



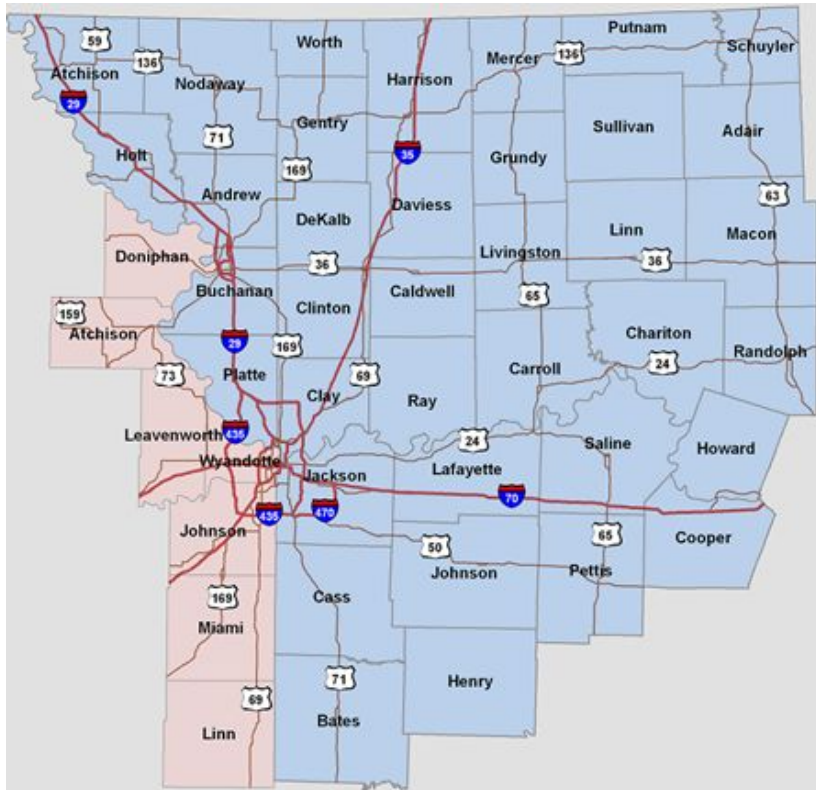
# Summer and Spring Preparedness

National Weather Service - Kansas City  
Jonathan Kurtz | Warning Coordination Meteorologist

U.S. Department of Commerce  
National Oceanic and Atmospheric Administration  
National Weather Service

# National Weather Service | Background

**Our Mission** Provide weather, water and climate data, forecasts, warnings, and impact-based decision support services for the protection of life and property and the enhancement of the national economy.



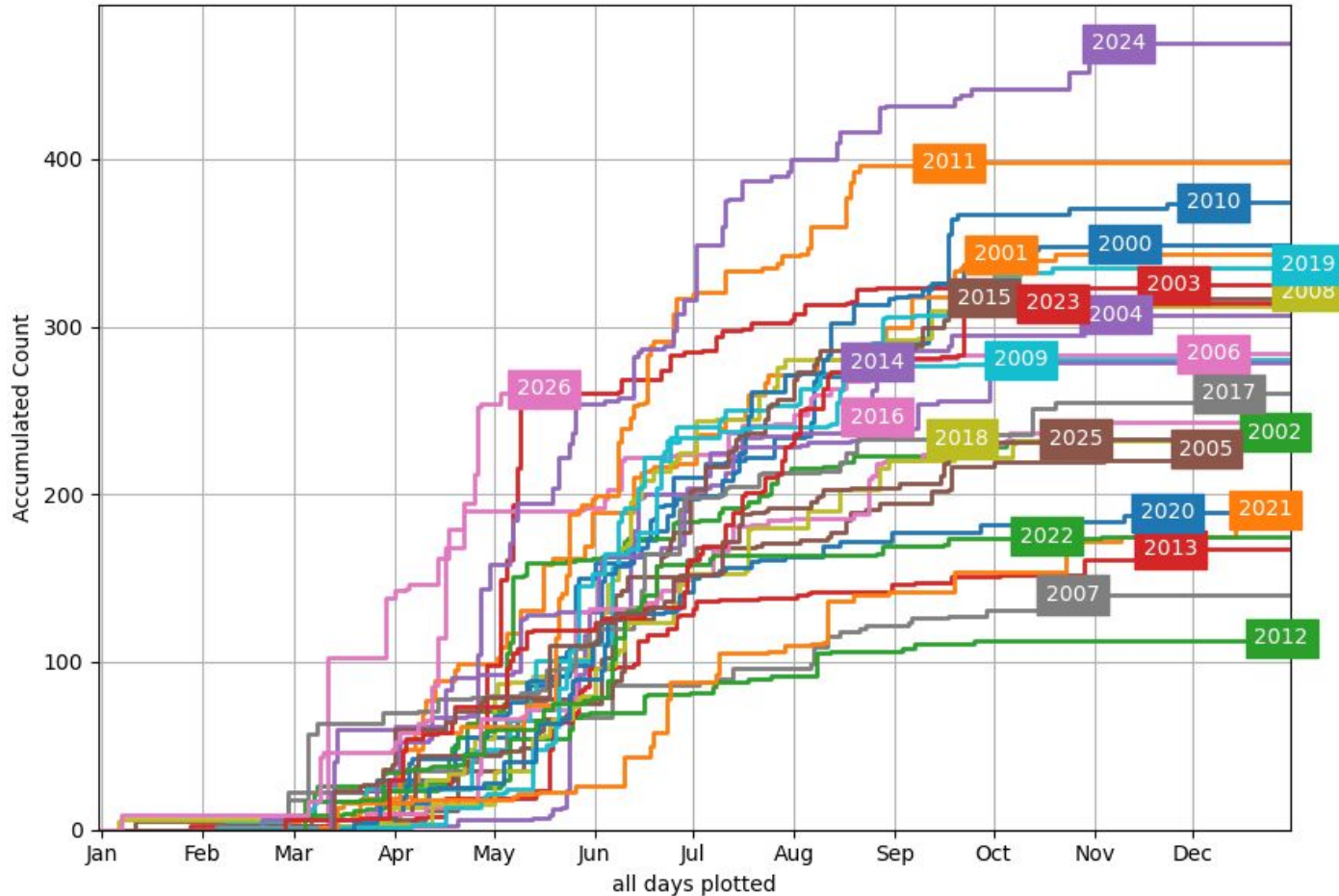
**Our Office** The NWS has had a presence in Kansas City for nearly 140 years. Our office employs a highly skilled staff that works 24/7 to serve our fellow citizens. We are responsible for 37 counties in Missouri and 7 counties in Kansas.



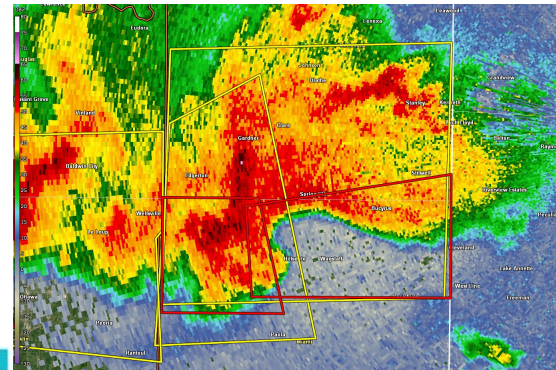
# 2026 Severe Weather Season... So Far



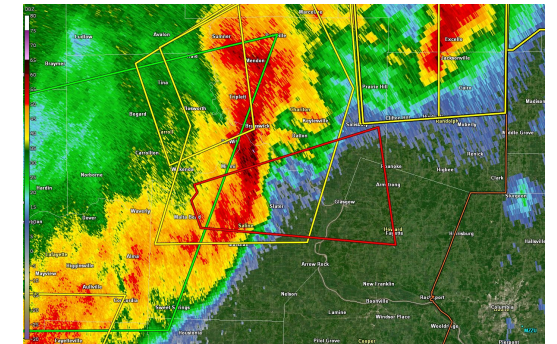
NWS WFO: Kansas City/Pleasant Hill (EAX)  
Severe Thunderstorm + Tornado Warning Count



