

Integrated Warning Team: Tools and Terminology



What's in your Toolbox?

Find a Local Forecast Office Social Media Dashboard Instagram Prototype

Social Media Dashboard for Fort Worth, TX

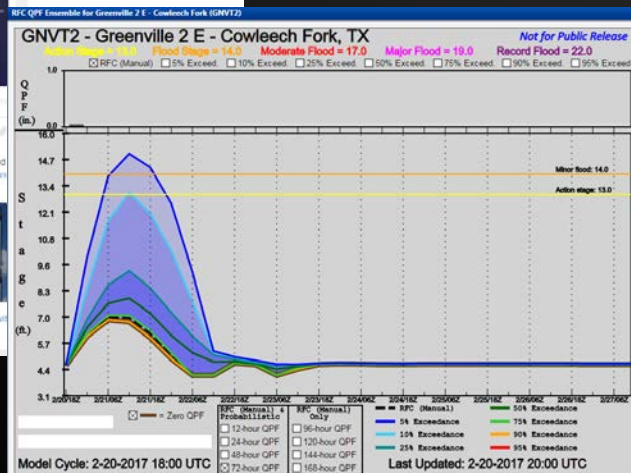
Change office City, St or Zip Code

US National Weather Service Fort Worth Texas

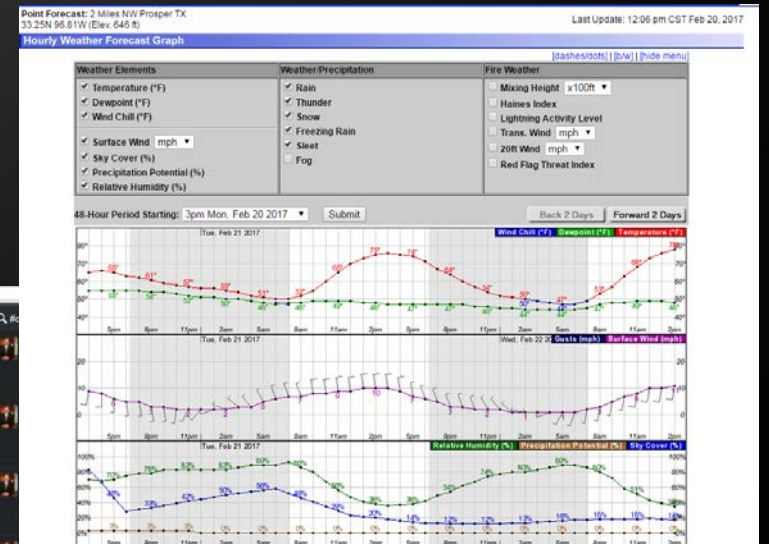
Tweets by @NWSFortWorth

Next Skywarn Class

US National Weather Service Fort Worth Texas



Twitter feed showing tweets from users like @NWSFortWorth, @User, and @Mentions.



One Message, Multiple Voices

Available Communication Tools

- Provide a refresher for NWSChat and a refresher on common tools and their...
 - Meaning
 - Intent
 - Terminology

NWSChat

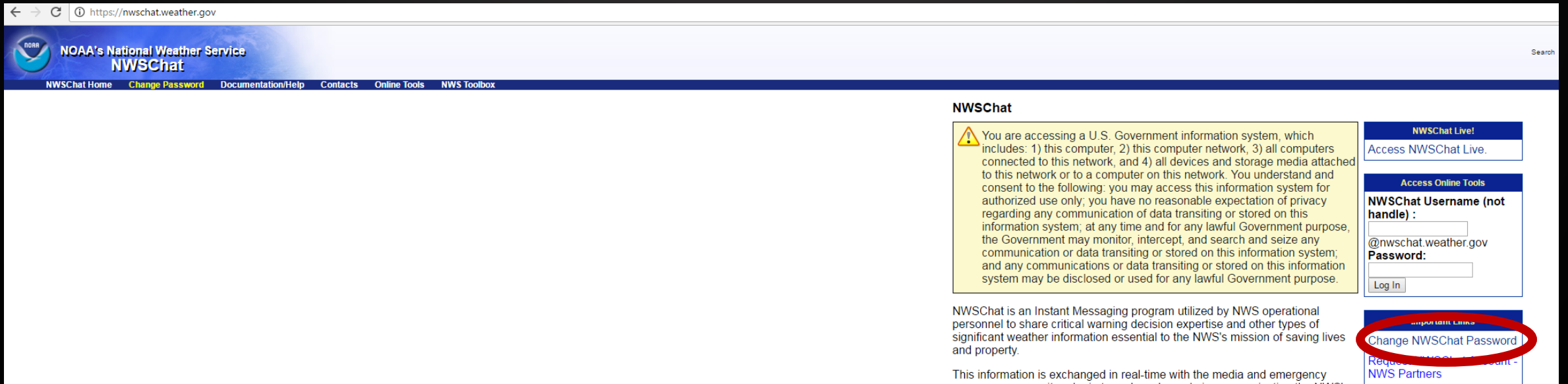
- **Be in the correct room**
- **Change your password regularly**
- **Change your handle**
- **High signal to noise ratio**
- **No private messages**
- **There are no stupid questions**
- **Some storms are more important than others**
- **Follow along**
- **Get a map**
- **Weather events are fluid.**

Be In The Correct Room

- **FWDChat: open to anyone with an account.**
- **FWDEMAChat: have to be allowed access into the room.**
 - Emergency Management
 - Public Safety
 - Amateur Radio Network Controller*
 - Laptops are here to check if you are in the right room
- **Decisions you make that others need to know as well:**
 - Put in both rooms
 - Especially in FWDChat

Change Your Password Regularly

- Each weather event: “can you change my password?” “can I get a password reset” “I can’t log in”
- Change password during nice weather so you can log in when it is bad.



The screenshot shows the NOAA's National Weather Service NWChat website. The page has a blue header with the NOAA logo and the text "NOAA's National Weather Service NWChat". Below the header is a navigation menu with links: "NWChat Home", "Change Password", "Documentation/Help", "Contacts", "Online Tools", and "NWS Toolbox". The main content area is white and contains a "NWChat" section. On the left, there is a yellow warning box with a triangle icon and text: "You are accessing a U.S. Government information system, which includes: 1) this computer, 2) this computer network, 3) all computers connected to this network, and 4) all devices and storage media attached to this network or to a computer on this network. You understand and consent to the following: you may access this information system for authorized use only; you have no reasonable expectation of privacy regarding any communication of data transiting or stored on this information system; at any time and for any lawful Government purpose, the Government may monitor, intercept, and search and seize any communication or data transiting or stored on this information system; and any communications or data transiting or stored on this information system may be disclosed or used for any lawful Government purpose." To the right of the warning box is a "NWChat Live!" section with a button "Access NWChat Live.". Below that is an "Access Online Tools" section with a form for "NWChat Username (not handle) :" and "Password:". The username field contains "@nwschat.weather.gov". Below the password field is a "Log In" button. At the bottom of the "Access Online Tools" section, there is a link "Change NWChat Password" which is circled in red. Below the "Change NWChat Password" link is a link "Request Account - NWS Partners".

Change Your Handle

- Names are great. Jurisdictions are better.
- Helps our forecasters know immediately who they are talking with
em-christina.crockett or em-Anderson.County



Goal: High Signal to Noise Ratio

- This storm looks remarkably like the one in 2002 that dropped baseball to softball sized hail over the southwestern part of Fort Worth, similar to the large hail threat near Roanoke now. Actually, this storm looks a lot like the storm that made me a meteorologist on Friday the 13th in June of 1975. That one moved from NW to SE and produced an F-3.
- 2" Hail moving into Roanoke now. Trophy Club is next.
- What was the lowest temperature in December?

