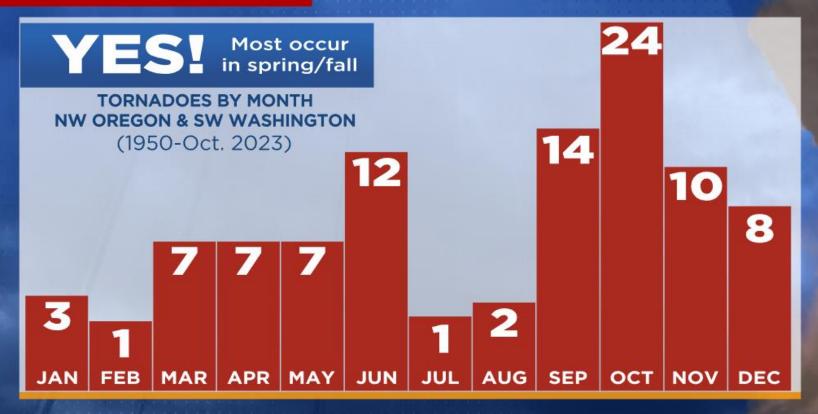
FIRST ALERT IS THERE A TORNADO SEASON?

WEST OF THE CASCADES



Updated 10/11/2023

FIRST ALERT PACIFIC NW TORNADOES

USUALLY THEY ARE QUITE WEAK

EF-5 EF-4		NEITHER HAS OCCURRED IN PACIFIC NORTHWEST
EF-3	136-165 mph	1
EF-2	111-135 mph	5
EF-1	86-110 mph	21
EF-0	65-85 mph	68

TORNADOES IN NW OREGON & SW WASHINGTON (1950-OCT 2023)

FIRSTALERI RECENT TORNADOES

EF-0	La Center, WA	October 2023
EF-0	Harrisburg	June 2023
EF-0	Woodburn	October 2022
EF-0	Sandy	October 2022
EF-0	Battle Ground	September 2021
	Ilwaco, WA	March 2021
EF-O		

TORNADO! TOOLS & **TECHNOLOGY USED IN FORECASTING** & BROADCAST **COVERAGE**



Tools:

- Storm Prediction Center (SPC) Norman, Oklahoma
- Atmospheric Soundings
- Doppler Radar
- Real Time Observations



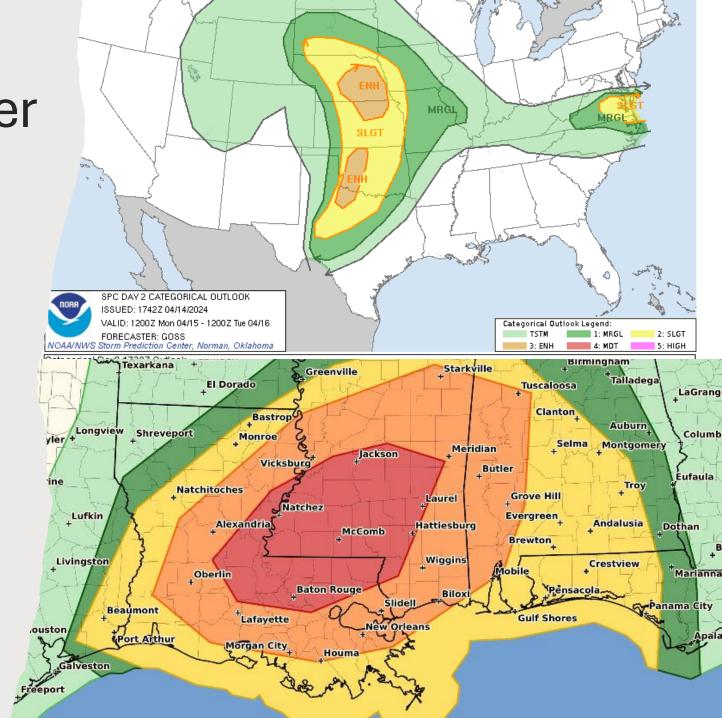
Storm Prediction Center

- Norman, Oklahoma

Issue Outlooks and

Severe Weather Watches

(Warnings are issued at the local NWS Forecast Office)



...THERE IS A SLIGHT RISK OF SEVERE THUNDERSTORMS ACROSS SOUTHEASTERN VIRGINIA AND NORTHEASTERN NORTH CAROLINA...

...SUMMARY...

Scattered severe thunderstorms are likely across the southern to central Great Plains, mainly Monday evening and night. Large to very large hail, damaging wind gusts, and a few tornadic storms are possible.

...Synopsis...

An upper low over the Great Basin at the start of the period is forecast to shift east toward -- and eventually into -- the central Plains region through the period. As this occurs, lee cyclogenesis will occur over the central High Plains by Monday afternoon, and drift east along the KS/NE border through 12Z Tuesday. Low-level moisture modification from the northwest Gulf, while sufficient for severe storms, will not be overly rich or deep beneath a stout elevated mixed layer. Mid 60s surface dew points should become common over the southern Great Plains ahead of the dryline by evening with upper 50s to low 60s reaching northward into the central Plains.

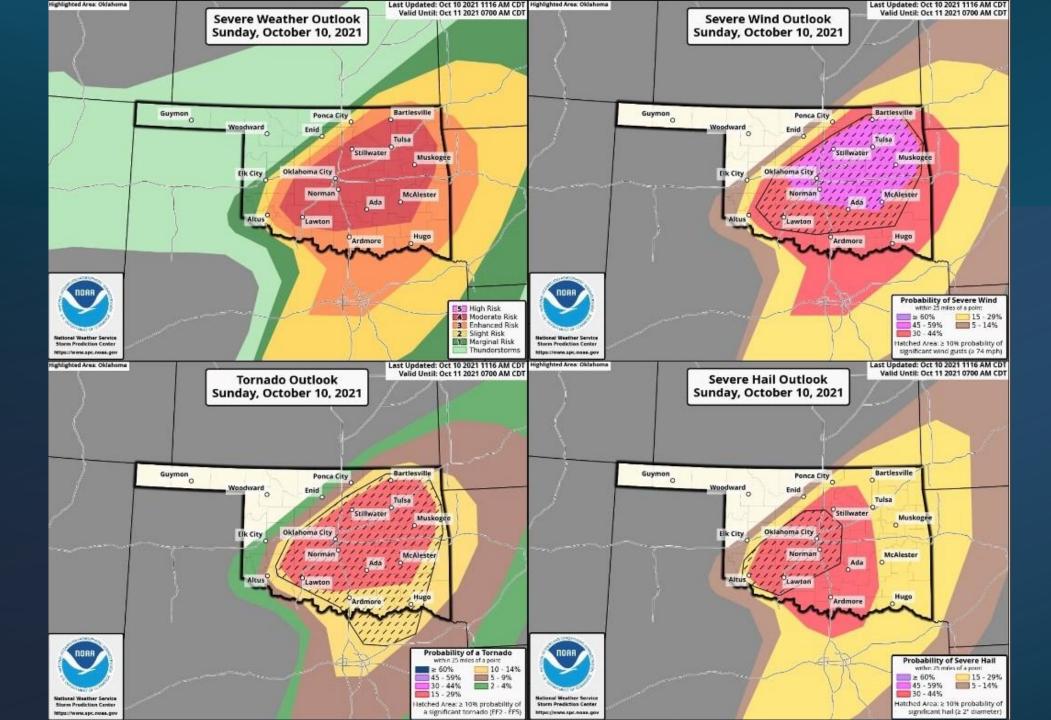
...Central/southern Plains...

