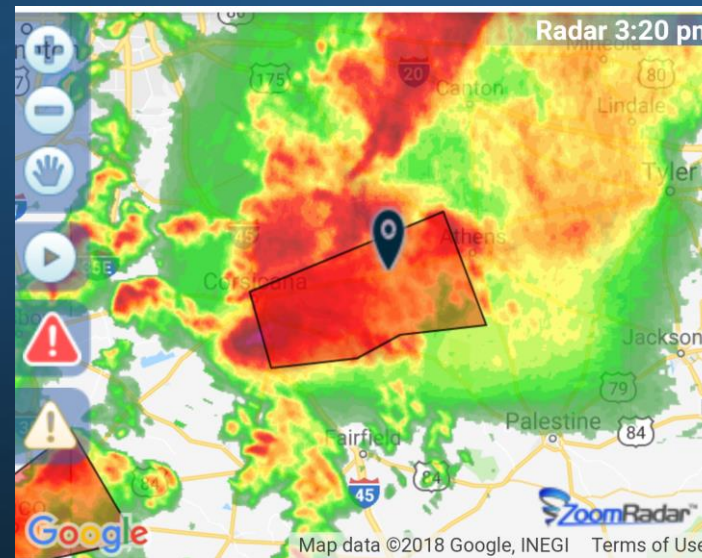
TORNADO...OBSERVED

HAIL... < .75IN

INSTRUCTIONS:

To repeat, a tornado is on the ground. TAKE COVER NOW! Move to a basement or an interior room on the lowest floor of a sturdy building. Avoid windows. If you are outdoors, in a mobile home, or in a vehicle, move to the closest substantial shelter and protect yourself from flying debris.

Tornado has been confirmed!



**Confirmed Tornado Warning for
Location:
Pleasant Grove**

**TAKE COVER NOW! A tornado has been
CONFIRMED in your area.**

**BULLETIN - EAS ACTIVATION
REQUESTED**

**For a thunderstorm to be classified as severe,
the winds need to be at least:**

A) 38 mph

B) 58 mph

C) 70 mph

For a thunderstorm to be classified as severe, the winds need to be at least:

A) 38 mph

B) 58 mph

C) 70 mph

- Winds > 58 mph
- Hail 1" or greater
- Storms can and do occur **WITHOUT** a watch in effect



Severe Thunderstorm Warning for

Location:

GMHA Office

TAKE COVER NOW! Hail and damaging winds happening.

**SEVERE
THUNDERSTORMS
CAN ALSO
PRODUCE
TORNADOES EVEN
IF **NO** TORNADO
WARNING IS ISSUED**



SEVERE THUNDERSTORM WARNING

BULLETIN - IMMEDIATE BROADCAST REQUESTED

SEVERE THUNDERSTORM WARNING

NATIONAL WEATHER SERVICE PEACHTREE CITY GA
907 PM EST WED NOV 18 2015

THE NATIONAL WEATHER SERVICE IN PEACHTREE CITY HAS ISSUED A

* SEVERE THUNDERSTORM WARNING FOR...
NORTHEASTERN HANCOCK COUNTY IN EAST CENTRAL GEORGIA...
NORTHWESTERN WARREN COUNTY IN EAST CENTRAL GEORGIA...
TALIAFERRO COUNTY IN EAST CENTRAL GEORGIA...

* UNTIL 945 PM EST

* AT 907 PM EST...A SEVERE THUNDERSTORM WAS CENTERED 5 MILES NORTHWEST
OF SPARTA...MOVING NORTHEAST AT 45 MPH.

INTENSE THUNDERSTORM LINES CAN PRODUCE BRIEF TORNADES AND WIDESPREAD
SIGNIFICANT WIND DAMAGE. ALTHOUGH A TORNADO IS NOT IMMEDIATELY
LIKELY...IT IS BEST TO MOVE TO AN INTERIOR ROOM ON THE LOWEST FLOOR
OF A BUILDING. THIS STORM MAY CAUSE SERIOUS INJURY AND SIGNIFICANT
PROPERTY DAMAGE.

INTENSE THUNDERSTORM LINES CAN PRODUCE BRIEF TORNADES AND WIDESPREAD
SIGNIFICANT WIND DAMAGE. ALTHOUGH A TORNADO IS NOT IMMEDIATELY
LIKELY...IT IS BEST TO MOVE TO AN INTERIOR ROOM ON THE LOWEST FLOOR
OF A BUILDING. THIS STORM MAY CAUSE SERIOUS INJURY AND SIGNIFICANT
PROPERTY DAMAGE.