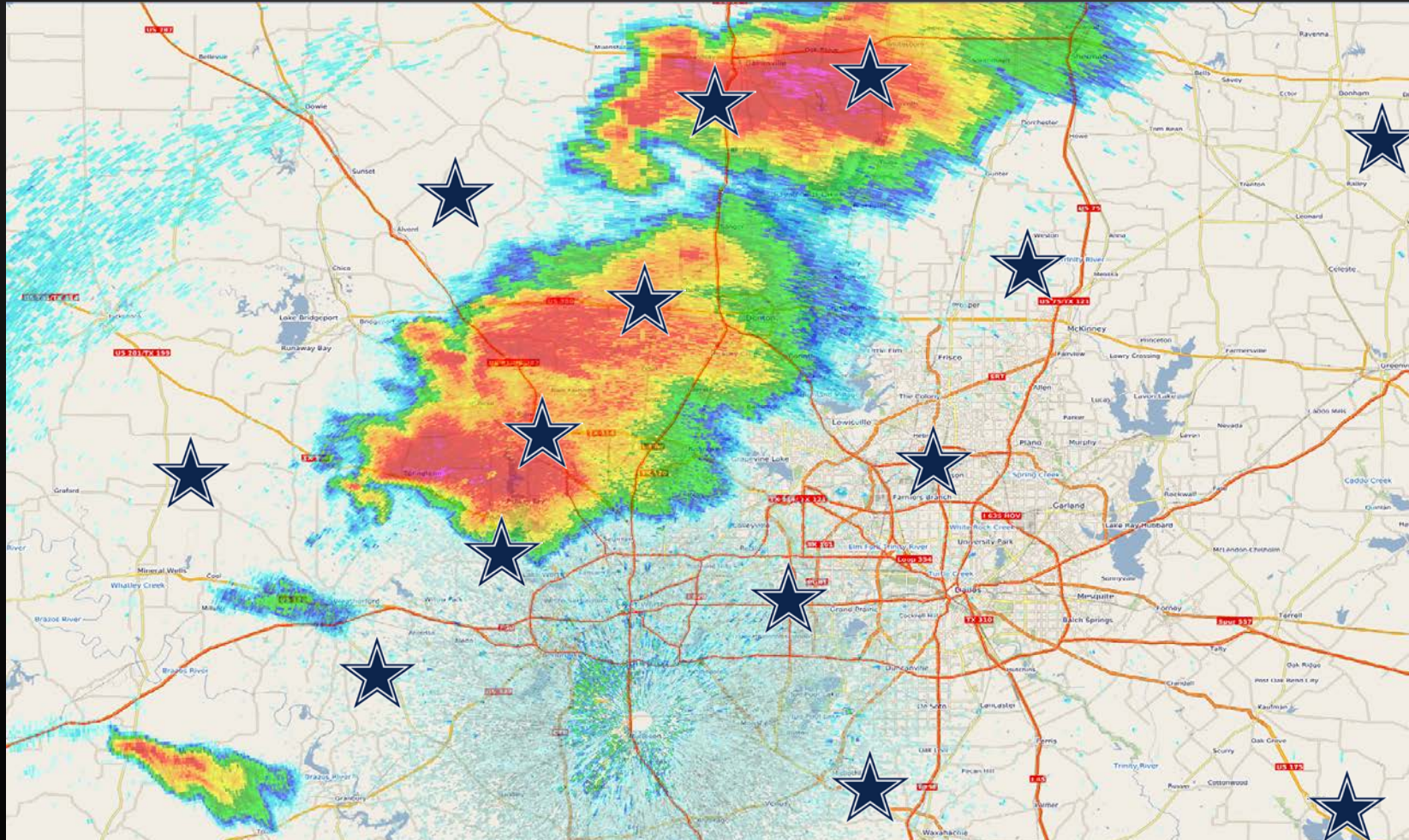
No Private Messages (to NWS)

- No screenshots to protect the innocent. My “record” is 12 individual messages
- Goal of NWSChat (and IWT in general) is to have the same information at the same time.
- One question may answer everyone. May not.
- Outdoor events
 - May have some need to discuss things not yet ready for public release
 - Be sure you’re in the correct chat room. FWDEMAChat.
- If you have a question, someone else may have the same one.
 - There have been times when answers are posted to only one person, but was meant for the group.

There are no dumb questions.

- **This is not a challenge!!**
- **If you have a question: Ask.**
- **There really are no dumb questions.**
 - **Timing is always an issue.**
 - **Confidence in the forecast may be an issue**
- **Do ask that you check what is going on and maybe do some checking on your own.**
- **You are not bothering us. ***

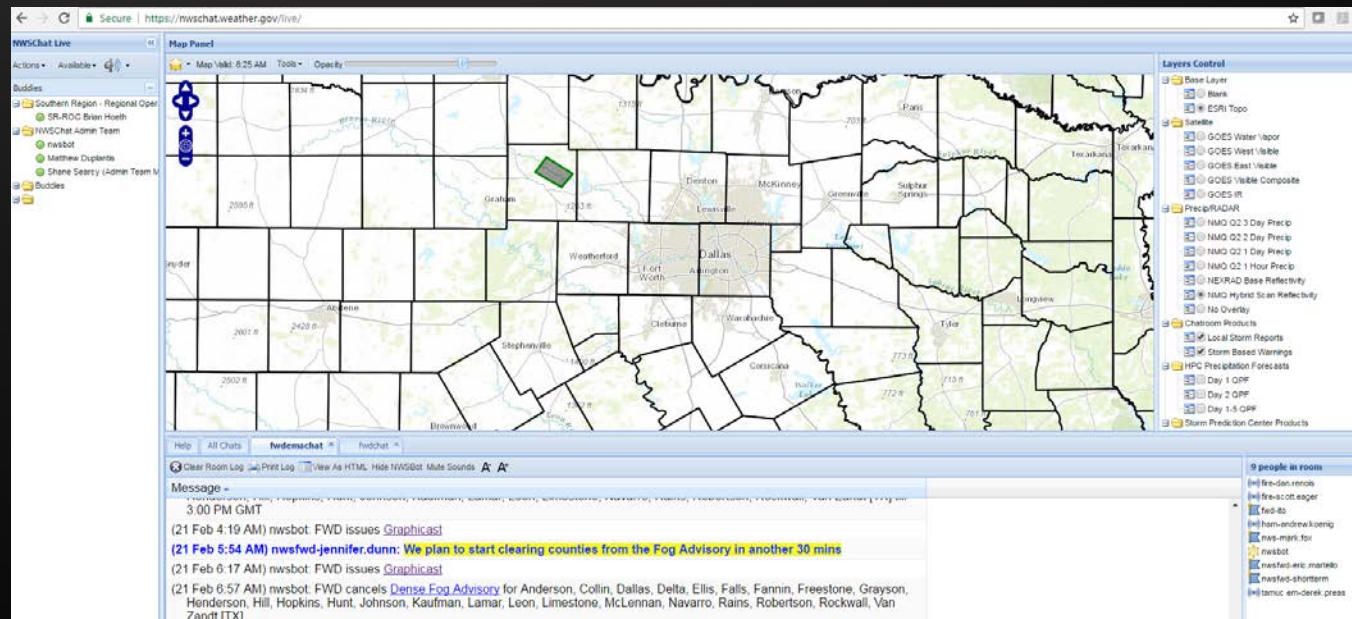
* Some Storms Are More Important Than Others



One Message, Multiple Voices

Follow Along...