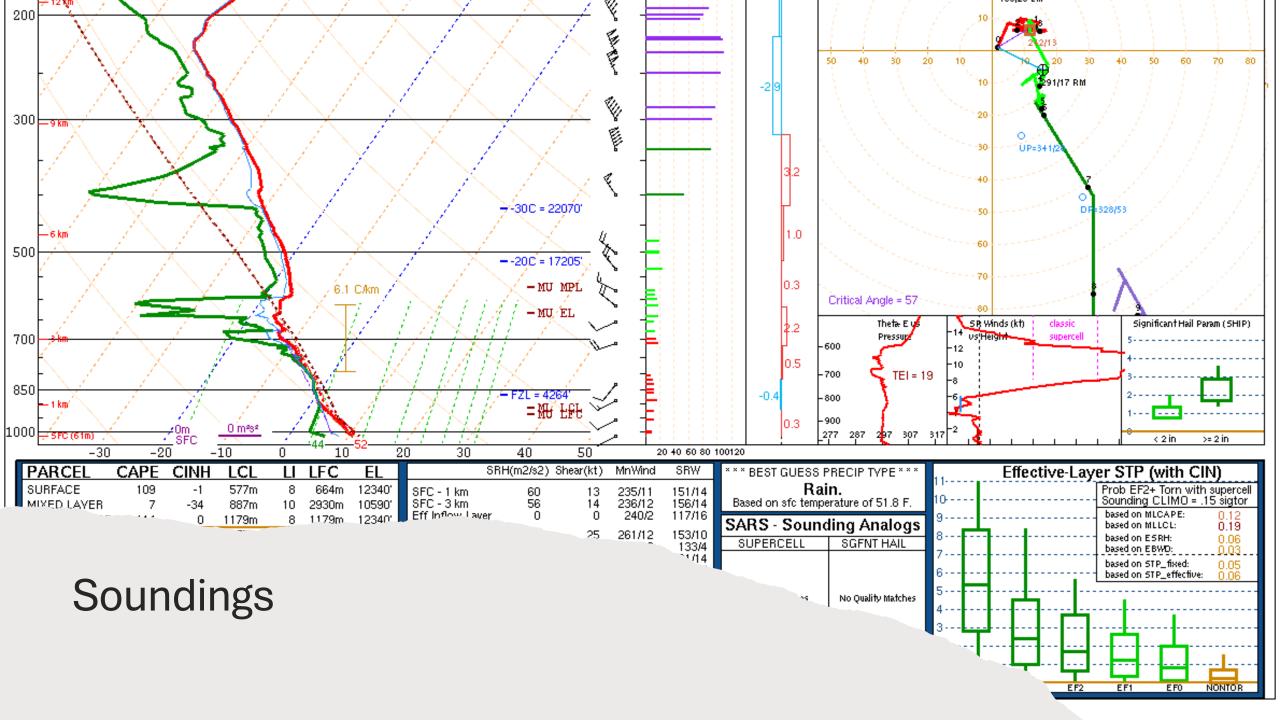
Late afternoon to early evening thunderstorm development is expected as diurnal heating and broad large-scale ascent aids in weakening of capping in place across much of the warm sector. Fairly widespread development of storms is expected across the central High Plains and arcing east-southeast along the surface warm front into the Mid-Missouri Valley. Boundary-layer moisture will decrease with northwest extent, but favorable deep-layer ascent within a favorably strong/veering deep-layer flow field will support organized/rotating storms capable of producing large hail and isolated severe wind gusts. Given the very steep lapse rates aloft, very large hail appears likely across parts of central and eastern Nebraska and portions of northeastern Kansas, near and north of the surface warm front largely after dark as the upper low approaches.

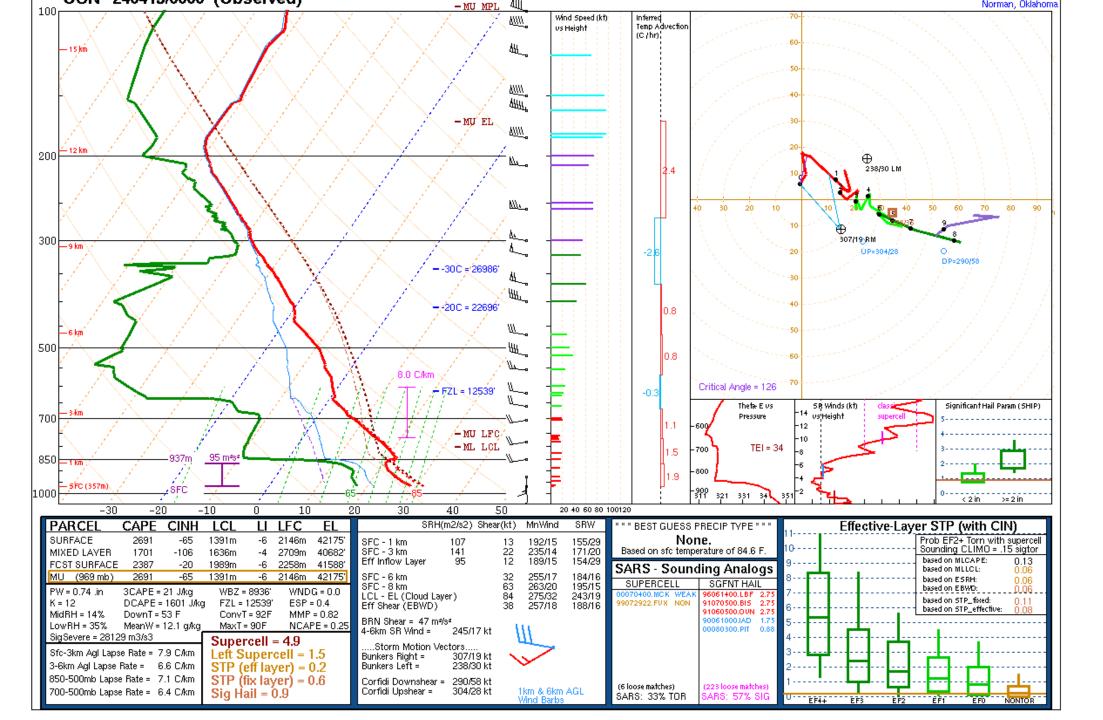
resibility of a few surface-based supercells with



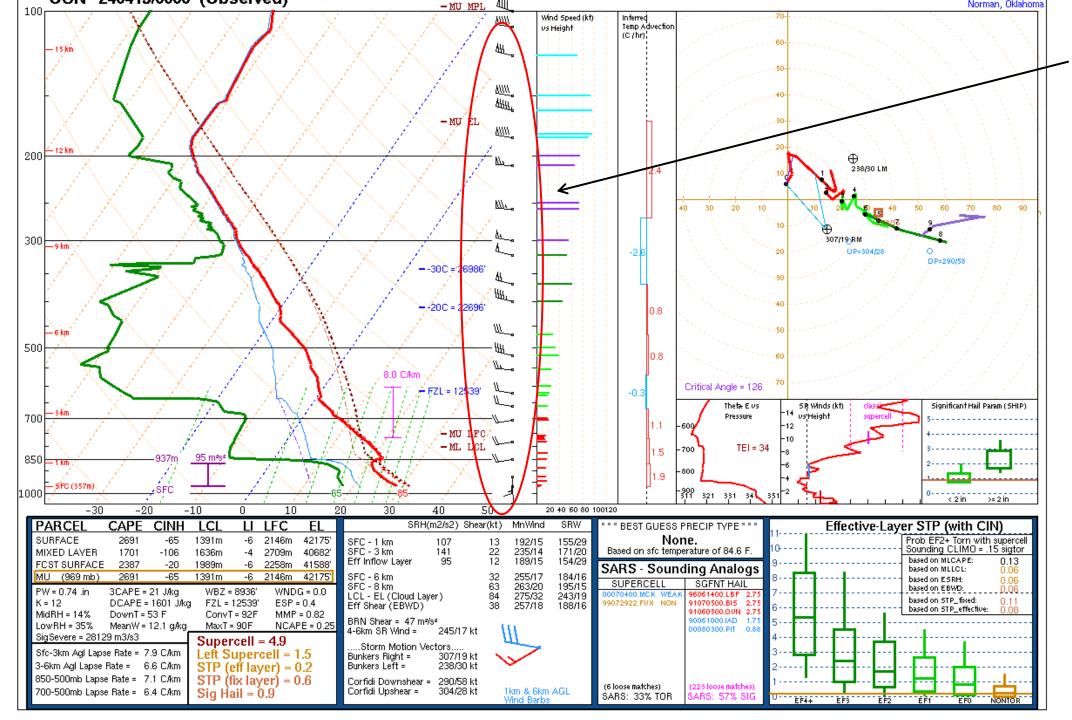
Weather Watches / Outlooks / Discussions