Generated at 13 May 2026 10:54 AM CDT in 0.78s

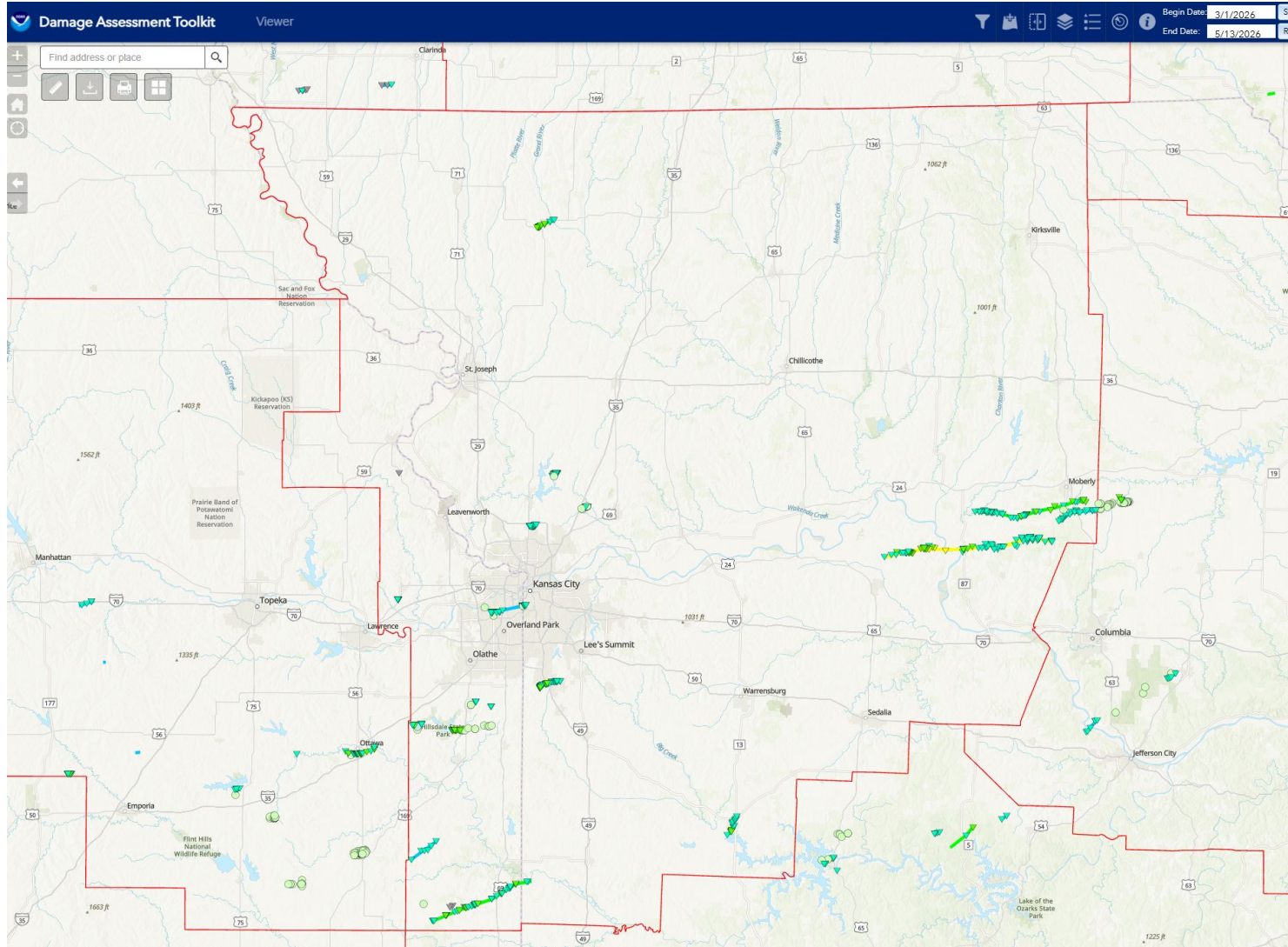


2000 (349)	2014 (279)
2001 (343)	2015 (317)
2002 (237)	2016 (246)
2003 (325)	2017 (260)
2004 (307)	2018 (233)
2005 (227)	2019 (337)
2006 (284)	2020 (189)
2007 (140)	2021 (191)
2008 (321)	2022 (175)
2009 (280)	2023 (314)
2010 (374)	2024 (469)
2011 (398)	2025 (233)
2012 (114)	2026 (263)
2013 (167)	



IEM Autoplot App #44

# 2026 Severe Weather Season... So Far



## 20 Confirmed Tornadoes in our County Warning Area.

- EF-2 Tornadoes (111-135 mph)
  - Hillsdale, KS (4/13)
  - Slater, MO (4/27)
- Eight EF-1 Tornadoes (86-110 mph)
  - Belton, MO (4/17)
  - Randolph Co. (4/27)
  - Linn Co. KS (4/13)



# NWS Severe Weather Operations

- **Day(s) Before Severe Weather:**

- Local NWS Kansas City office - What are we doing?
  - NWS Storm Prediction Center - How does this national center fit in?

- **Day of Severe Weather**

- Staffing of our Local NWS Office
- Watches and Warnings - What is the difference??
  - Watch Collaboration Process
- How we issue Warnings and take in Reports

# NWS Severe Weather Operations - Day(s) Before

- **Messaging and Forecasts Leading up to Severe Weather**

- Decision Support Briefing Packets on our web page, email briefings to core partners, video briefings, one to one phone briefings, social media posts.

[4-27-2026 AM Update] Additional Storm Chances This Afternoon + Ongoing Water Issues

◆ Add to Calendar

nws.kansascity@noaa.gov

Good Morning!

**Bottom Line Up Front:** There are additional chances for storms this afternoon and evening, but over a more limited area near a line from Butler, MO to Sedalia, to Moberly and areas to the east. Storms are expected to be *tuned to the weather as shifts to this area may occur*. Additionally, existing overland flooding and local streams are expected to gradually improve today. As water continues to drain into the river, additional river flooding to be possible.

**What:** Storms again possible this afternoon, including all hazards (large hail, damaging winds, and a few tornadoes) possible.

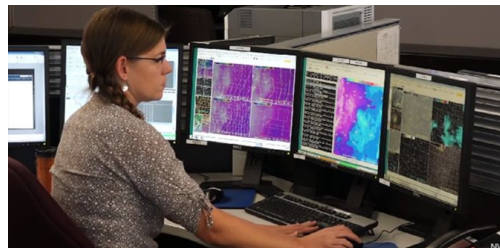
**Where:** Mainly to the S and E of the KC Metro. Currently anticipated for storms to initiate this afternoon near a SW to NE line from Butler, MO to Sedalia, to Moberly and traveling E/NE from there.

**When:** Current timing suggests after 2pm and into the early evening as storms travel to the E and NE.

For additional details regarding these storm threats, the current briefing packet has been attached. The most up to date briefing packet can always be found at <https://www.weather.gov/kansascity>

If you have any questions, please reach out to our office at 1-800-438-0596

NWS Kansas City @NWSKansasCity · 7h  
Another round of strong to severe storms is possible (15-30%) Friday afternoon and evening with a Slight (Level 2 of 5) Risk across central MO. The main hazards are large hail and damaging wind gusts. #nowx #kcswx



**One More Severe Storm Opportunity Friday**  
Setting Up as the **Greatest Potential of Recent Severe Storm Chances**

**Key Messages:**

- Severe Storms Increasingly Likely Friday**
  - SPC **Enhanced Risk** Friday afternoon into evening
  - See Slide 2 for hail, wind, and tornado probabilities
  - Timing** likely similar to Wednesday, early/mid afternoon to evening
  - All hazards possible:** large hail, damaging winds, tornadoes
    - Large hail most likely with initial storms, then transitioning more toward damaging winds.
    - A couple/few tornadoes may be possible with individual storms and within lines of storms.
- Some Water Issues Remain Possible Friday**
  - Ground remains relatively saturated from recent rains.
  - Primarily minor river flooding and localized flash flooding primarily possible Friday. Especially any areas that do see multiple storms pass through.
  - WPC Marginal to Slight Risk for Flooding

**SPC Day 2 Outlook - Friday**

**Severe Weather Probabilities Friday**  
**Greatest Peak Potential of Recent Severe Storm Chances**

**Tornado Probability**  
% Chance of a Tornado Within 25 Miles of a Point

2-4	5-9	10-14	15-29	30-44	45-59	>60
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**Damaging Wind Probability**  
% Chance of Wind ≥ 58 mph within 25 Miles of a Point