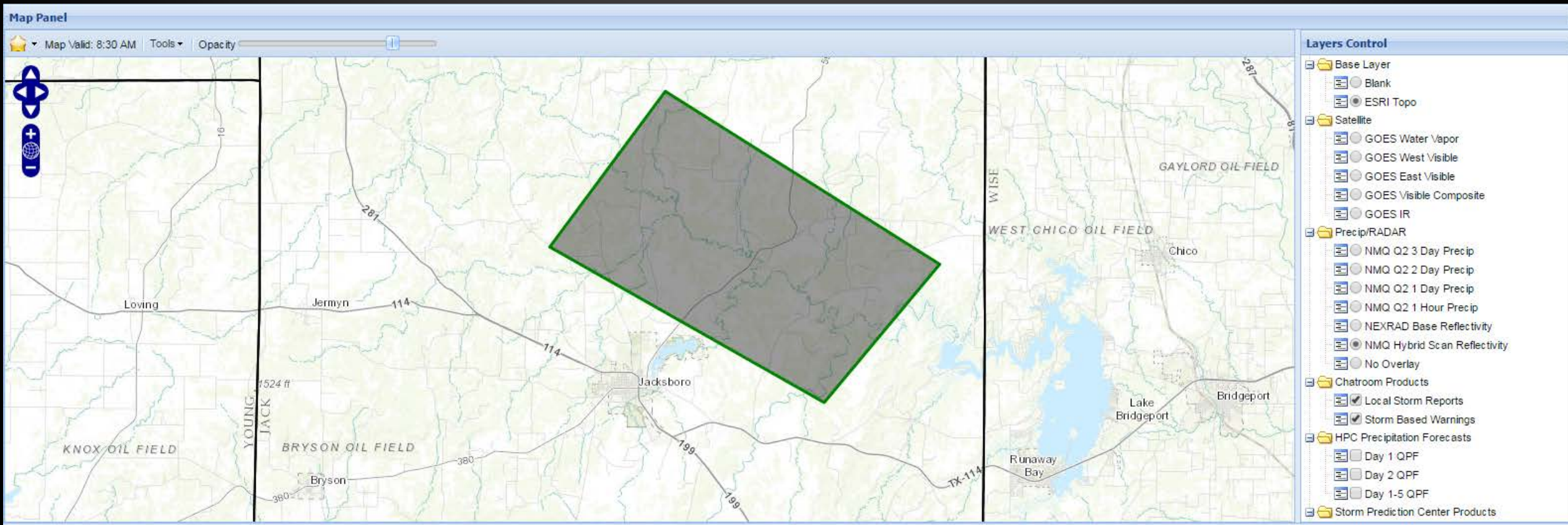
- Not always possible to catch everyone up when they enter an event.
- If the storm is affecting you and you just got into chat? It's a little late.
- Once in the chatroom, scroll back a bit to see what is going on.
- NWSChat/live has the option of warning polygons / LSRs on the map.



One message, Multiple Voices

Get a Map

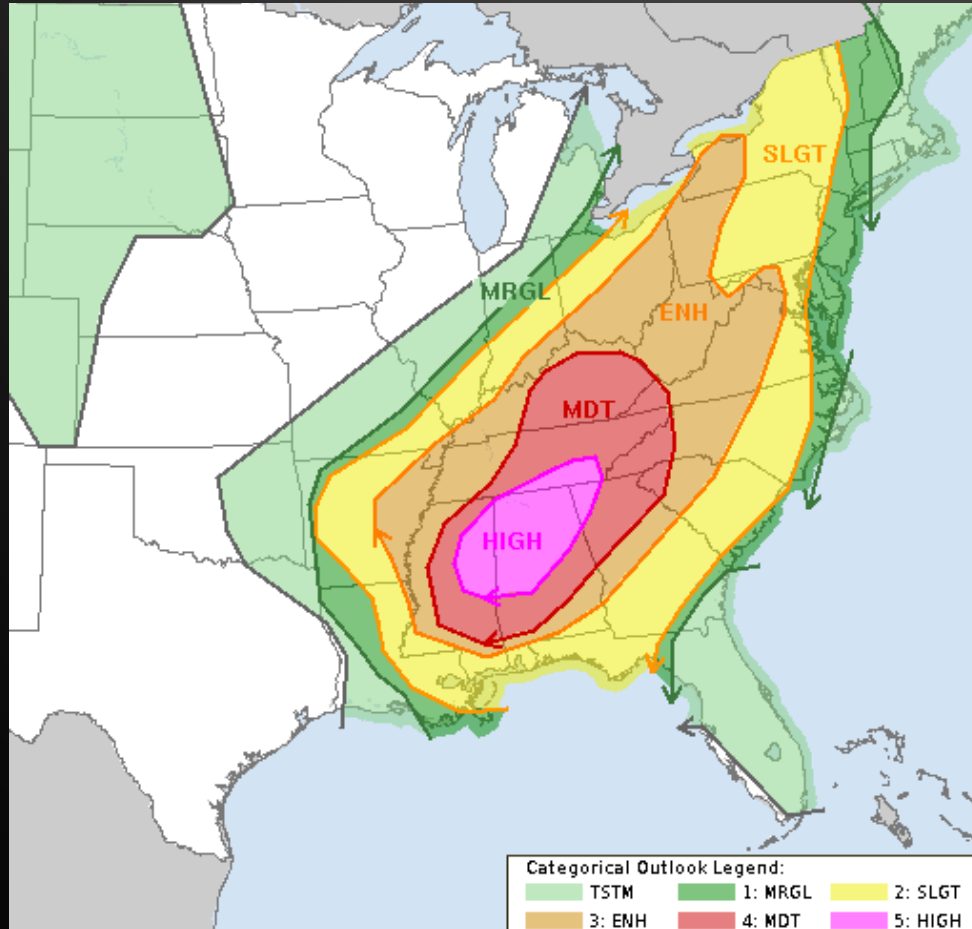
- The flood warning is issued for just east of Jermyn.



(21 Feb 6:57 AM) nwsbot: FWD cancels [Dense Fog Advisory](#) for Anderson, Collin, Dallas, Delta, Ellis, Falls, Fannin, Freestone, Grayson, Henderson, Hill, Hopkins, Hunt, Johnson, Kaufman, Lamar, Leon, Limestone, McLennan, Navarro, Rains, Robertson, Rockwall, Van Zandt [TX]