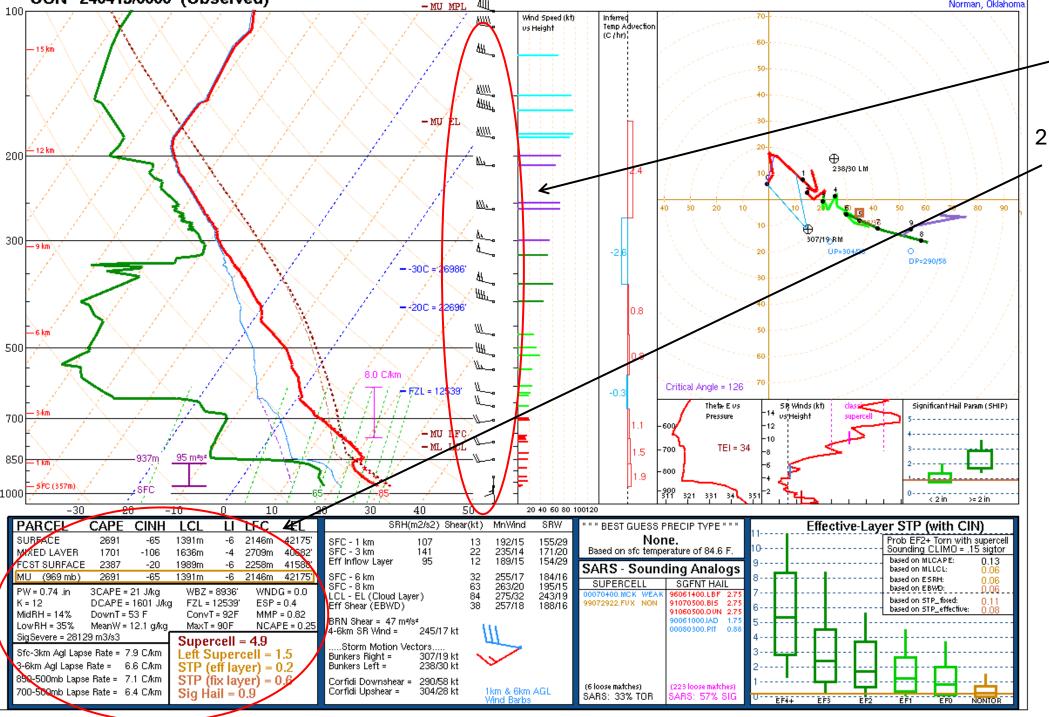






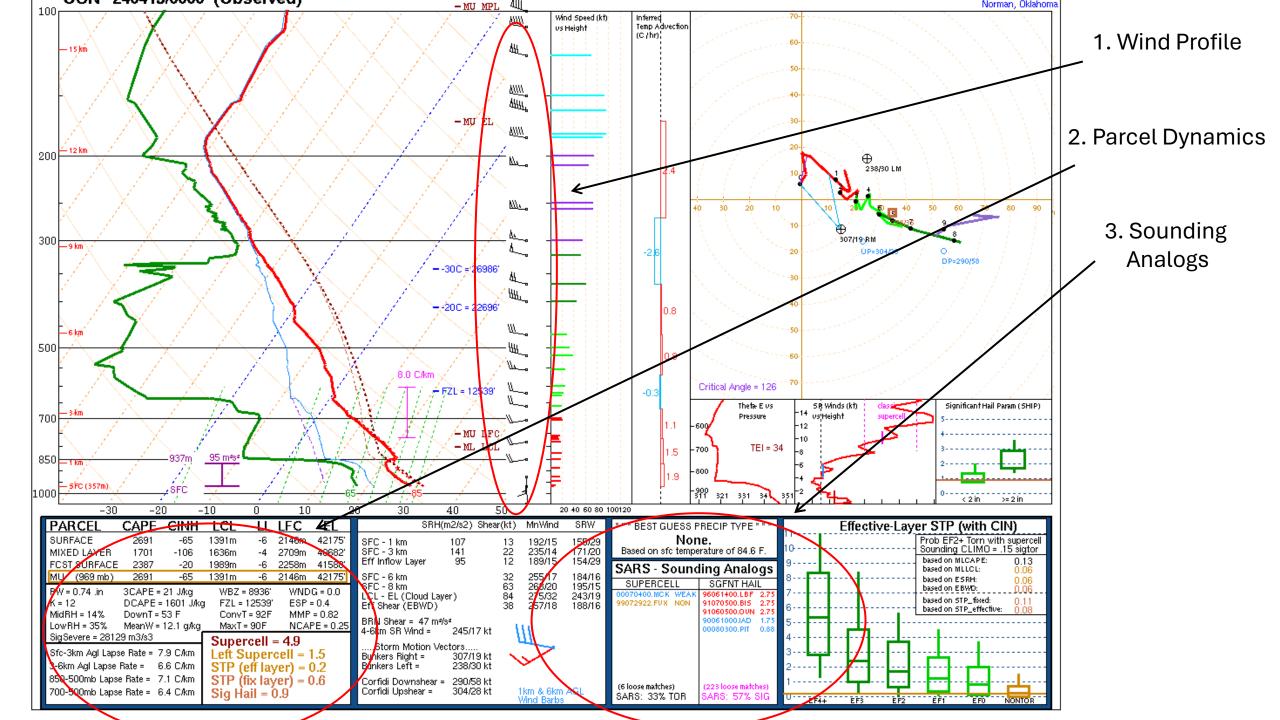
1. Wind Profile

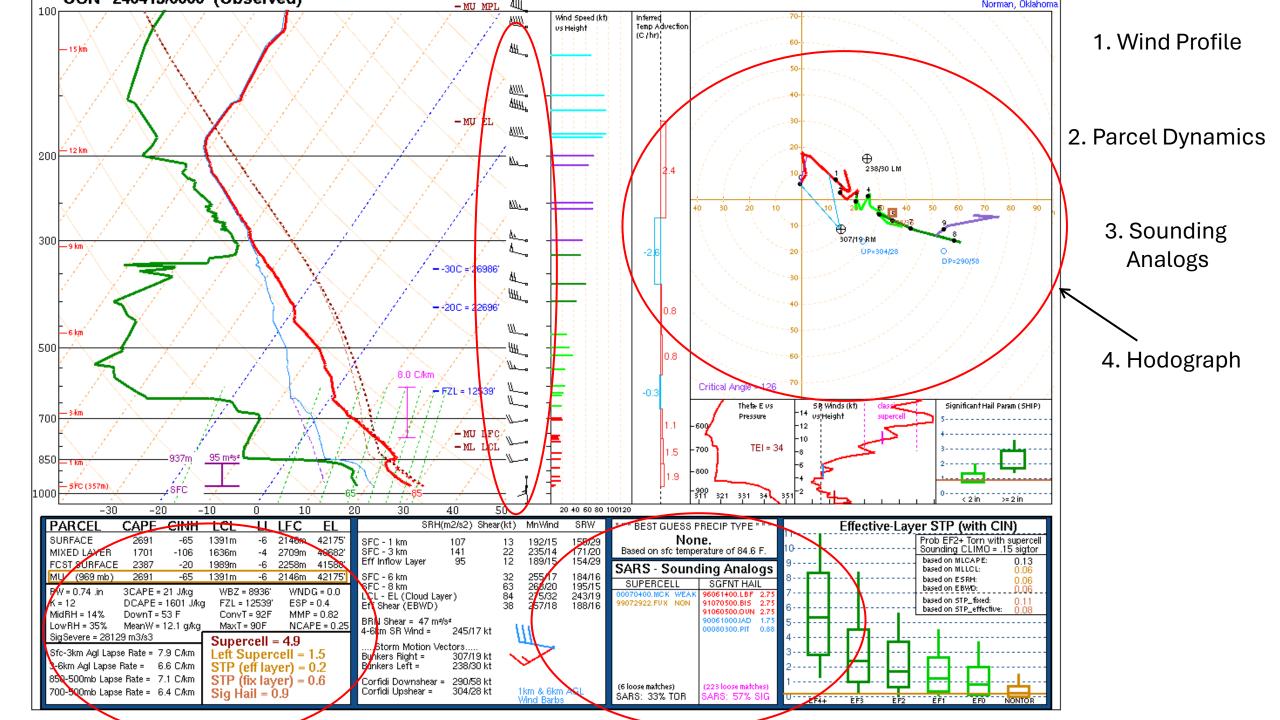




1. Wind Profile

2. Parcel Dynamics







Radar



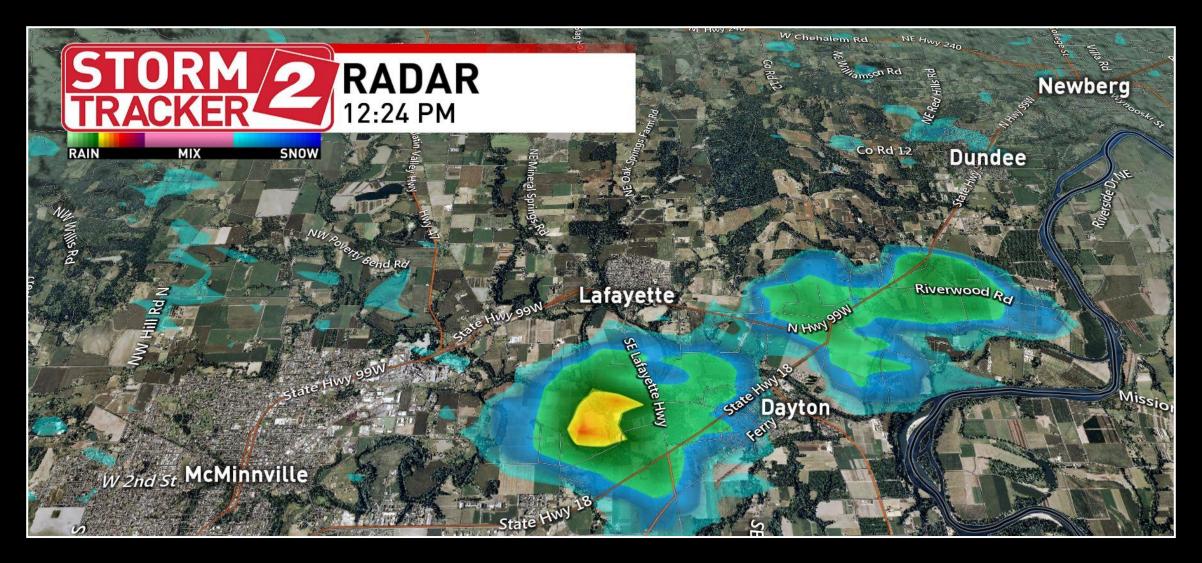
Doppler Radar WSR-88D

Radar