5-14	15-29	30-44	45-59	>60
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**Severe Hail Probability**  
% Chance of Hail ≥ 1" within 25 Miles of a Point

5-14	15-29	30-44	45-59	>60
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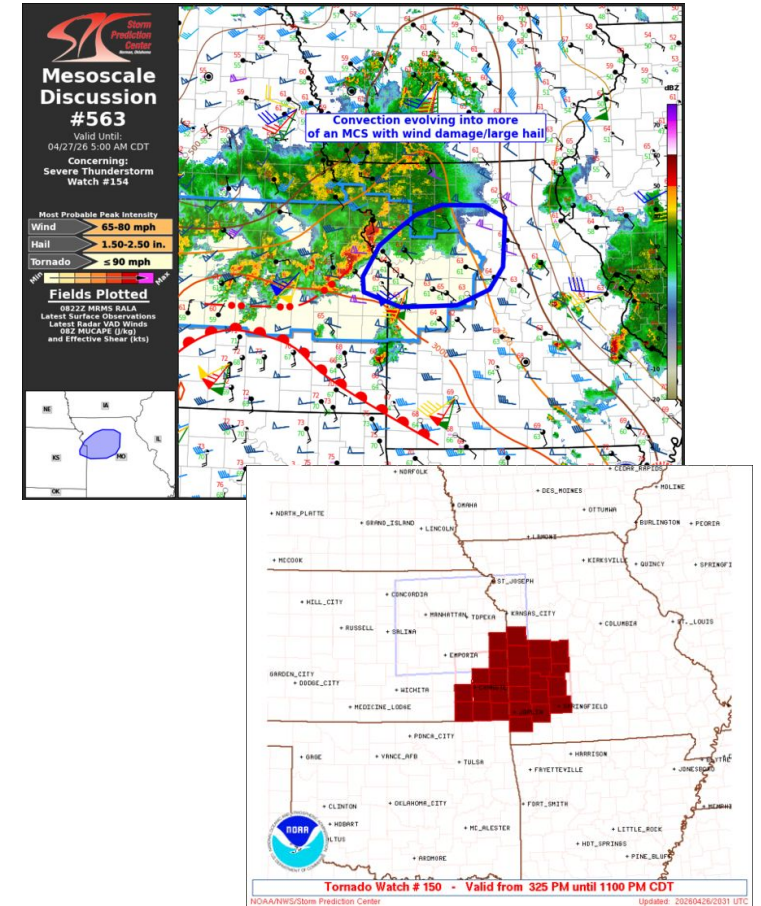
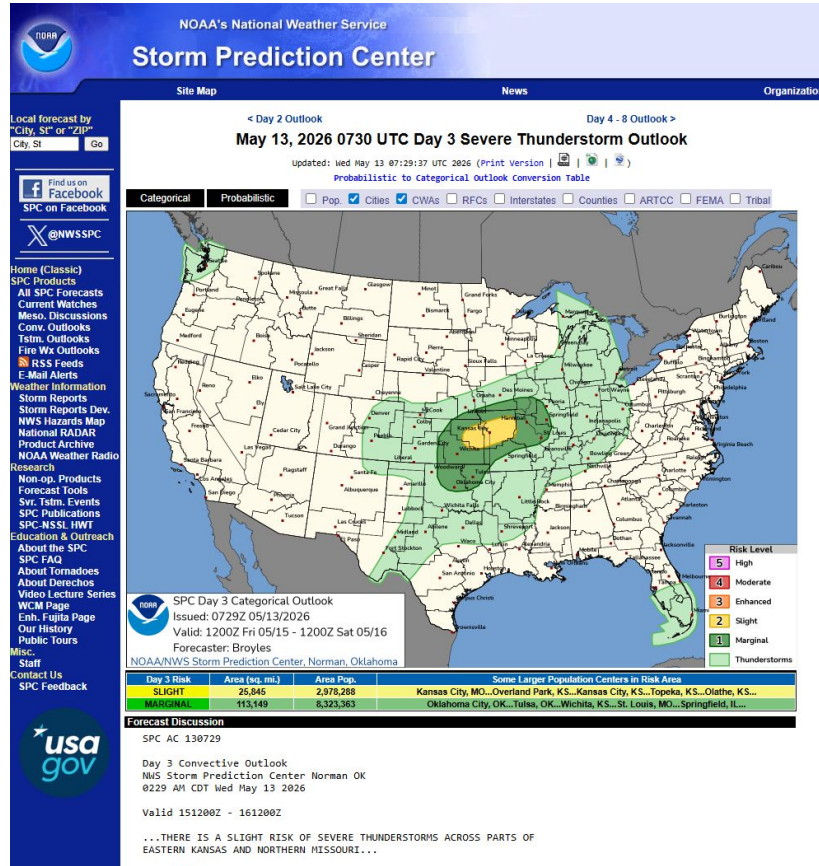
**Reasonable Tornado Strength**  
Up to EF-3

**Reasonable Max Wind Speeds**  
75 to 85 mph

**Reasonable Largest Hail**  
2" to 3.5" diameter







# NWS Severe Weather Operations - Day(s) Before

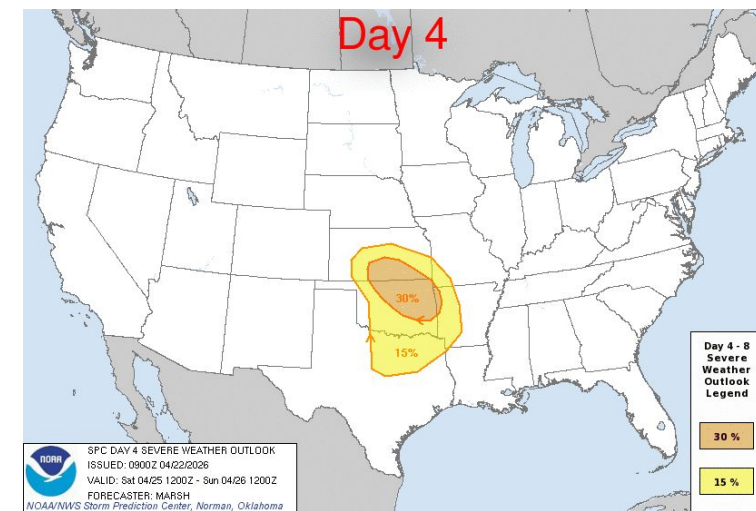
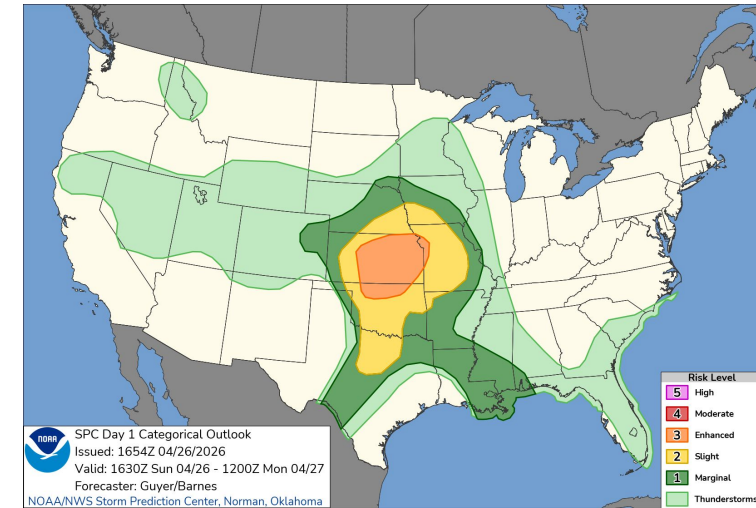
- NWS Storm Prediction Center (SPC)
  - Severe Weather Outlooks and Watch Coordination Responsibility - Partner to Local NWS Offices



# NWS Severe Weather Operations - Day(s) Before

- **NWS Storm Prediction Center (SPC) - Severe Weather Outlooks**
  - Days 1, 2, and 3, with extended outlooks for Days 4-8