- Winds > 70 mph
- Golf-ball sized hail



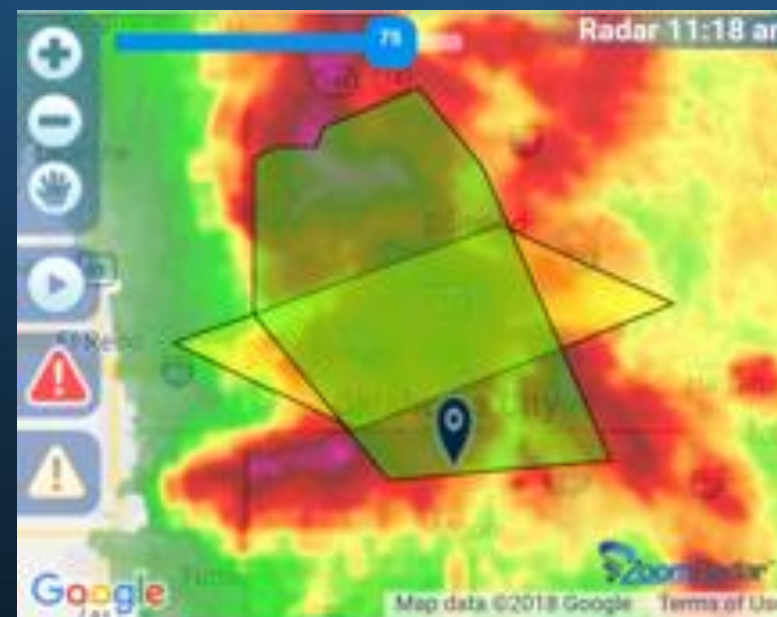
Extreme Thunderstorm Warning for

Location:

MHAO Office

TAKE COVER NOW! Hail at least golf-ball size and/or hurricane force winds happening

Confirmed flash flooding is occurring.



Flash Flood Warning for Location:

MHAO Office

GET TO HIGHER GROUND NOW!

Excessive rainfall is causing flooding.



- A) I live where disasters are possible any moment**
- B) No, disasters are infrequent, so I don't consider them**
- C) Local government and the media incite fear, so many ignore the threats**

Have you personally experienced a disaster?

A) Yes, I have

B) No, but close family/friends have

C) My town/county has and has and it impacted my life.

I feel confident government will solve my post-disaster challenges:

- A) Strongly agree**
- B) Agree slightly**
- C) Neither agree or disagree**
- D) Slightly disagree**
- E) Strongly disagree**

Are you confident in your community's plan?

A) Yes we have a great plan and test it regularly

B) We have a plan on paper, but never test it

C) We have a plan in mind, but its not written down

D) I don't have the time/expertise to organize it

“If you don’t have a plan, you are part of someone else’s plan, and in that plan you are not the priority.”

**Brad Huffines, FEMA EMI Instructor of
Emergency Management and
Emergency Public Information**





“No plan survives the first shot from the enemy.”

Helmuth Von Moltke

*It won't happen to me...
is NOT a plan!*

**Gov't mass-notification systems
Local and Federal**

Smart-phone 'Wild Wild West'