Sends out a beam of energy. The beam strikes an object and returns the energy to the radar

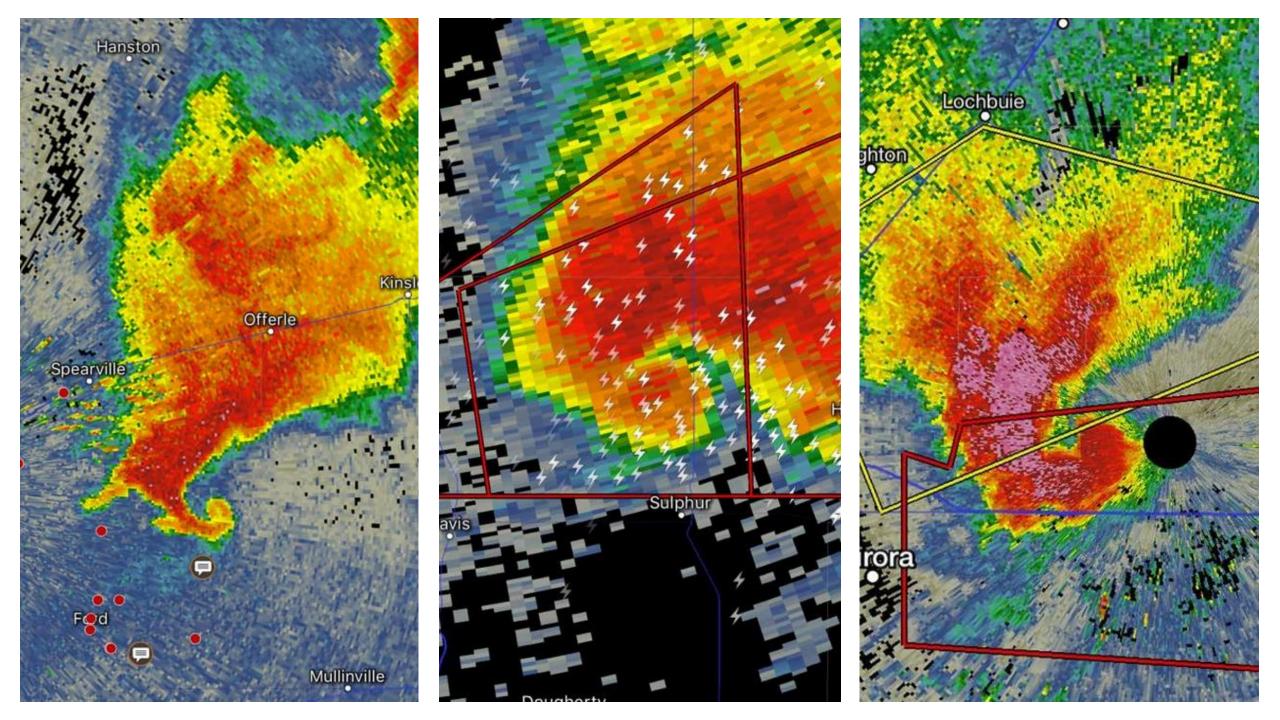
Dual-Pol Radars

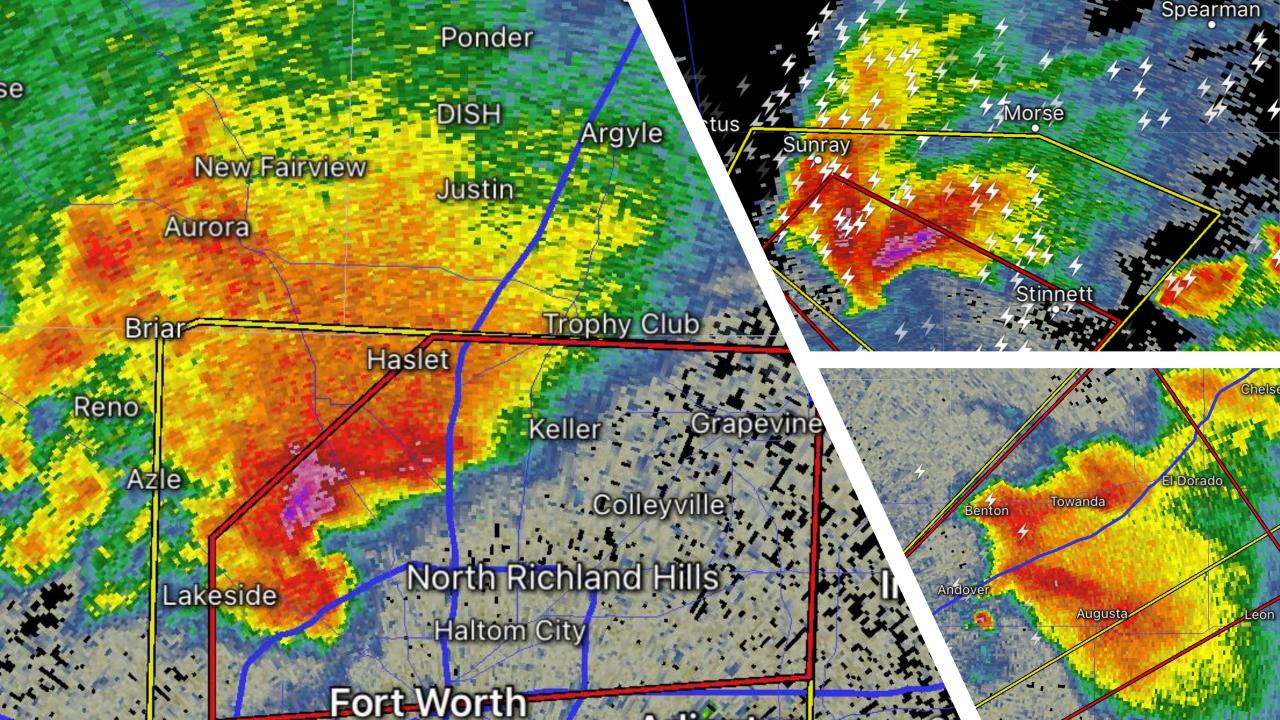
Sends both a vertical and horizontal beam Allows users to see more information