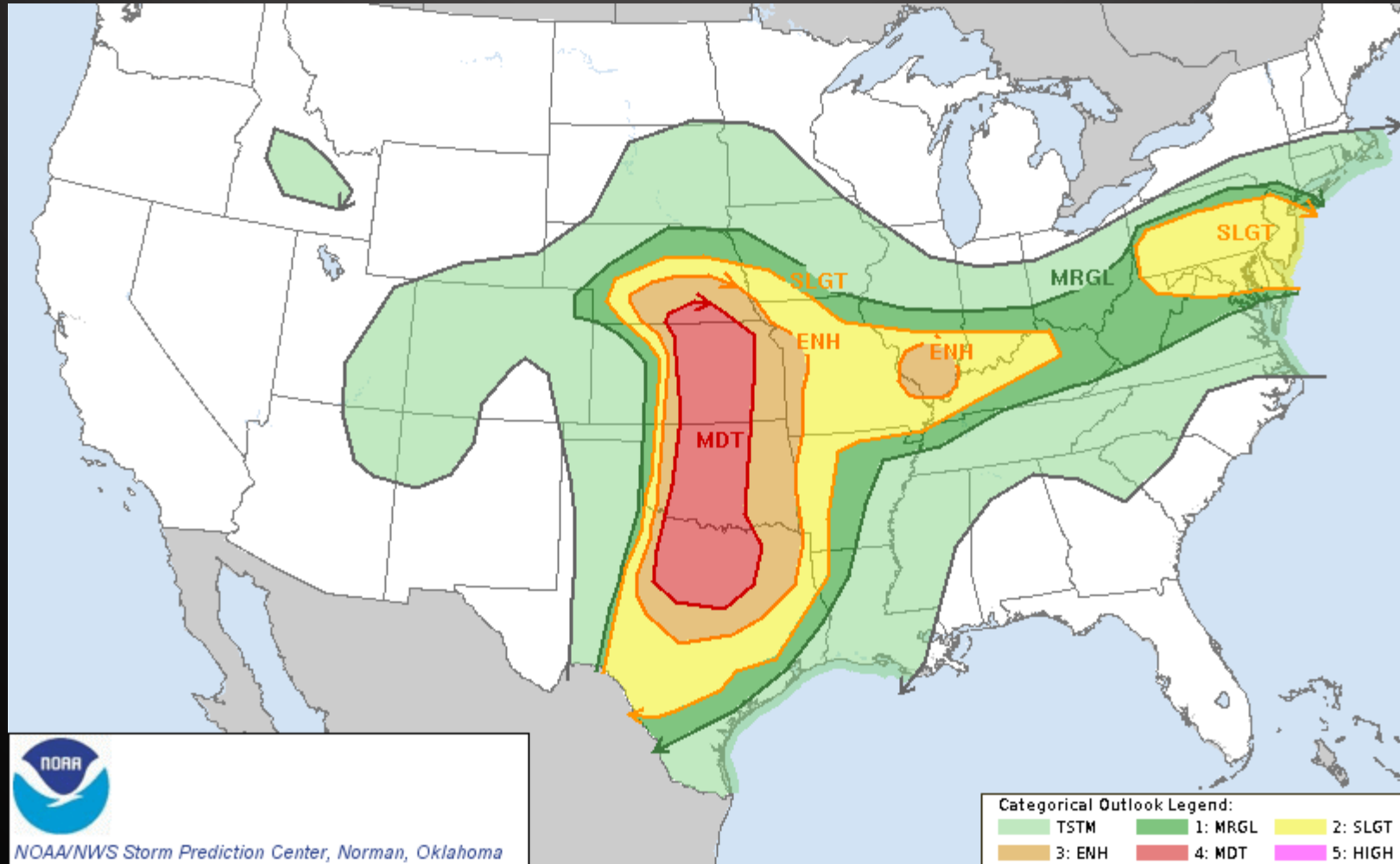
nwsfwd-shortterm
tamuc em-derek.press

Other Terminology...SPC

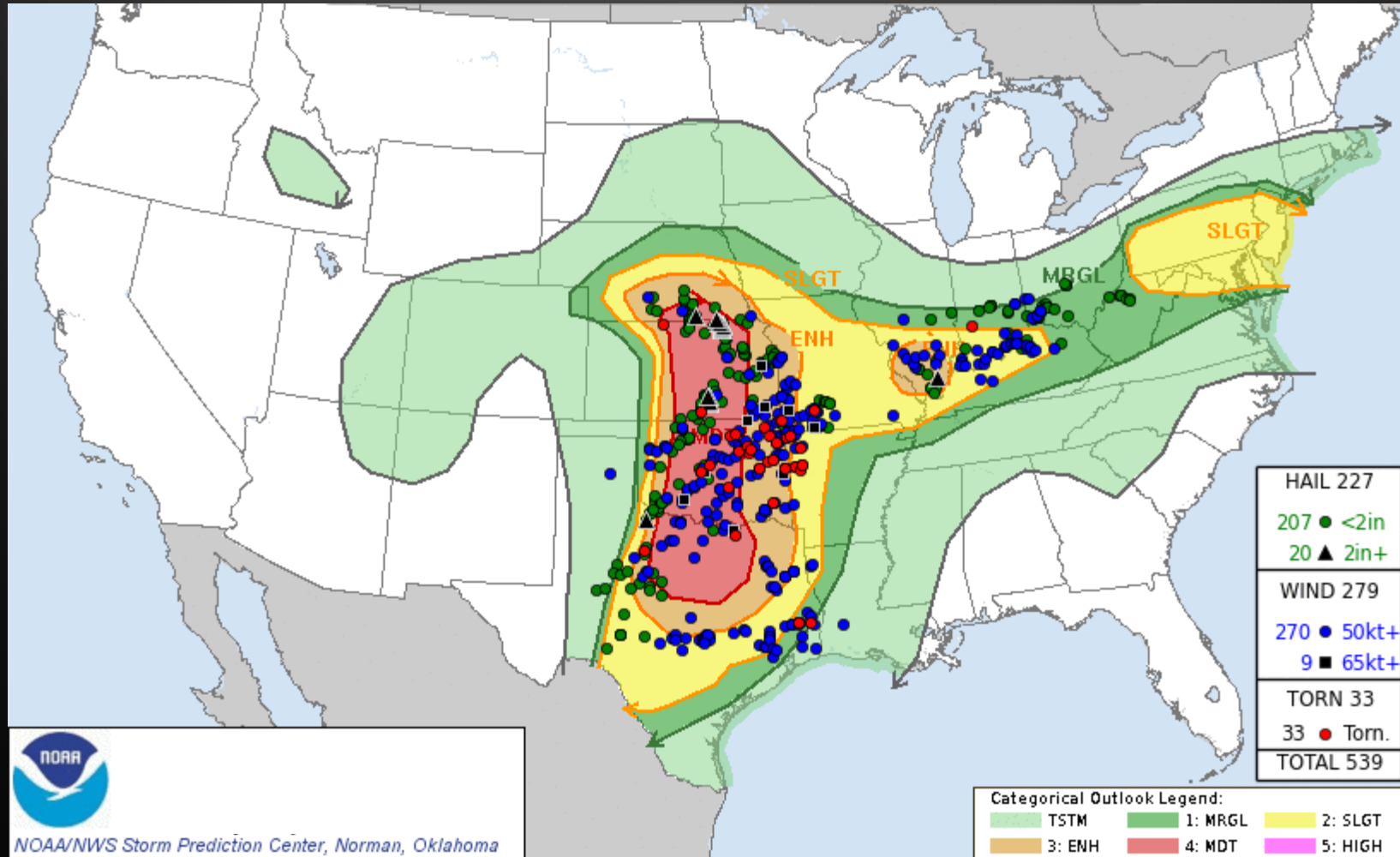


	Thunder
1	Marginal
2	Slight
3	Enhanced
4	Moderate
5	High

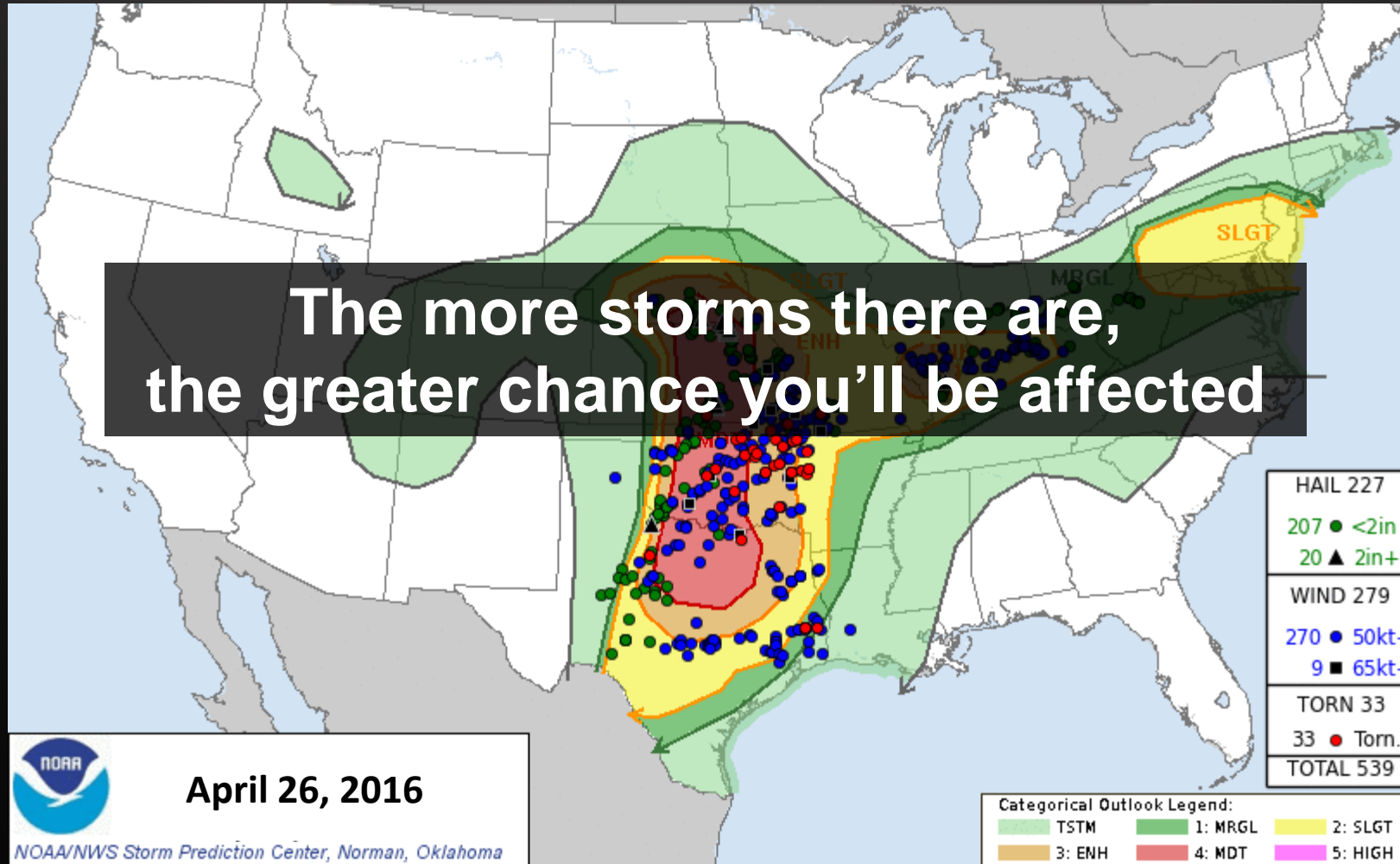
Risk is Coverage, Not Intensity