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

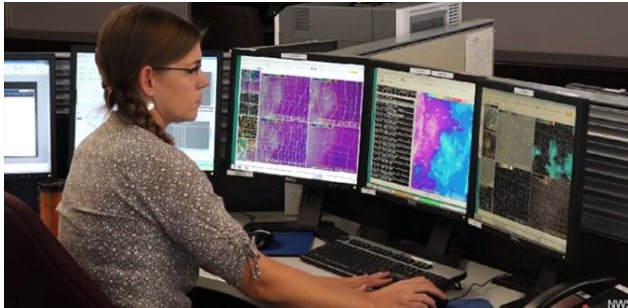


# NWS Severe Weather Operations - Day Of

- **Surge Response of forecasters**

- “Routine” 24/7 Weather Watch: 1 to 2 Meteorologists in our office.
- “Severe” Weather Operations? 4 to 8 Meteorologists, depends on workload

Warning Forecaster Support



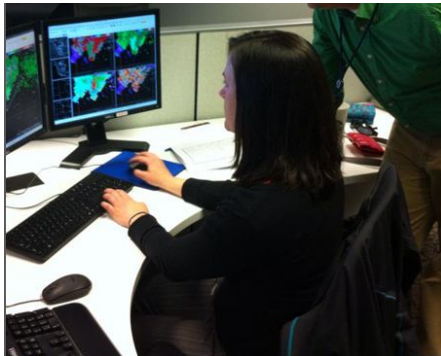
Forecaster



Coordinator



Hydrologic Forecaster



Warning Forecasters



Communicator



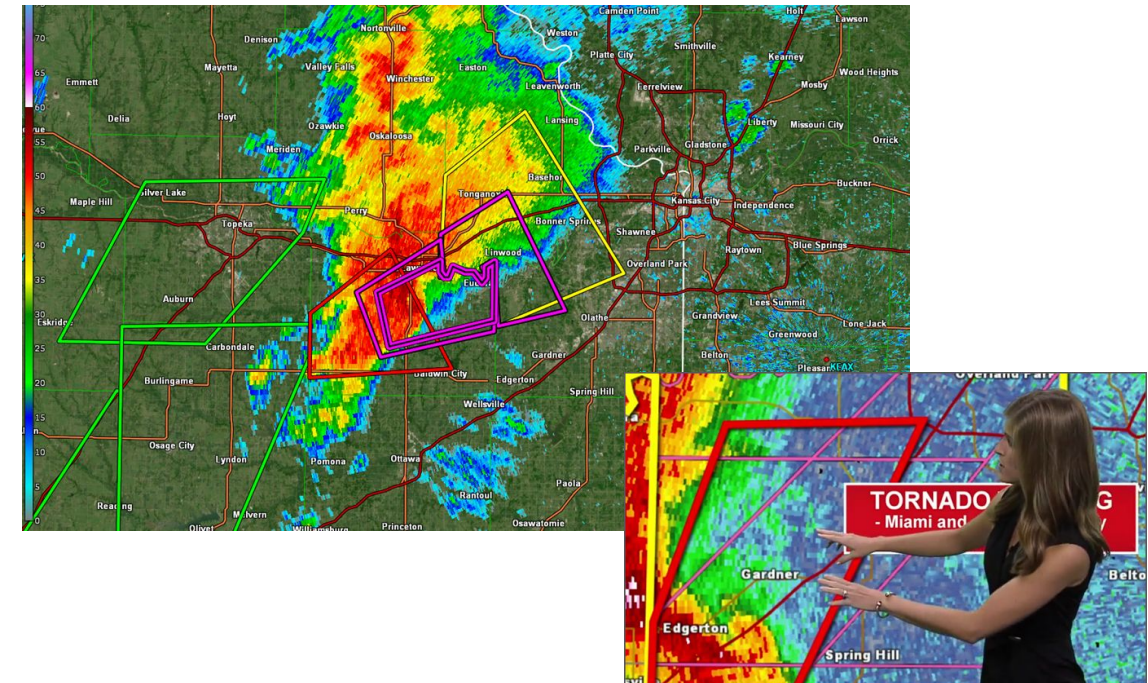
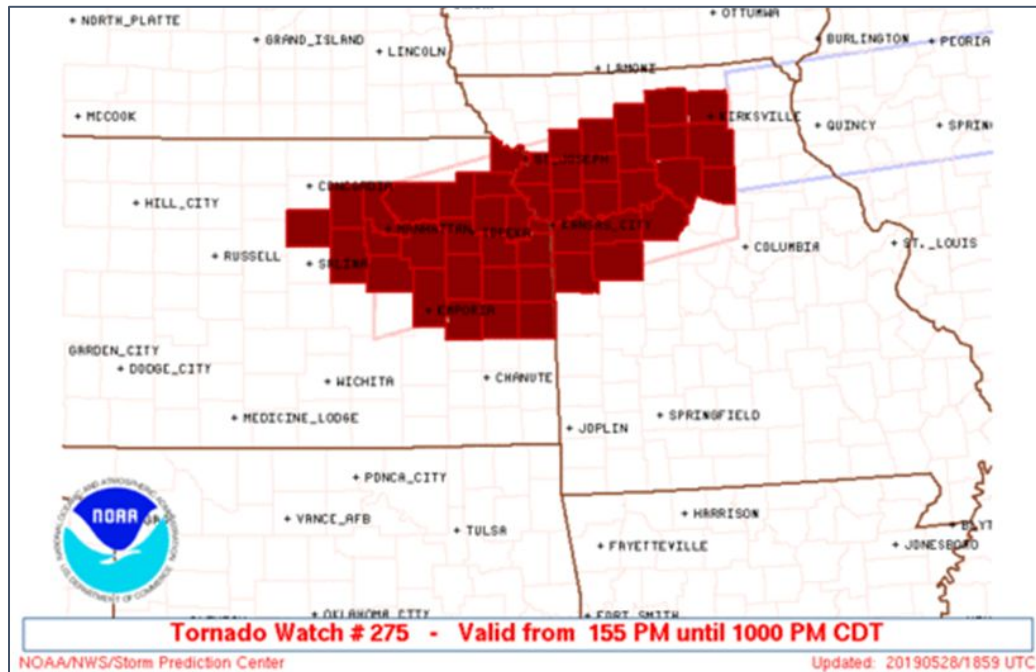
# Watches and Warnings... What is the Difference?