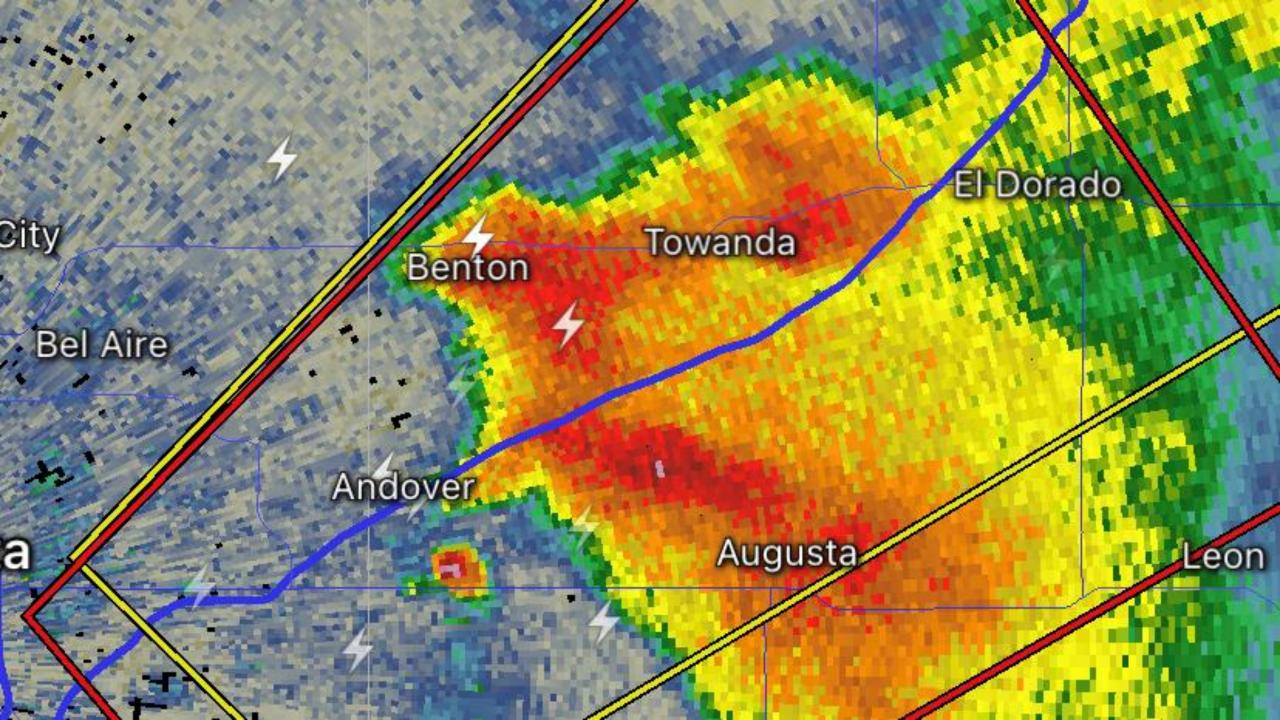


Reflectivity:

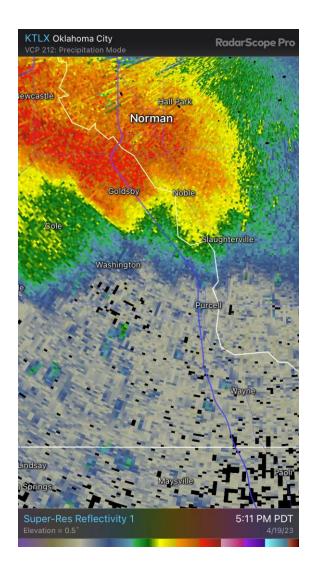




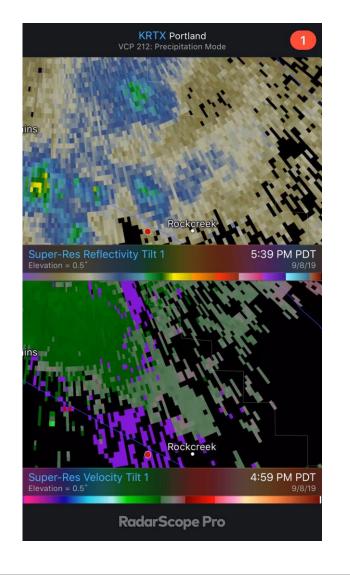




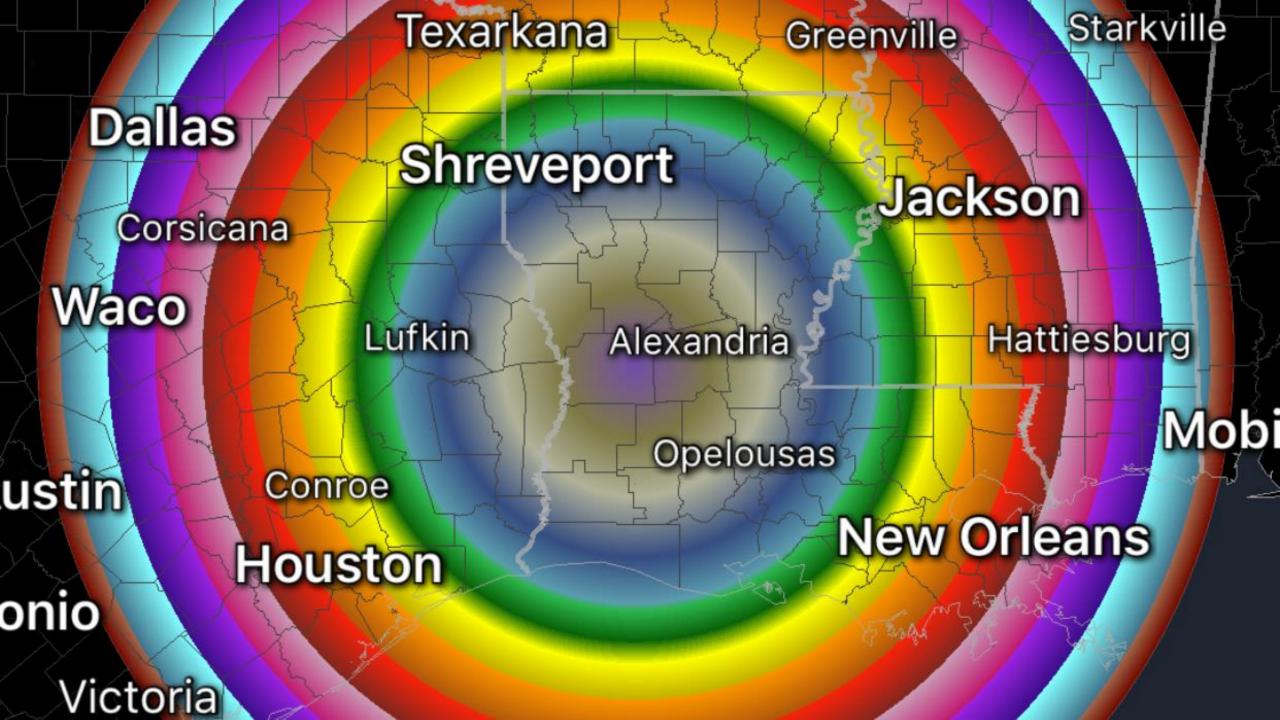
















Michael Bonney

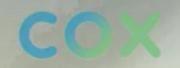








The Technology behind tornado forecasting and coverage!