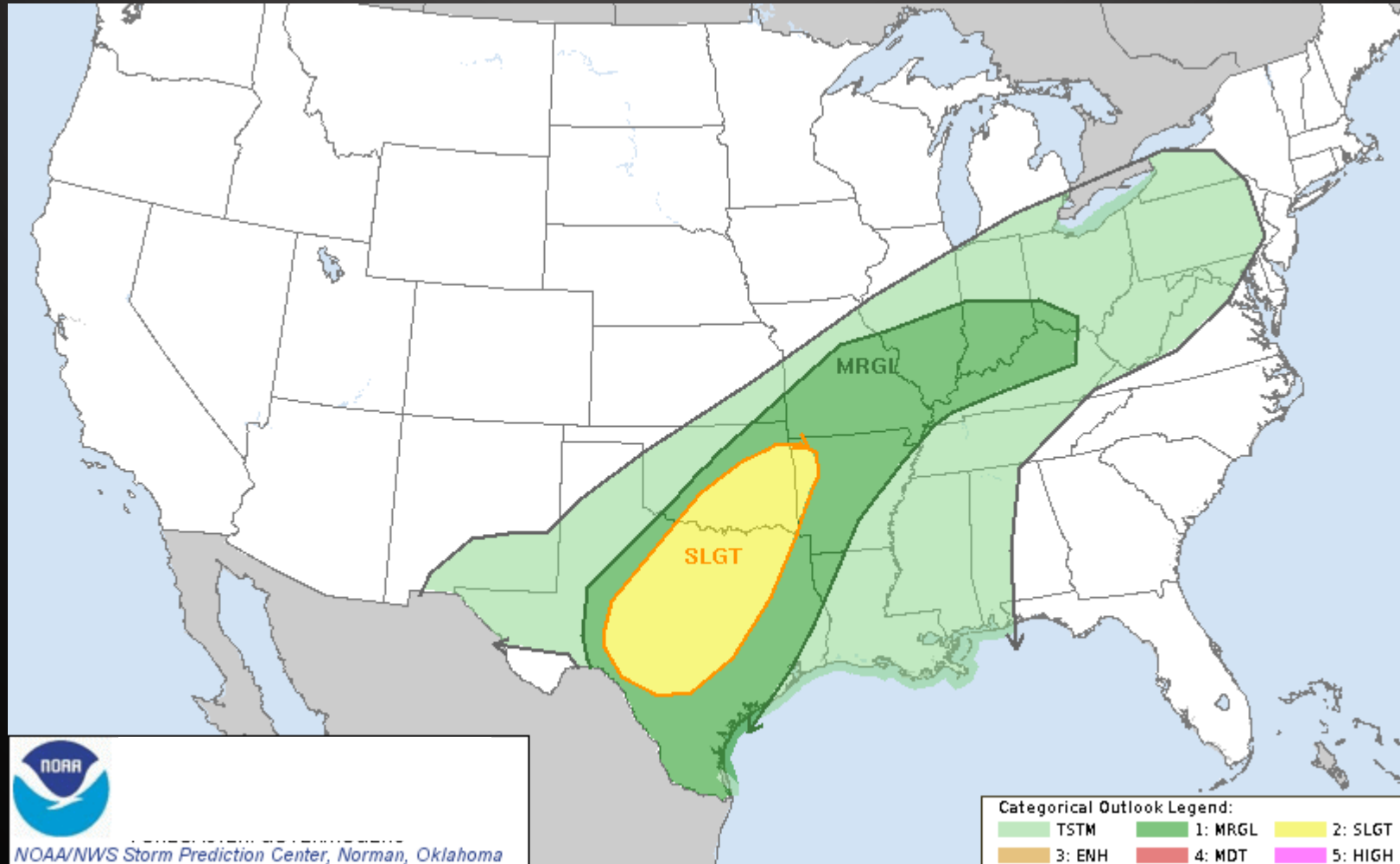
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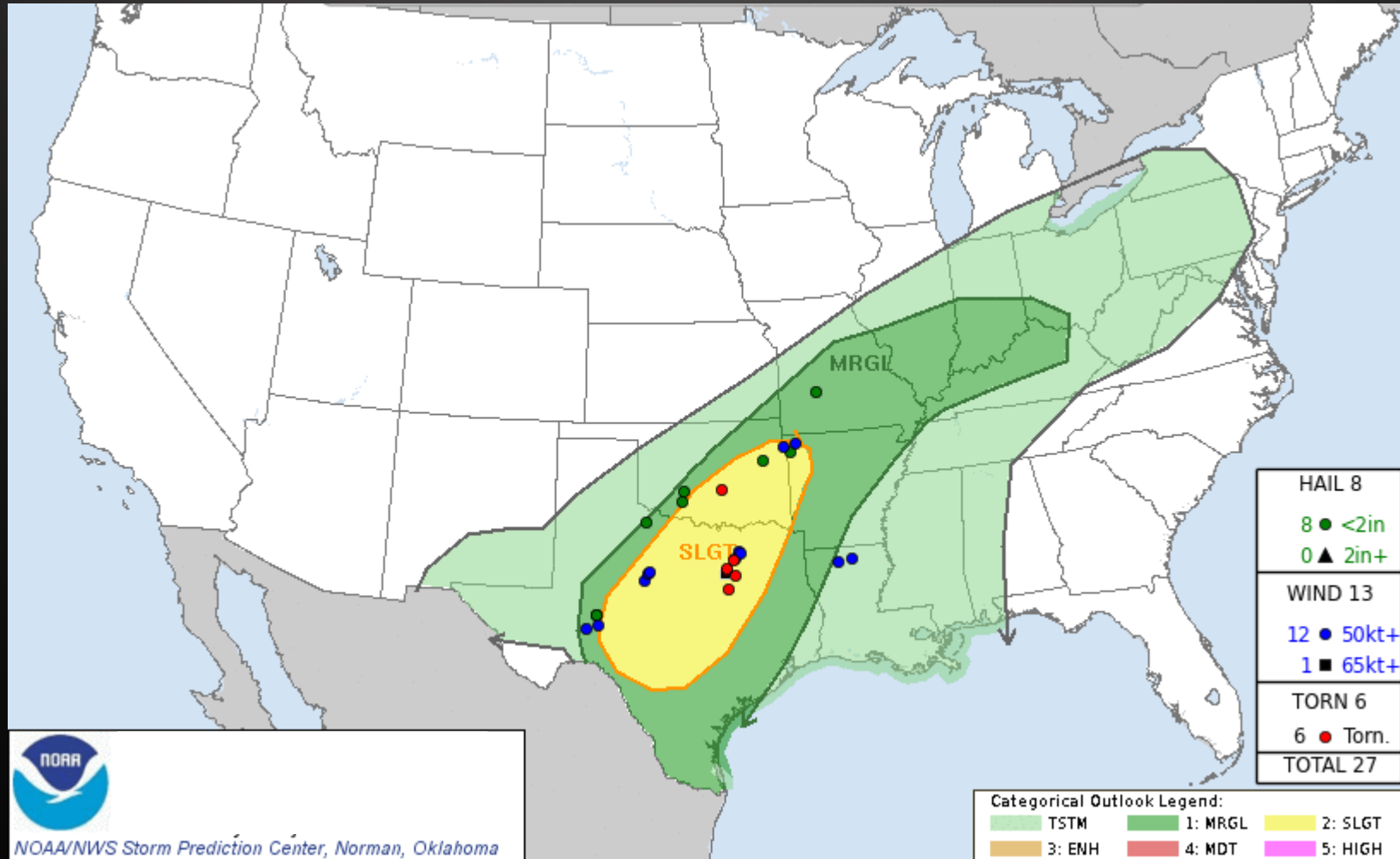
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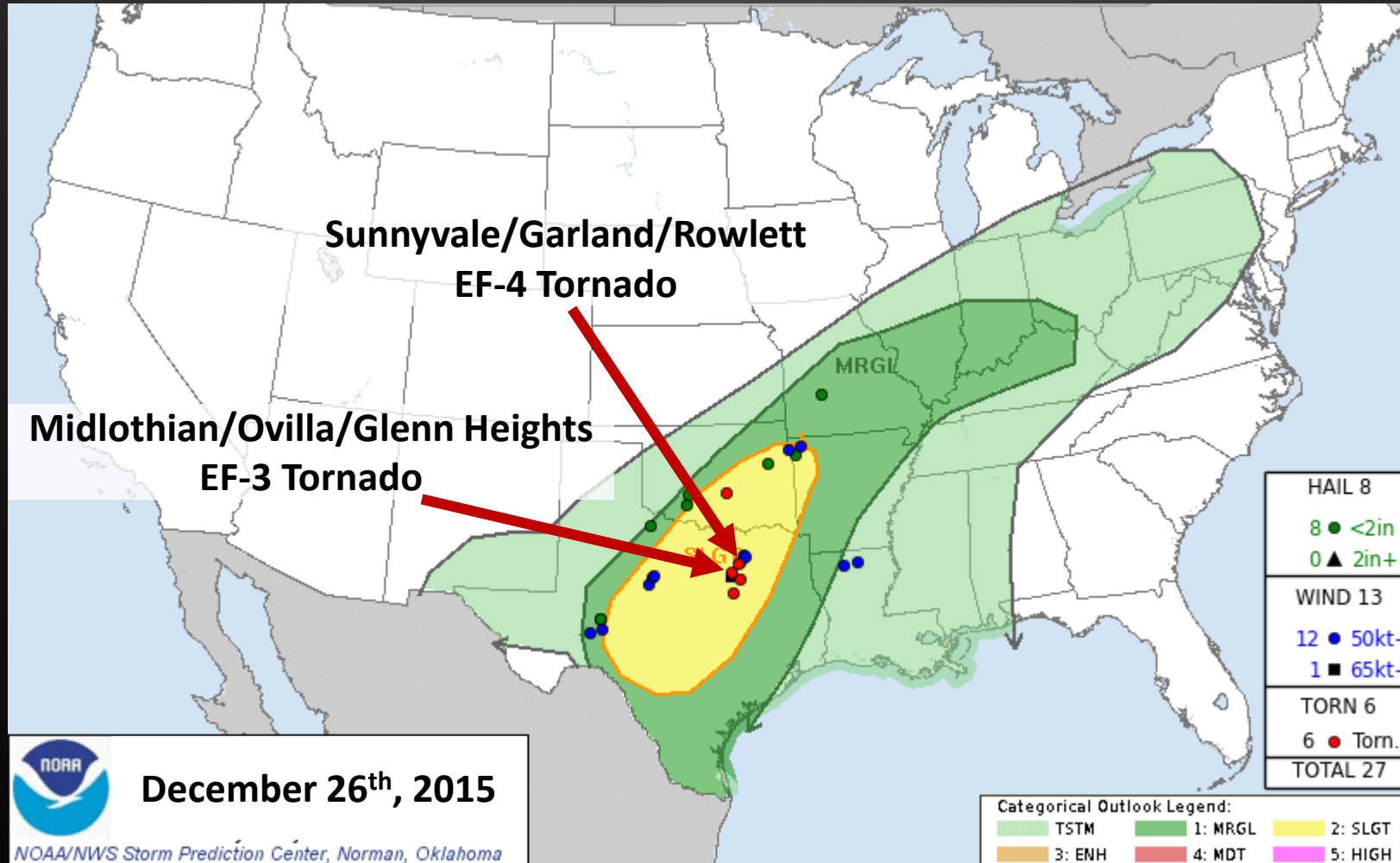
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