- **A Watch Means...**

- Severe weather is POSSIBLE
- Stay alert and maintain awareness of the weather

- **A Warning Means...**

- Severe weather is IMMINENT or OCCURRING
- Take Shelter Immediately



# Watches and Warnings... What is the Difference?

- **A Taco Watch Means...**

- The ingredients exist for Tacos
- There is a potential for Tacos



- **A Taco Warning Means...**

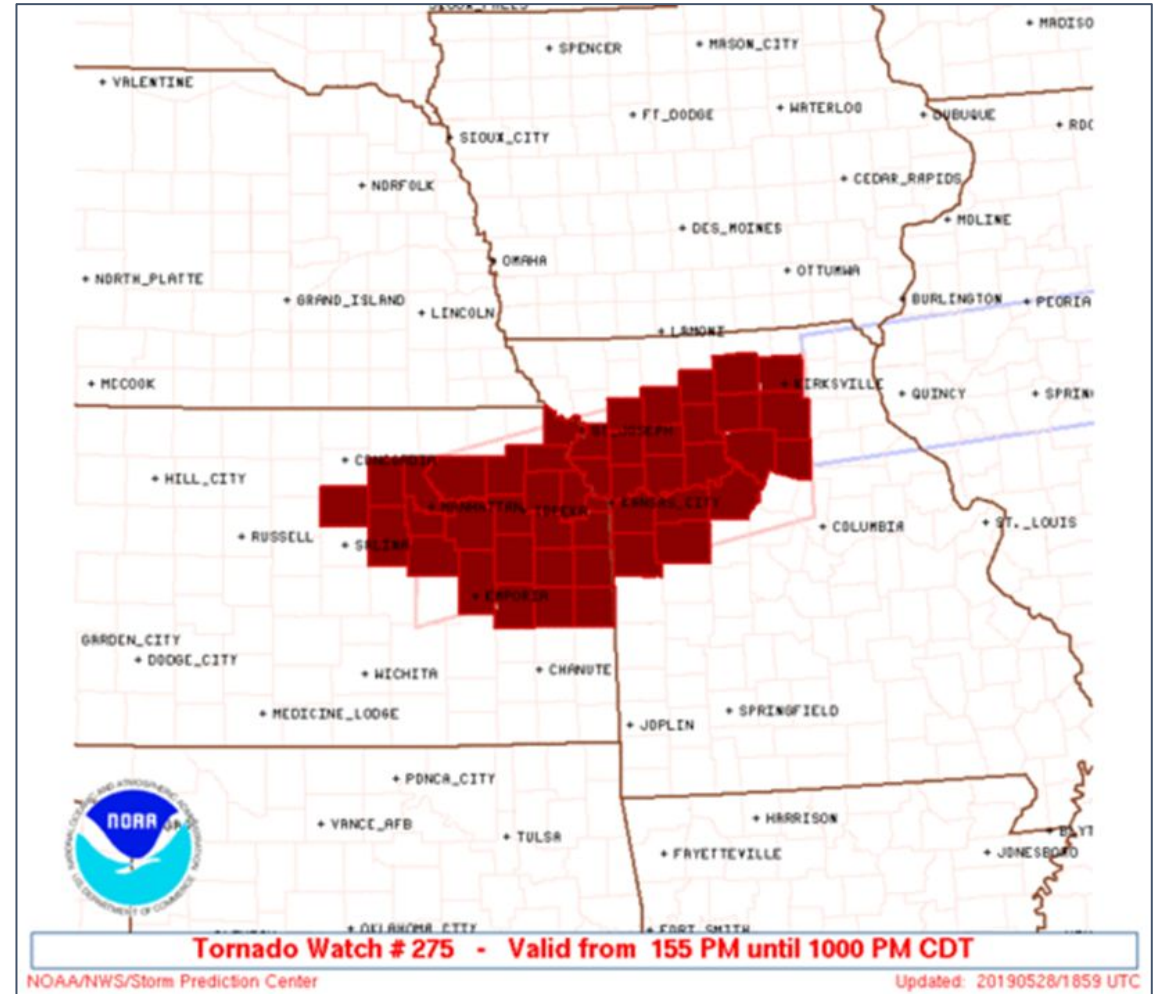
- The tacos are assembled
- Eat the Tacos



# Watches and Warnings... What is the Difference?

## ● Watches

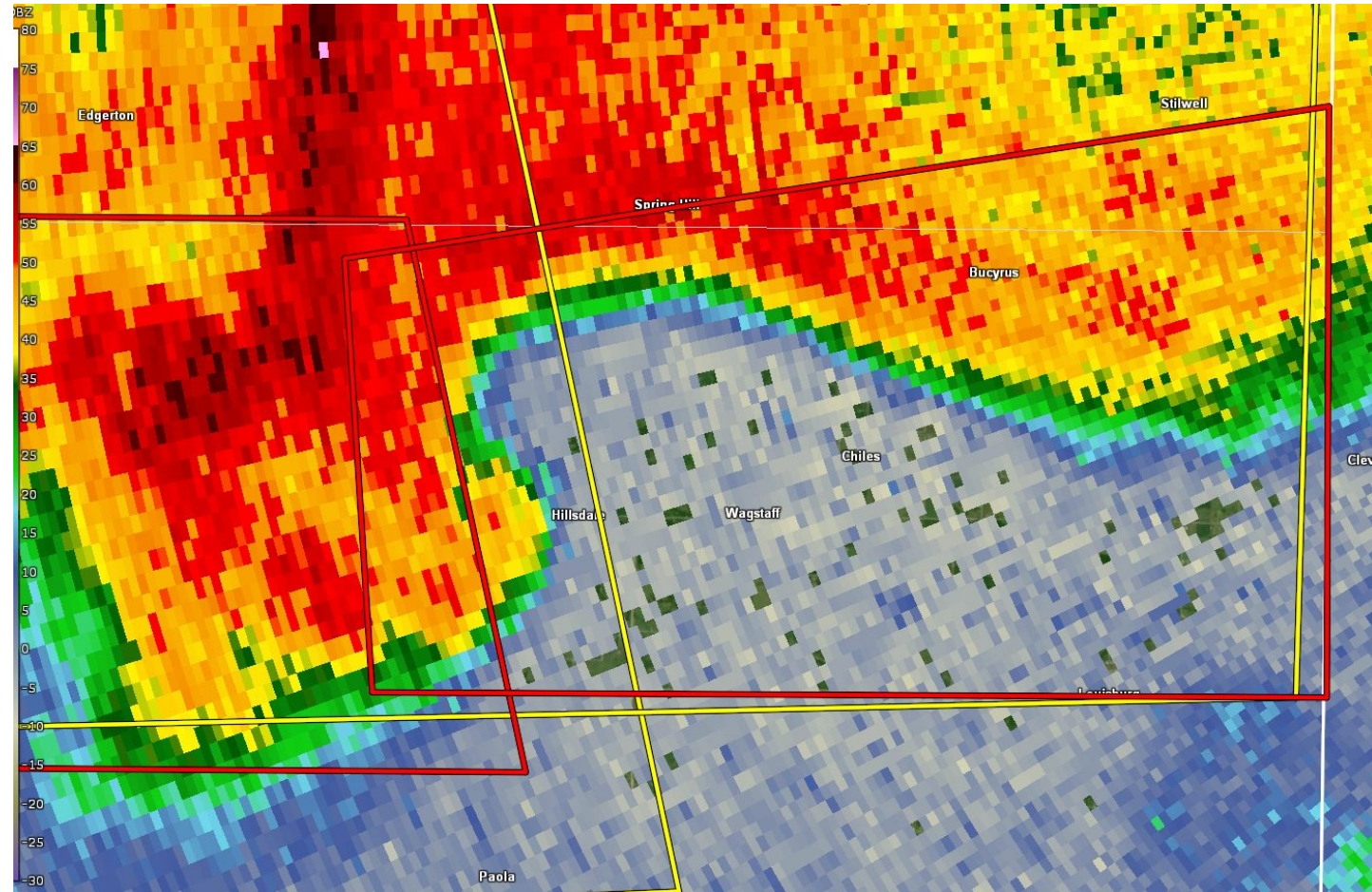
- County Based - Broad Area
- May be issued hours before storms form or once one storm has developed
- **Not everyone in a Watch will experience severe weather!**



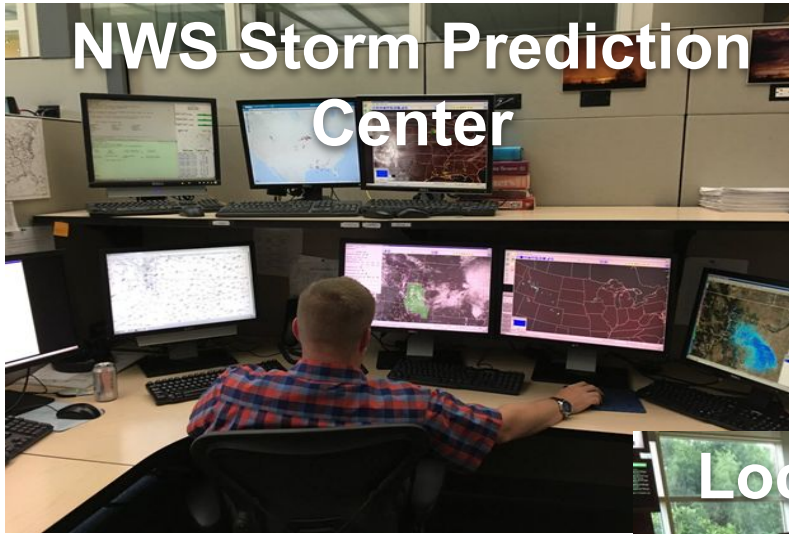
# Watches and Warnings... What is the Difference?