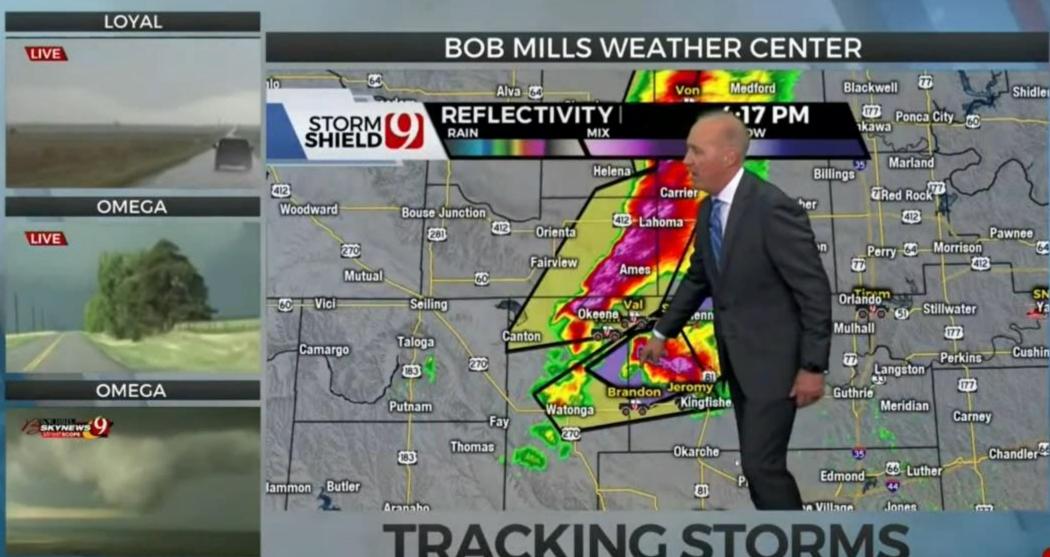






Tornados look the same as they always have... but how we see them have changed





TRACKING STORMS **TEAM COVERAGE**

4:20 80°



EMAIL WEATHER PICTURES AND VIDEOS TO PICS@NEWS9.NET ine, Garfield, and Kingfisher, effective until 4:45 pm . . . Grant until 4:30 pm. A Freeze War

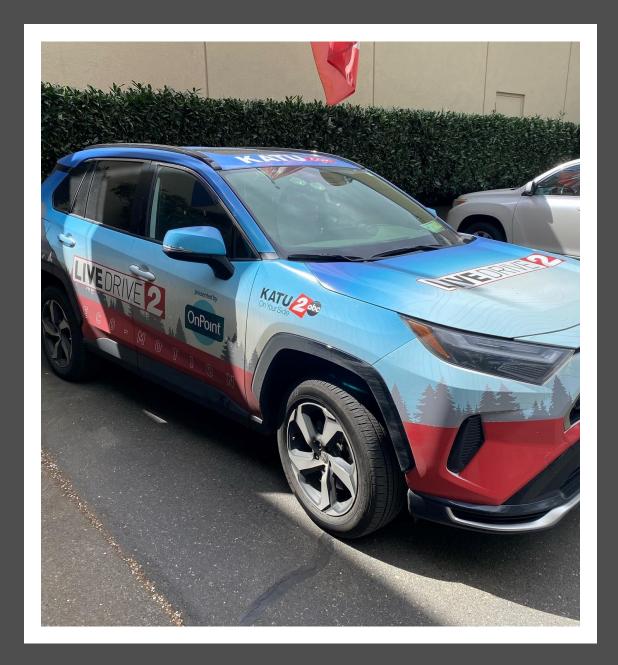


How do we get these shots to you, the viewer?



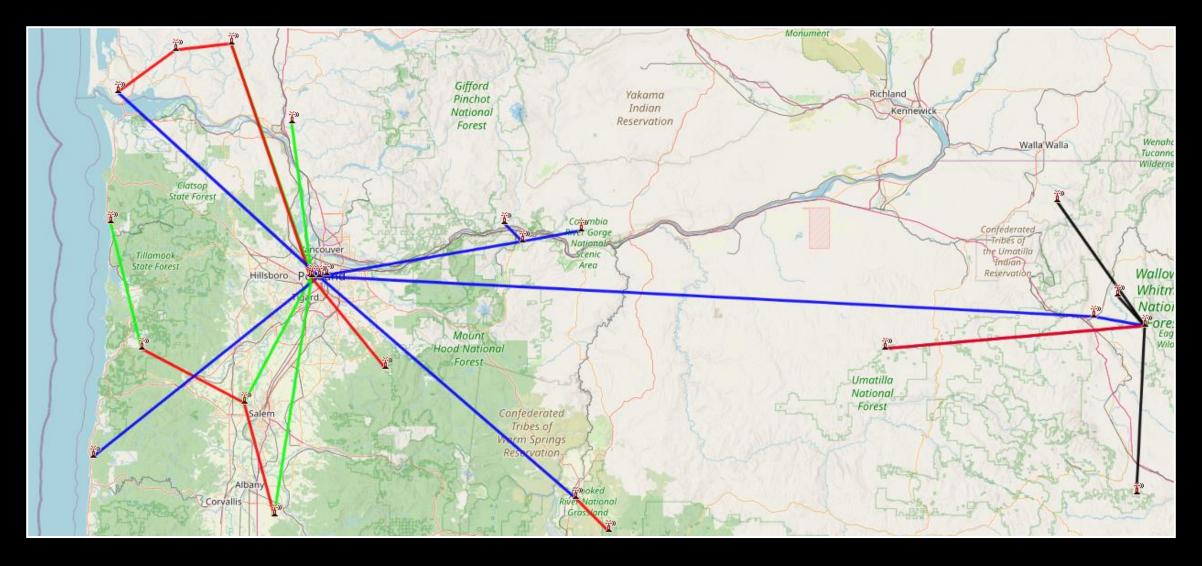












We still use microwave technology, especially for helicopters and long-form broadcasts









What we see in the studio...