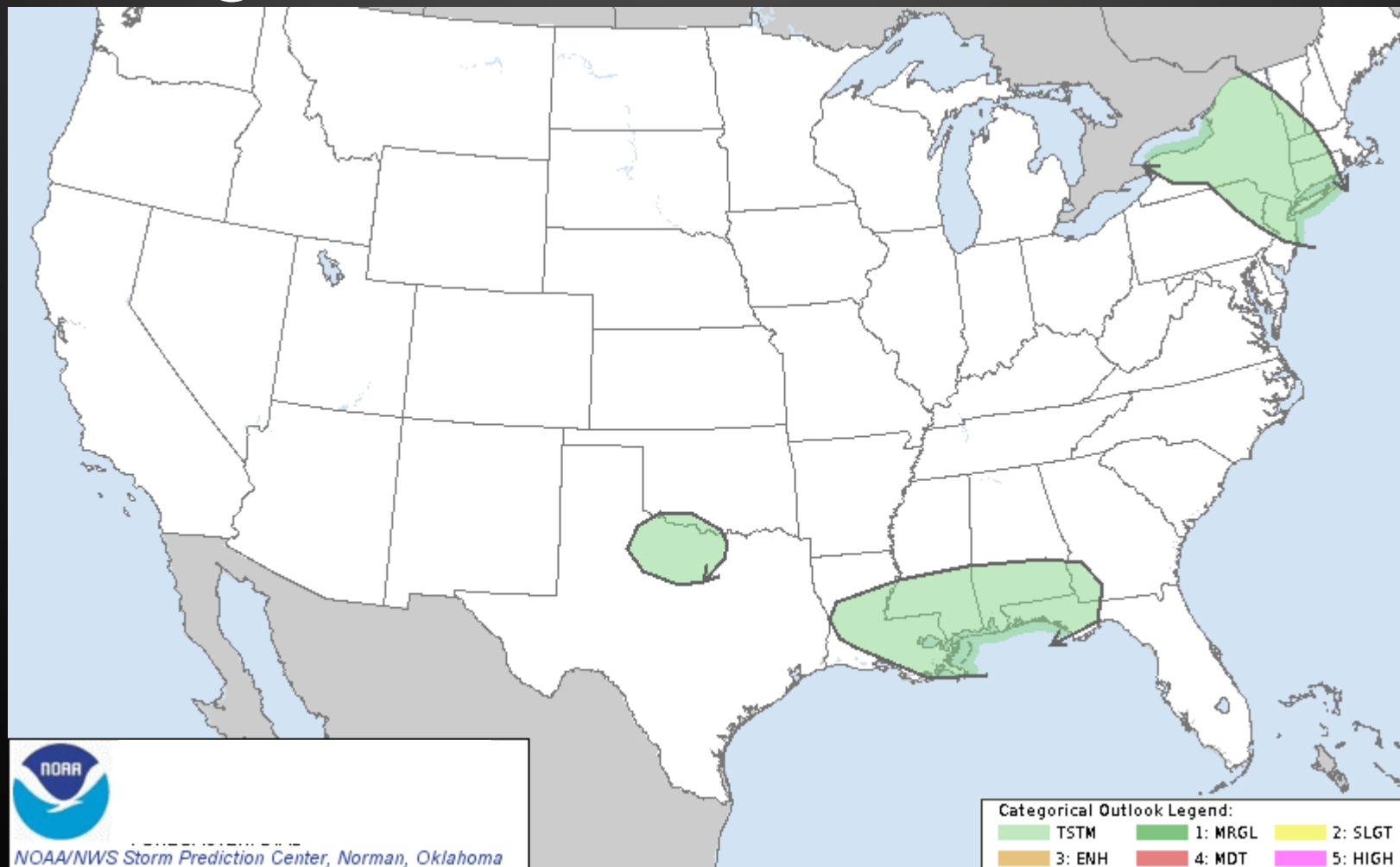
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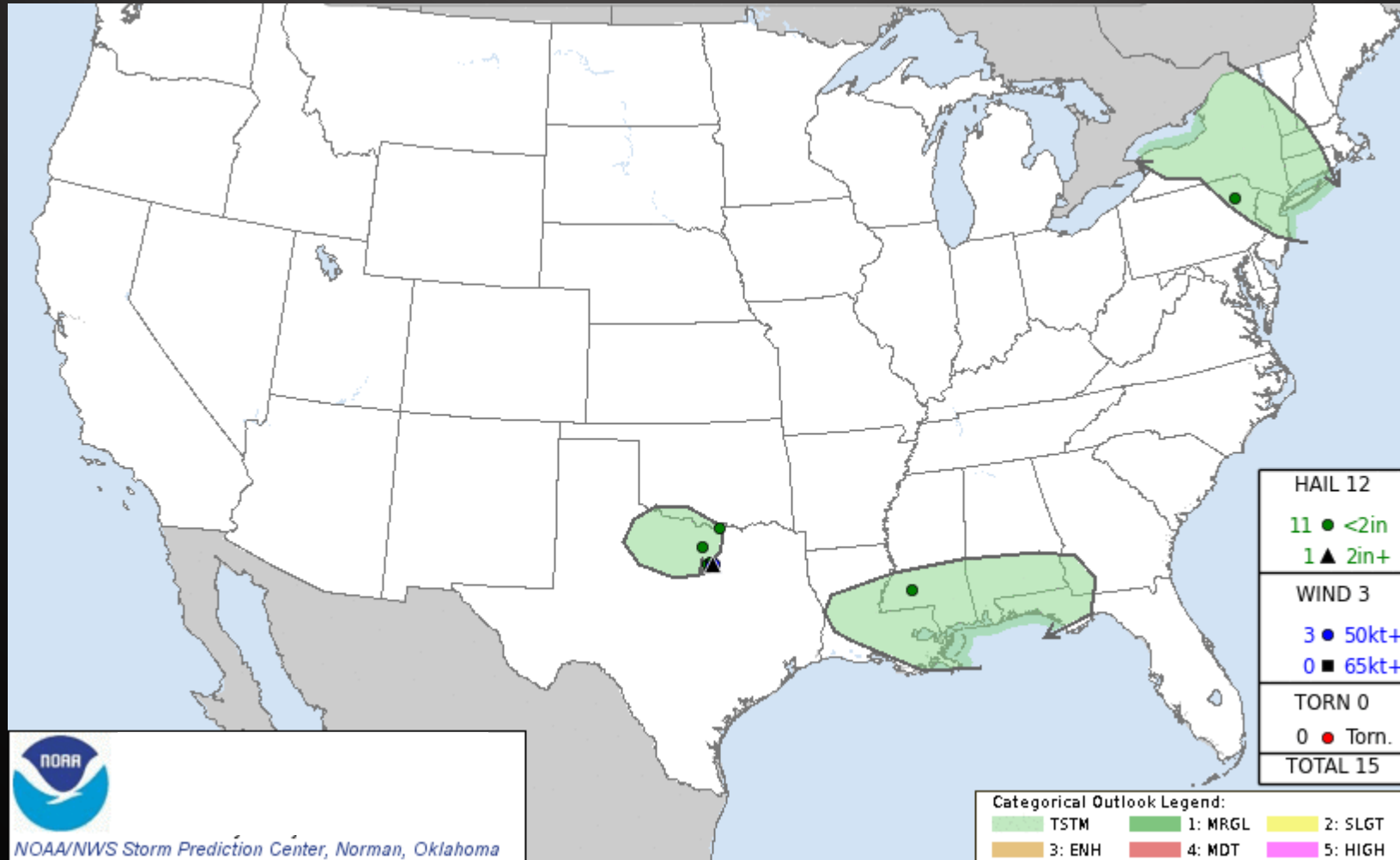
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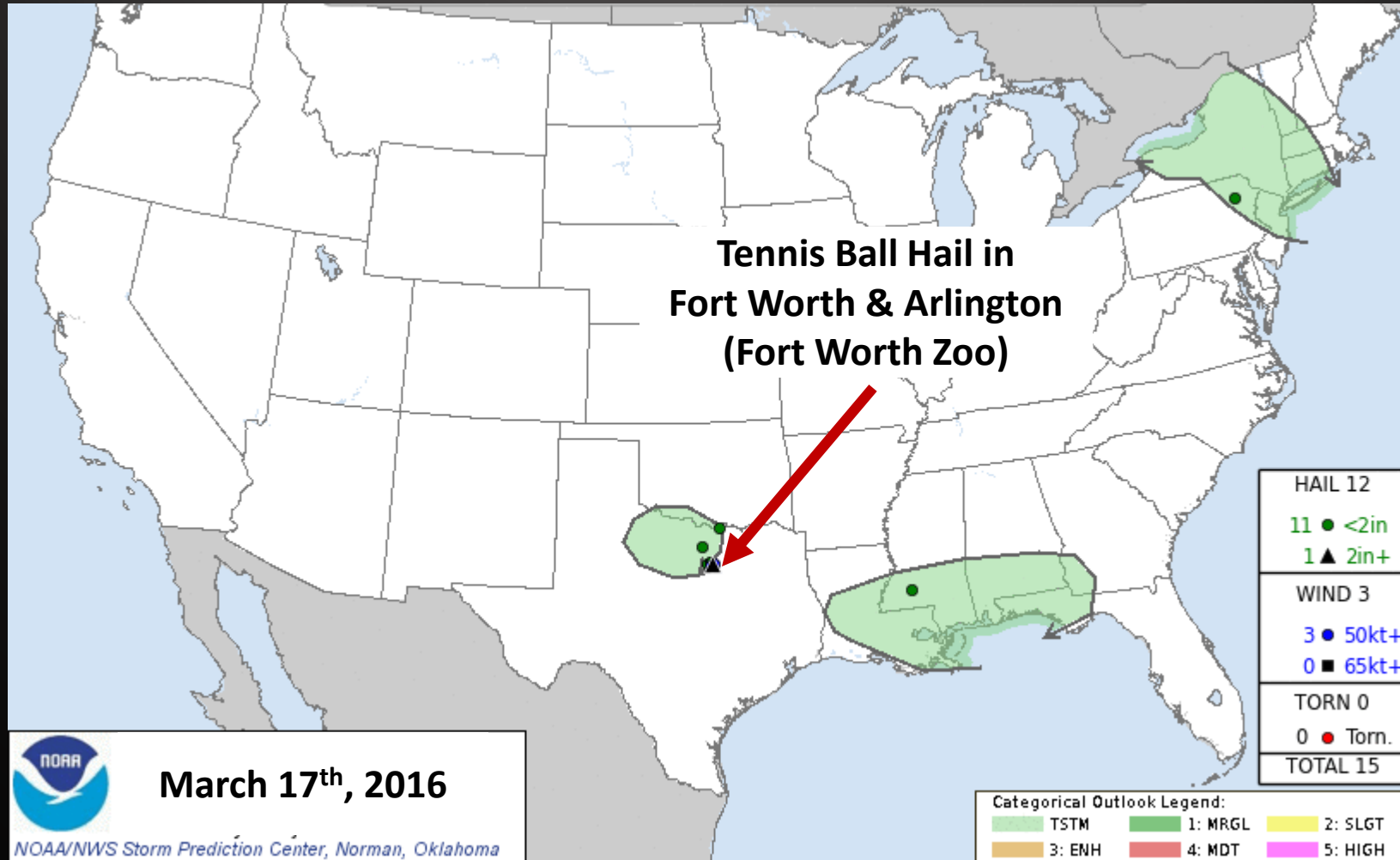
In Reality: The lines mean nothing