## ● Warnings

- Polygon based - portions of counties - more finite than a watch
- Issued when severe weather is eminent, may have 5 to 20 minutes of lead time, maybe 1 to 2 minutes - Hazard has to start somewhere - could be your location is the start!
- **Not everyone in a Warning will experience severe weather!**



# Watch to Warning Process

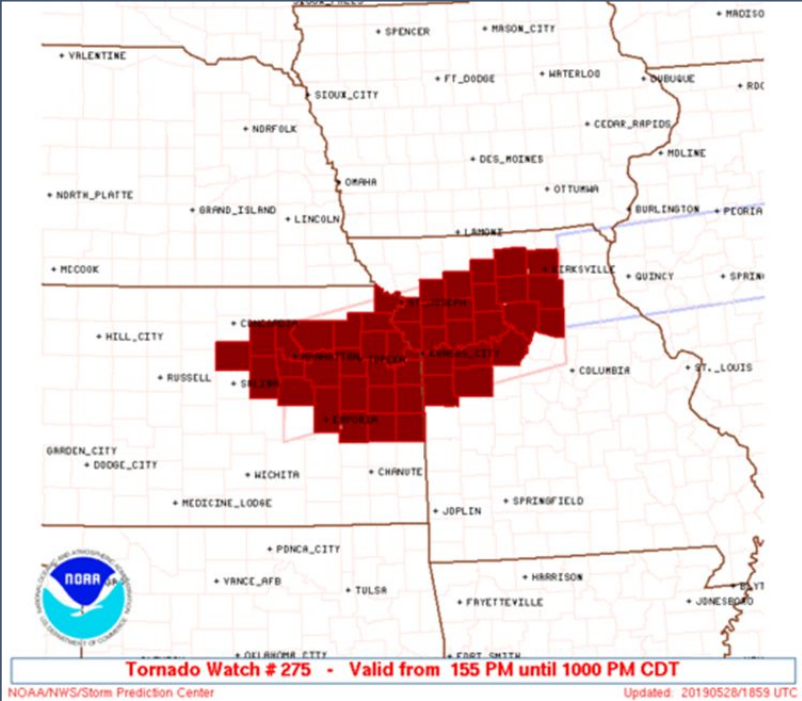


NWS Storm Prediction Center

NWS SPC initiates Watch Collaboration call with local NWS Offices



Local NWS Office



Tornado Watch # 275 - Valid from 155 PM until 1000 PM CDT

NOAA/NWS/Storm Prediction Center Updated: 20190528/1859 UTC

Local NWS Office provides input to SPC and collaborate on counties to include

Watch Issued

Tornado vs Severe Watch? This is dependent on the atmospheric conditions!

# How are Warnings Issued?

Primary Focus is on Radar

Listening to the Mesoscale Forecaster

*Warning Forecasters sometimes work in teams*



Asking for opinions - double checking thoughts

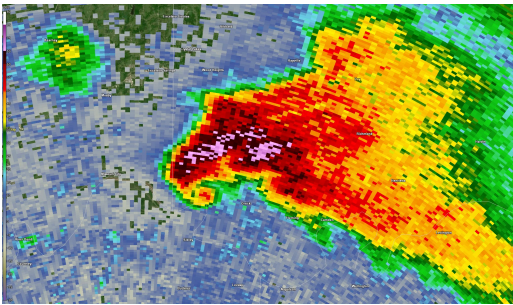
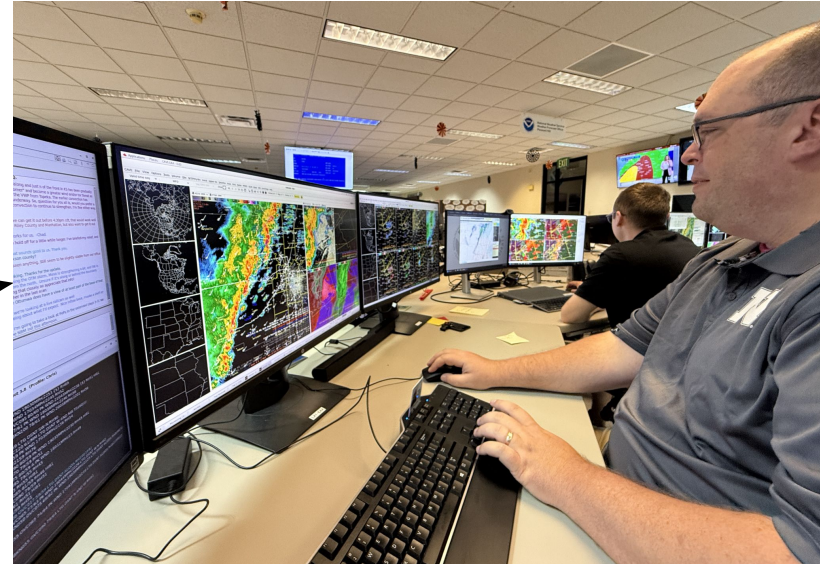
Listening to reports/conversations

# How Warning Forecasters Take in Reports and use them



Reports come in to the communicator/storm report specialist

The Warning Forecaster(s) are listening for “what,” “when,” “where” in realtime



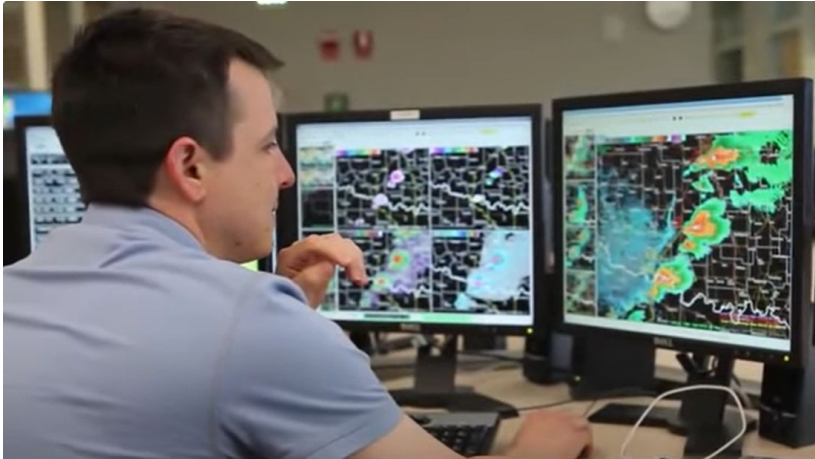
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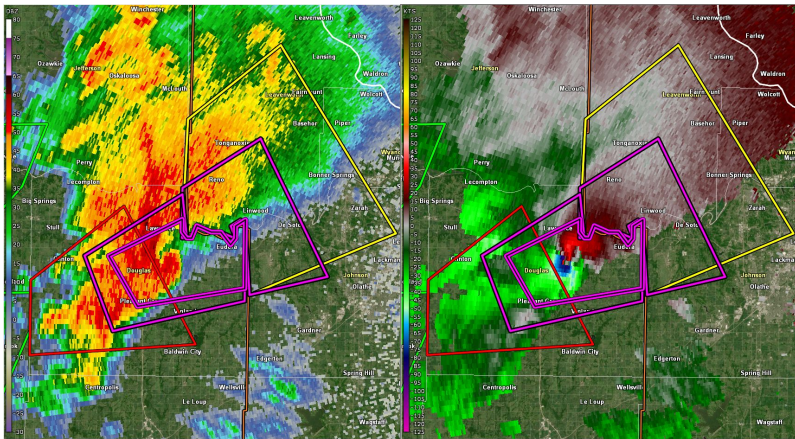
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**Warning Decisions**

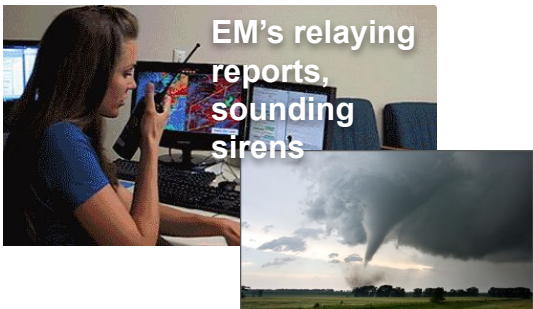
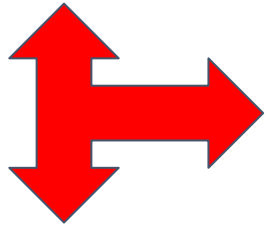
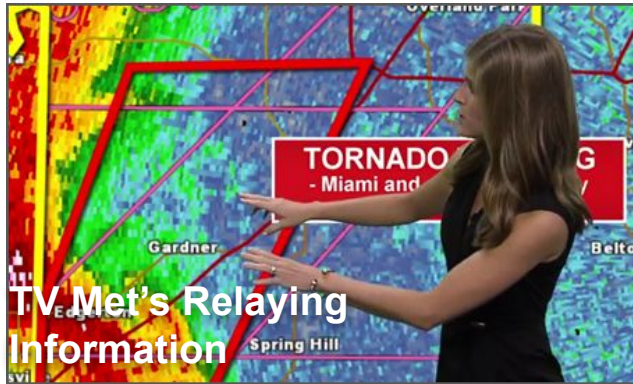
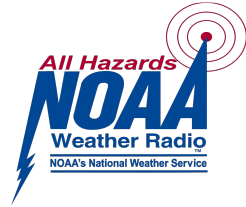
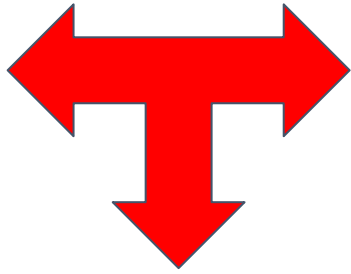
# Warnings - *Especially Tornado Warnings* - Have Consequences