Live Updates: Tornado Warning For Beckham



Dual-pol allows us to pinpoint wind speeds within a storm

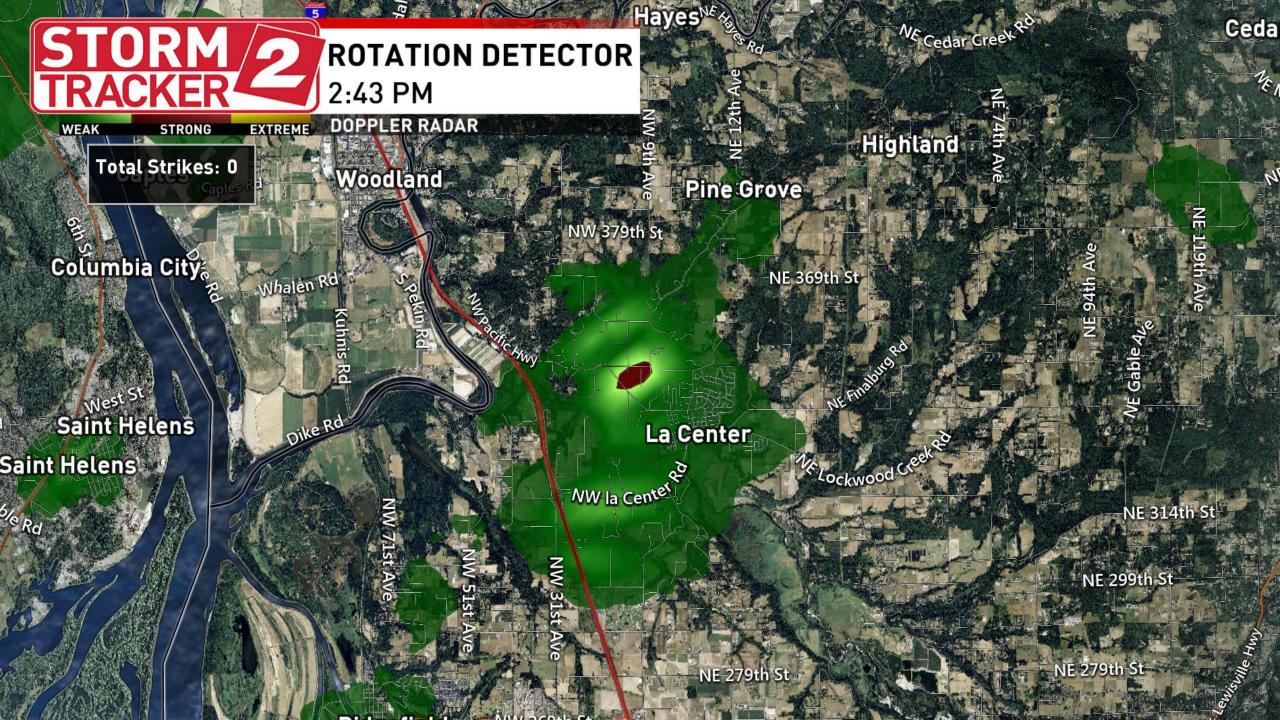


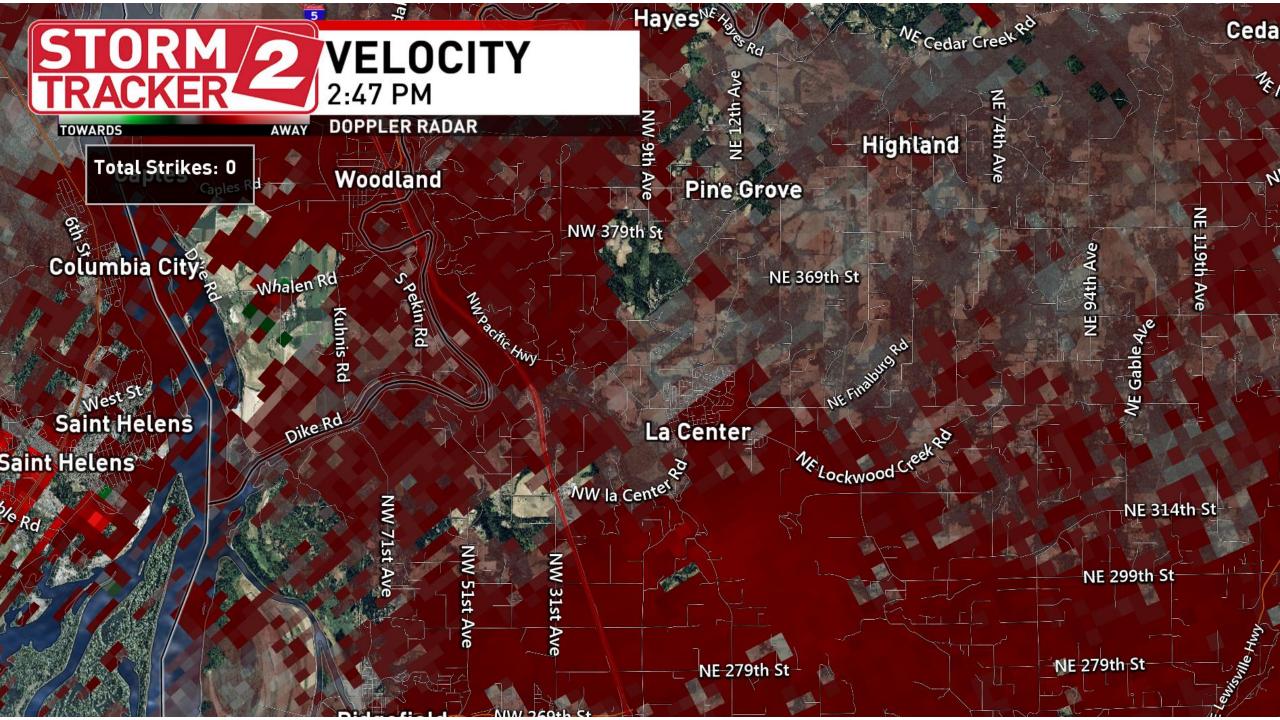


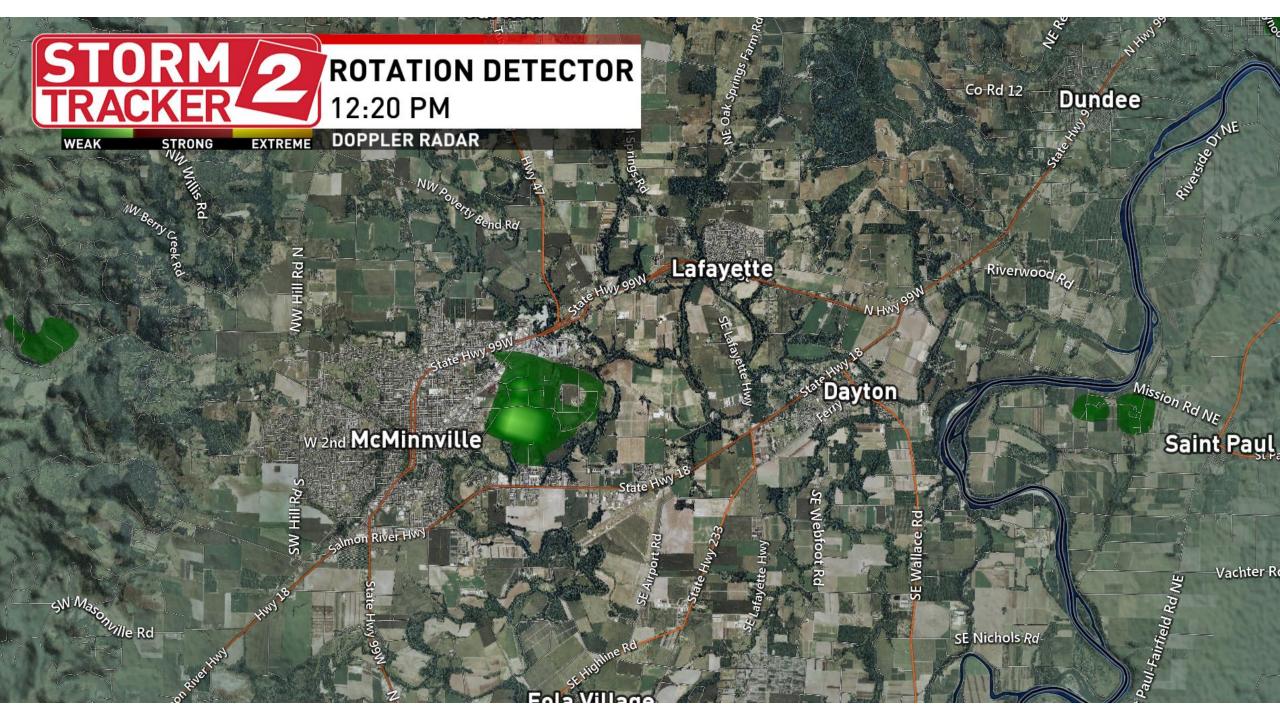


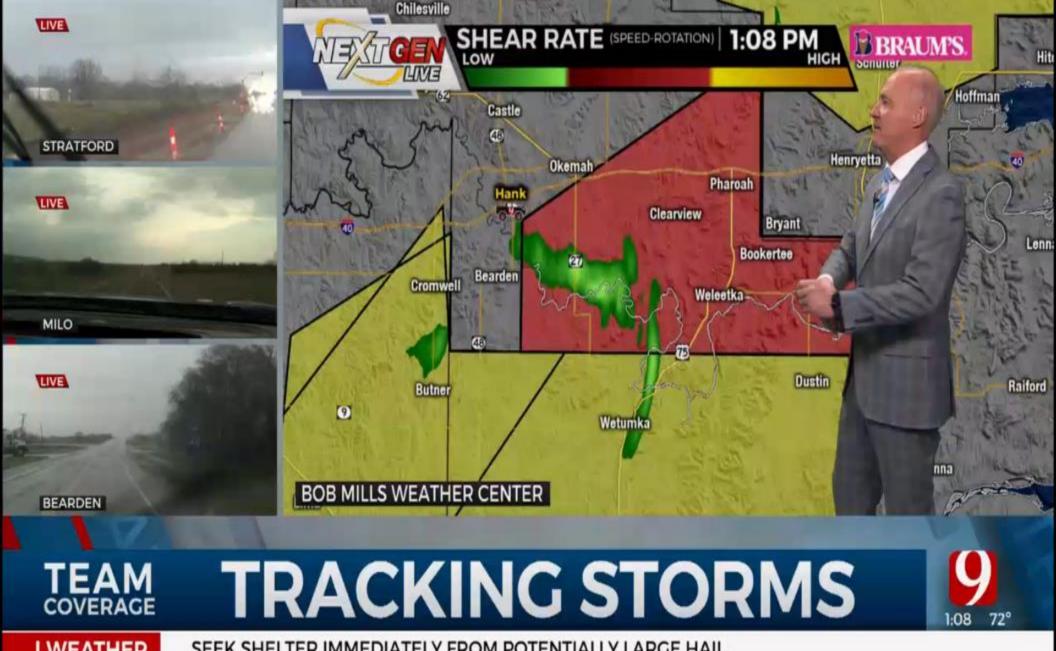








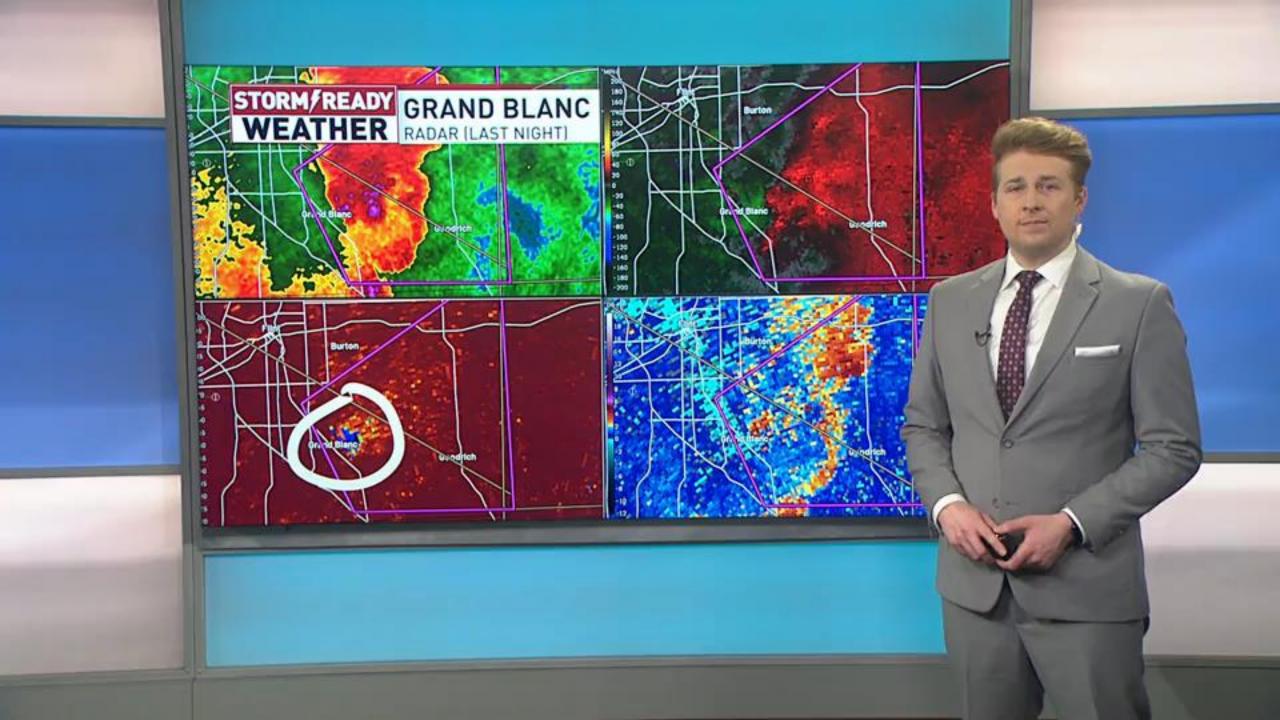