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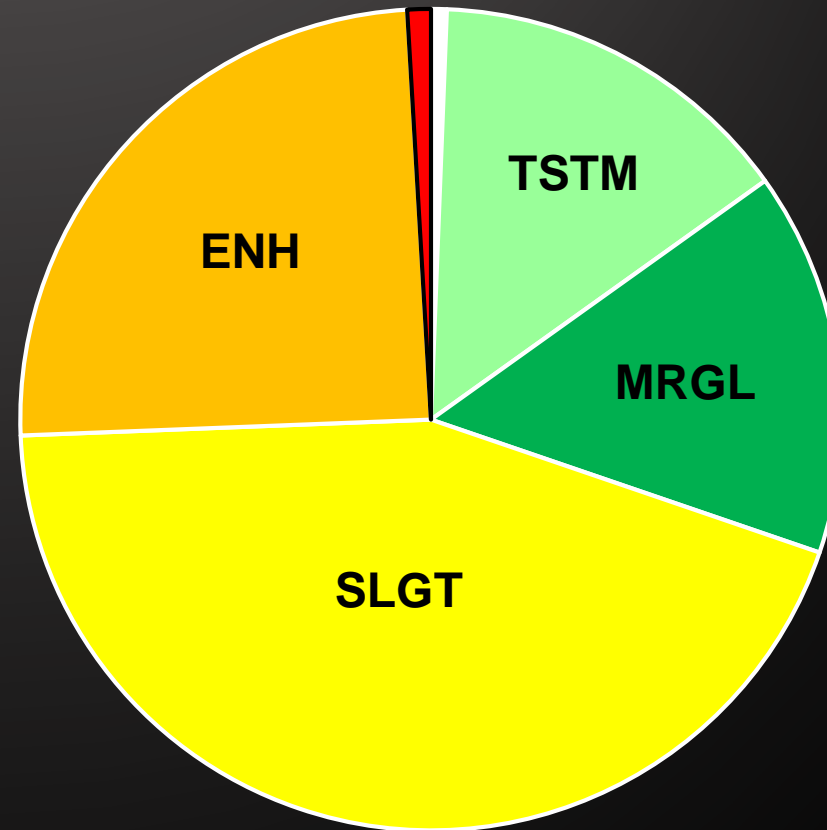
In Reality: The lines mean nothing