- We Want To Get it Right
- We have to weigh the data with the report(s) and make a quick decision.
- We don't want to false alarm
- We don't want to miss something



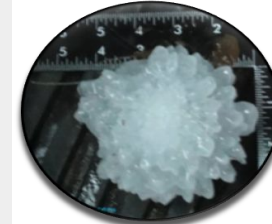
# The Integrated Warning Team - "it takes a village"



People are *more* likely to heed a warning when it is confirmed.

# NWS Warnings: Severe Hazards Imminent or Occuring

<b>SVR</b>	<b>Severe Thunderstorm Warning</b>	<ul style="list-style-type: none"><li>• Thunderstorm Winds <math>\geq</math> 58 MPH</li><li>• Hail <math>\geq</math> 1 Inch in Diameter</li><li>• Tone Alert NOAA Weather Radio</li><li>• <i>WEA*</i> - <math>\geq</math> 80 mph winds, baseball hail</li></ul>
<b>TOR</b>	<b>Tornado Warning</b>	<ul style="list-style-type: none"><li>• Doppler Radar Indicated Rotation</li><li>• Confirmed Report of a Tornado</li><li>• Tone Alert on NOAA Weather Radio</li><li>• <i>WEA*</i></li></ul>
<b>FFW</b>	<b>Flash Flood Warning</b>	<ul style="list-style-type: none"><li>• <math>\geq</math> 6 inches of flowing water over roadways</li><li>• Rapid rise in water is a threat to life and property</li><li>• Tone Alert on NOAA Weather Radio</li><li>• <i>WEA*</i> "Considerable" or "Catastrophic" tag</li></ul>



\*Wireless Emergency Alerts (WEA)

# STORM PLANNING TIMELINE

## A few days out

*If the forecast calls for severe weather in a few days, start preparing now.*



Make sure that you have emergency supplies



Know your safe places



Have a family communication plan

## The day before

*The day before, forecast accuracy continues to improve.*



Adjust plans



Make sure your phone can receive WEAs



Ensure your shelter is clean and accessible

## The day of

*Remain vigilant and aware of any active Watches. A Warning may be issued at a moment's notice!*



Remind your family of the communication plan



Know how to evacuate and/or get to safety from wherever you are



When a Warning is issued, you may only have seconds to take action!

weather.gov



# Tornado Sheltering Guidelines

Seek the best available refuge area **immediately** when a Tornado Warning is issued.  
Your chance of surviving a tornado is excellent if you follow these guidelines.

## WORST OPTIONS

Mobile homes

Vehicles

Underneath a  
highway overpass

## BAD OPTIONS

Large open rooms  
like gymnasiums

Manufactured housing

## GOOD OPTIONS

Interior room  
of a well-constructed  
home or building

Basement

## BEST OPTIONS

Above or below ground  
Tornado Storm Shelter  
(NSSA/ICC 500 compliant)\*

Specifically-designed  
FEMA Safe Room\*

**Find another option**



**Stay in place until all clear**

PHOTO: U.S. Air Force -Tech. Sgt. Bradley C. Church

\*Recommended by FEMA



# Know Where to Go

## When Sheltering from a Tornado



[weather.gov/safety/tornado](https://weather.gov/safety/tornado)

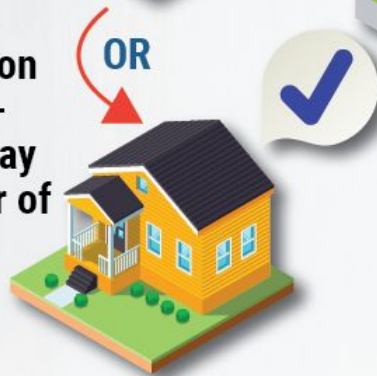
# TORNADOES AND ROAD SAFETY

## WHAT TO DO

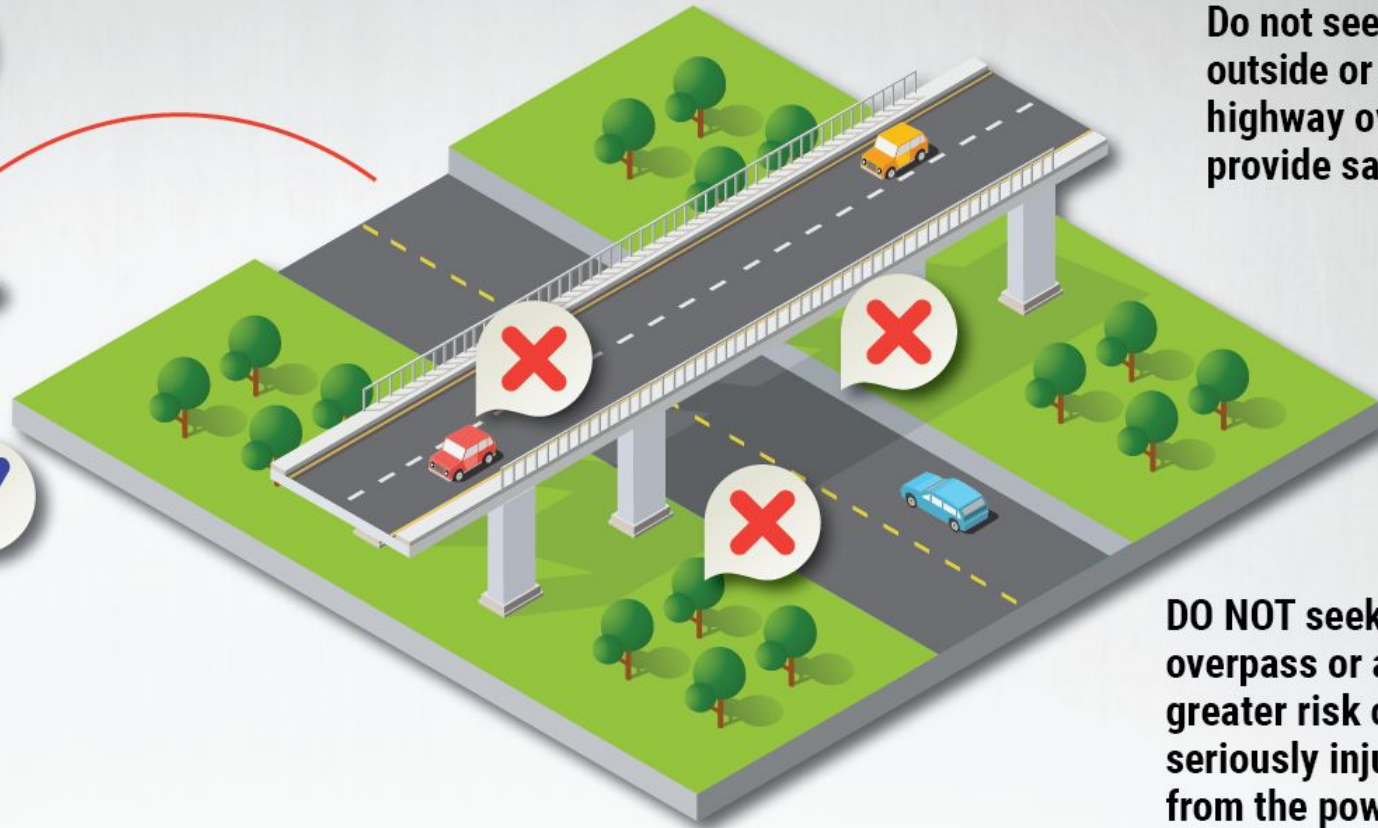
Get off the road. The best option is to drive to a designated shelter, basement or safe room.