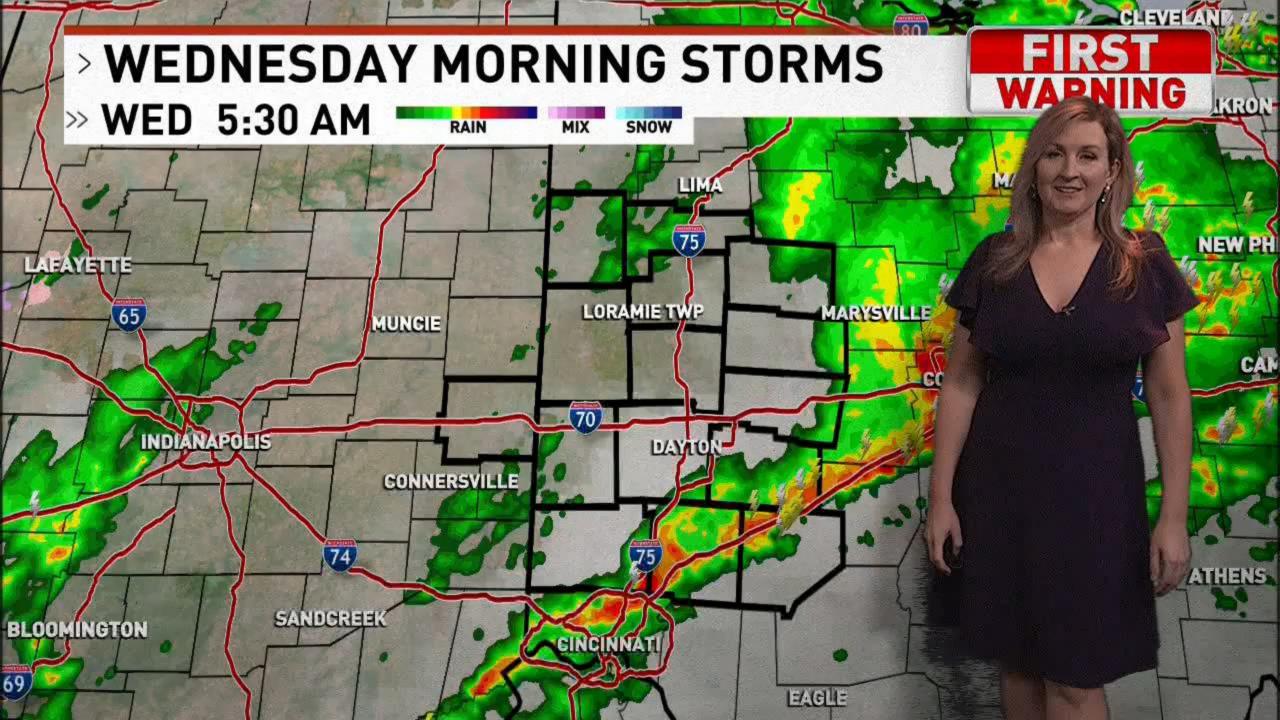


masun

| WEATHER | ALERT SEEK SHELTER IMMEDIATELY FROM POTENTIALLY LARGE HAIL. Sequoyah, Stephens, Tulsa, and Wagoner effective until 6:00 pm. A Floo

A Flood Advisory is active for



































You must go see the National Weather Center on the campus of the University of Oklahoma