What's my chance for severe weather in a...

Marginal Risk:	2.5%
Slight Risk:	10.8%
Enhanced Risk:	21.8%
Moderate Risk:	100%*
	<small>*sample size of 3 counties</small>
(No high risks)	N/A
No Risk:	0.01%
General Thunder:	0.5%

Total Occurrences of Severe Weather



*Based on 12z SPC outlooks for North/Central TX (Oct '14 – Oct '16)

Summary

- **Equally dangerous storms can occur in any category.**
- **Severe weather isn't limited to lines and colors on a map.**
- **SPC outlooks are national in scope, while NWS offices focus on local impacts.**
- **Local office forecasts are updated more frequently than SPC's.**

Other Terminology

- **PDS Watch: Particularly Dangerous Situation.**
 - Intent: Highlight the potential for higher intensity storms
 - IMO: Planning remains the same
- **Tornado / Flash Flood Emergency: A warning which is immediately confirmed and has the potential for an extreme loss of life.**
 - Intent: Confirmation that a life threatening condition exists in a large population area.
 - IMO: Should be extremely rare. No changes to how EMs react. More for the media to help create urgency.
- **NWS UPDATE: Head's up email that something is possible.**
 - Intent: Get you out of your routine and monitor the weather a bit closer.



Understanding the Flood Products

West Gulf River Forecast Center



Urban / Small Stream Advisory

WHAT IS IT?
Flooding of small streams, streets and low-lying areas.

WHAT TO DO?
Stay away from areas that are prone to flooding and stay clear of rapidly moving water

Flood Watch

WHAT IS IT?
Flooding is possible – typically within 6 to 48 hours before rain is expected to reach the area.

WHAT TO DO?
Stay tuned to local river forecasts; prepare for areas near rivers to spread towards nearby roads and buildings

Flash Flood Watch

WHAT IS IT?
Flash flooding is possible – typically 6 to 48 hours before rain is expected to reach the area.

WHAT TO DO?
Have a way to receive local warnings, expect hazardous travel conditions and have alternate routes available

Flood Warning

WHAT IS IT?
Flooding impacts are occurring or imminent.

WHAT TO DO?
Stay *alert* for inundated roadways and follow all local signage! Additional impacts include homes and structures could become flooded and need to be evacuated

Flash Flood Warning

WHAT IS IT?
Flash flooding impacts are occurring or imminent.

WHAT TO DO?
Conditions will *rapidly* become hazardous! Do not cross flooded roadways or approach inundated areas as water may still be rising

Flash Flood Emergency

WHAT IS IT?
Flash flood situation that presents a clear threat to human life due to extremely dangerous flooding conditions

WHAT TO DO?
Immediately reach higher ground by any means possible



How is a flash flood different from a standard flood?

Flash floods are characterized by rapid rise of water on the order of a few minutes to 6 hours that can occur anywhere. A flood watch or warning pertains to larger streams and rivers that take much longer to respond (3 hours to weeks) but move much larger amounts of water through sensitive areas. Flood Warnings can last 6 to 12 hours to weeks for a single location.



Understanding Criteria Levels

West Gulf River Forecast Center



BELOW CRITERIA

Impact: Water is within the banks of the river with no impacts to the surrounding area. Flow speeds may still be high during rainfall or releases which could impact recreational activities

ACTION

Impact: Water is over the banks and into the flood plain, but not a threat to structures or roadways. Some action may be required such as moving farm equipment or increasing awareness

MINOR

Impact: Typically water is impacting areas inside of flood plain which can vary by location. Some low water crossings covered by water, agricultural flooding, water approaching public areas (parks, sidewalks etc.). Areas frequently flooded can expect to be impacted

MODERATE

Impact: Water now reaching areas only impacted by significant rain events. Structures can be inundated, several roads covered with water, water may cut off certain areas, widespread agricultural flooding.

MAJOR

Impact: Water is near the highest its ever been representing rare flooding and significant widespread impacts. Most roads will be covered by water in the area cutting off if not completely flooding subdivisions, rivers can be several miles wide in areas. Homes and structures underwater, bridges inundated and in danger of being hit by debris. Impacts may be greater than ever experienced.
RECORD FLOODING: Impacts that have never been experienced before and are therefore unknown