The next best option is a small, window-less room or hallway on the lowest floor of a sturdy building.



OR



## WHAT NOT TO DO

Do not seek refuge in a vehicle, outside or under an overpass. A highway overpass does not provide safety from a tornado.

**DO NOT** seek shelter under an overpass or a tree. This puts you at greater risk of being killed or seriously injured by flying debris from the powerful tornadic winds.



# *Flash flooding* can escalate quickly.

Heavy rain can lead to sudden flash floods, whether you're on the road or at a campground. Will you be ready?



Set up a way to get weather warnings on your phone



When alerted to a flash flood, get to higher ground immediately



Never enter floodwaters in a vehicle or on foot



weather.gov

# Three Ways to Monitor Heat

## NWS Heat Index

		NWS Heat Index															
Temperature (°F)		80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
Relative Humidity (%)	40%	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
	45%	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
	50%	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
	55%	81	84	86	89	93	97	101	106	112	117	124	130	137			
	60%	82	84	88	91	95	100	105	110	116	123	129	137				
	65%	82	85	89	93	98	103	108	114	121	128	136					
	70%	83	86	90	95	100	106	112	119	126	134						
	75%	84	88	92	97	103	109	116	124	132							
	80%	84	89	94	100	106	113	121	129								
	85%	85	90	96	102	110	117	126	135								
90%	86	91	98	105	113	122	131										
95%	86	93	100	108	117	127											
100%	87	95	103	112	121	132											

The Heat Index measures how hot it actually feels outside.

The Heat Index level that is considered dangerous can vary by person and region.

weather.gov

The Heat Index is a product of NOAA's National Weather Service (NWS).

The Heat Index is a measure of how hot it really feels when relative humidity is factored in with the actual air temperature.

Heat Index is the official driver of the issuance of heat headlines/products

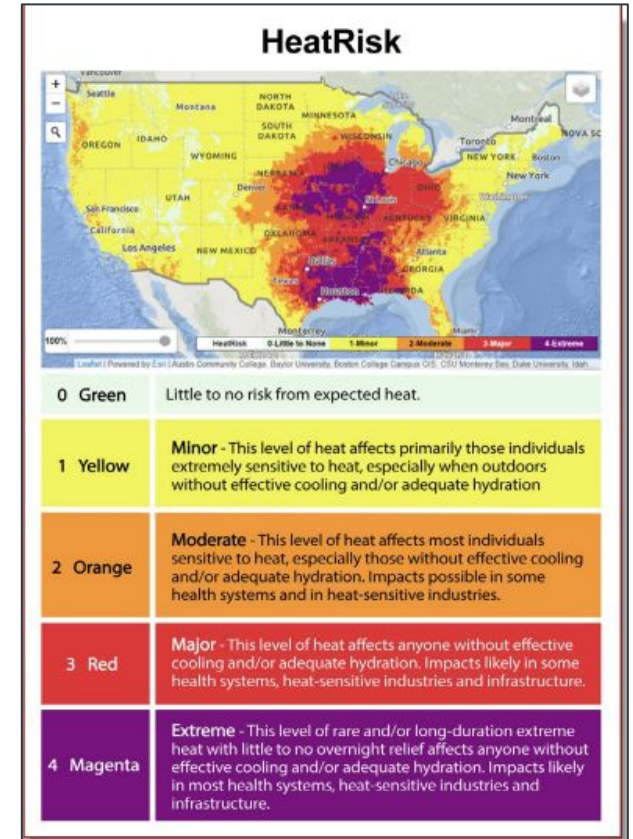
## Wet Bulb Globe Temp

WET BULB GLOBE THERMOMETER		ACTIVITY GUIDELINES & REST BREAK GUIDELINES
Middle School	High School	
< 82	< 82	<b>Normal Activities:</b> Provide at least 3 separate rest breaks each hour with a minimum duration of 3 minutes each. Use discretion for intense or prolonged exercise.
82.1 – 83.9	82.1 – 86.9	Use discretion for intense or prolonged exercise; watch at-risk players carefully; provide separate rest breaks each hour for a minimum of 4 minutes duration each.  Maximum practice time is 2 hours each.
84.0 – 86.9	87.0 – 89.9	<b>Football:</b> players are restricted to helmet, shoulder pads, and shorts during practice. If the WBGT rises to this level during practice, players may continue to <u>workout</u> wearing football pants without changing to shorts. <b>All Sports:</b> provide at least 4 separate rest breaks each hour with a minimum duration of 4 minutes each. <b>Consider delaying or rescheduling competitions.</b>
87.0 – 90.0	90.0 – 92.0	Maximum practice time is 1 hour. <b>Football:</b> NO protective equipment may be worn during practice, and there may be NO conditioning activities. <b>All Sports:</b> there must be 20 minutes of rest breaks distributed throughout the hour of practice. <b>Consider delaying or rescheduling competitions.</b>
> 90	> 92	<b>NO Outdoor Workouts:</b> cancel or delay practice and competitions until a cooler WBGT is reached.

WBGT is a parameter estimates the effects of temperature, relative humidity, wind and solar radiation

<https://www.weather.gov/eax/wbgt>

## NWS/CDC HeatRisk



Heat Risk takes into account time of year, duration of heat, and how temperatures elevate risk to impacts based on CDC data

<https://www.wpc.ncep.noaa.gov/heatrisk/?wfo=eax>

NWS Heat Forecast Tools



# Extreme Heat Planning Timeline

## Pre-Season

Start planning before hot weather arrives.

- ✓ Build an emergency kit
- ✓ Make a plan for power outages
- ✓ Become trained in first aid for heat-related emergencies
- ✓ Check that your A/C and fans are in working order

## A Few Days Out

If the forecast calls for extreme heat, be ready.

- ✓ Gather food, water, and medication
- ✓ Make a list of friends and family to check on & help them prepare
- ✓ Know your local cooling shelters or other cool locations
- ✓ Reschedule outdoor events

## During and After

Remain vigilant and stay informed.

- ✓ Stay in air conditioning and out of the sun if possible
- ✓ Check on friends, family, neighbors, and pets
- ✓ Drink plenty of water
- ✓ Take breaks and use a buddy system if working outdoors

weather.gov



# NWS Warnings: Severe Hazards Imminent or Occuring

**XHA**

**Extreme Heat Watch**

- Daytime heat index of 110 deg F or greater, with values of 75 deg or greater during the overnight period for at least 2 consecutive nights.
- At least 50% confidence of meeting threshold criteria. Generally issued 24 to 72 hours or more in advance of the event.

**XHW**

**Extreme Heat Warning**

- Daytime heat index of 110 deg F or greater, with values of 75 deg or greater during the overnight period for at least 2 consecutive nights OR if heat advisory criteria are expected to be met for at least 4 consecutive days.

**HTY**

**Heat Advisory**

- Daytime heat index of 105 to 109 deg F for a minimum of 2 hours.



# NWS KC Operations - World Cup

We are enhancing our operations to support Kansas City and our surrounding community.

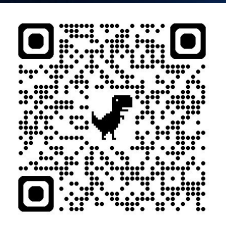
We will be staffing meteorologists to support Emergency Management and Public Safety officials onsite at the Kansas City Missouri Emergency Operations Center, KC2026 Regional Coordination Center/Joint Operations Center, Johnson County Kansas Emergency Operations Center and on match days supporting KCPD and KCFD at the Stadium

We are bringing in 16 meteorologists from other NWS Offices to assist our operations so that we can continue to provide a high standard of service to our community.



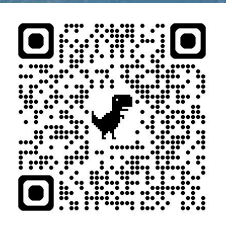
**NWS Kansas City Web Page**

[weather.gov/KansasCity](https://weather.gov/KansasCity)



**NWS Safety Resources and Information**

[weather.gov/safety](https://weather.gov/safety)



**NWS Kansas City Skywarn Spotter Training**

[weather.gov/kc/skywarn](https://weather.gov/kc/skywarn)

# Questions?

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