Social Media inaccuracies / click bait





Written and posted communications

Community meetings and briefings

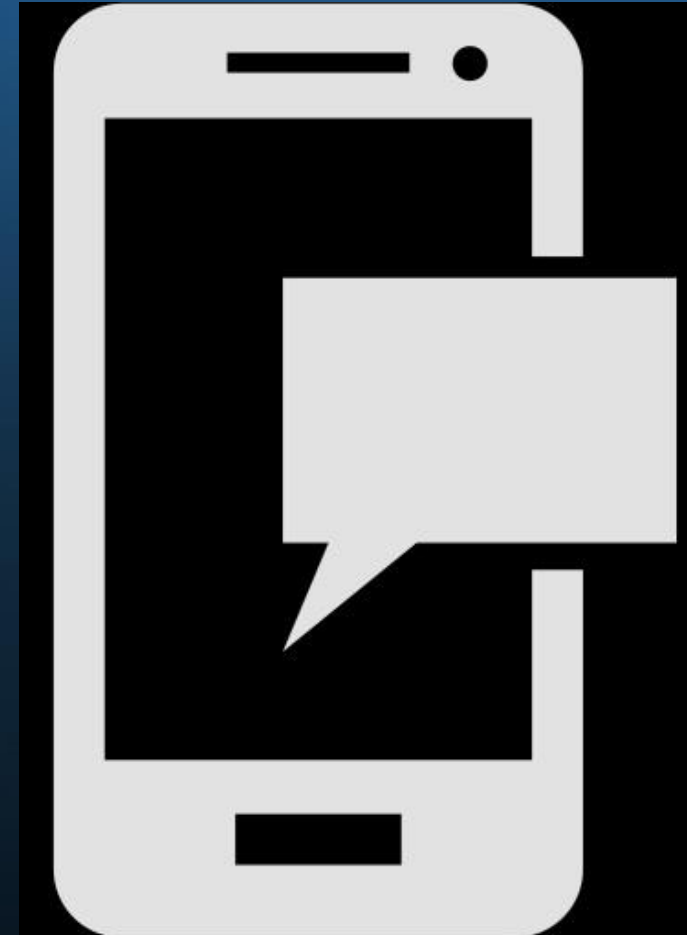
Neighbor to neighbor communications

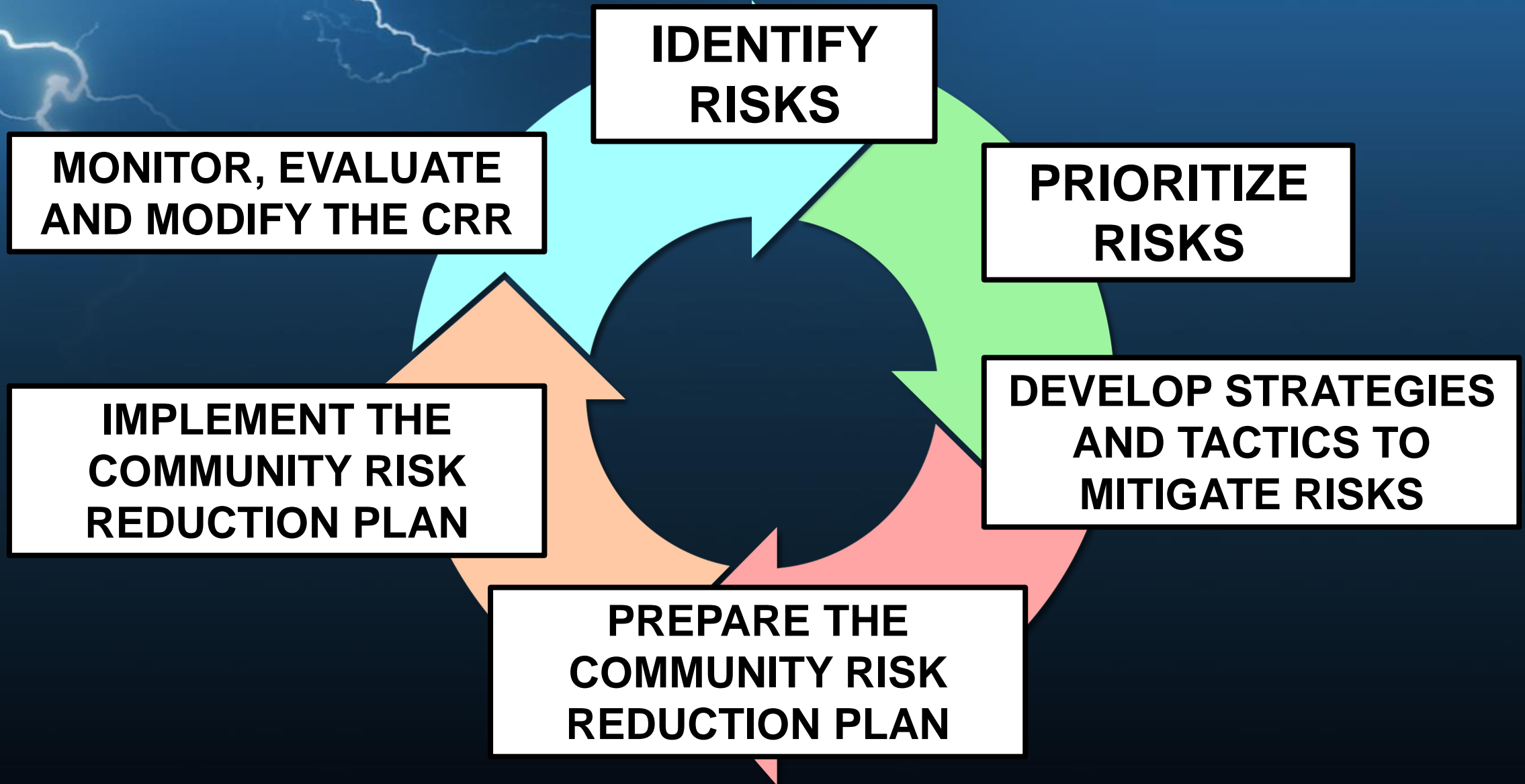
Timely phone calls

Text messages

Email from trusted sources

Phone apps from trusted/tested sources







Make a new plan if there isn't one

Compare your existing plan with what you learned from the wheel

Plan to re-evaluate the plan annually

- **Precise warnings for exact locations**
- **Instant notifications**
- **Urgent calls for life-threatening emergencies**
- **Customizable messages**



THANK YOU!

Learn more at:
hazardcallcommunity.com

Brad Huffines

Chief Meteorologist

VP of Risk Communication

bradh@hazardcall.com

256-682-9217

Gene Norman

Senior Meteorologist

VP of Marketing

gene.norman@hazardcall.com

770-376-0497