

Severe Weather Season and Horses

Being a meteorologist whose company specializes in short-fused convective warning dissemination and communication, and being a life-long equestrian, there are things you should know to help keep yourself and your horse as safe as possible when thunderstorms are forecasted or imminent. A little knowledge and planning can go a long way if you ever find yourself in a dangerous weather situation. All convective thunderstorms are dangerous, but some situations are more so than others. I'm going to preface what I write that you probably won't like a lot of what I'm going to say, but decades of experience goes into my recommendations.

Plan Ahead: Weather forecasts are driven by probabilities which the general public usually don't understand. What does a 20% chance of rain for a given defined area such as Sedgwick County actually mean? It means that 20% of the landmass will see rain. The other 80% won't. So, for the 20% who happen to fall under the clouds, the forecast was 100% correct. For the other 80%, you likely say, those stupid weather people got it wrong AGAIN.

- **Dangerous weather is never a surprise.** Much of the same sources of information the TV meteorologists are talking about are available to you for planning purposes. The best source is the 3 Day Convective Outlooks from the NOAA/National Weather Service's Storm Prediction Center (SPC) in Norman, OK. This product is paid for with your tax dollars and is the best tool for making decisions for **today, tomorrow, and the day after tomorrow**. <http://www.spc.noaa.gov/products/outlook/> There are 5 levels of risk for SEVERE THUNDERSTORMS which relate back to the probabilities.

Categorical Outlook Legend:		
TSTM	1: MRGL	2: SLGT
3: ENH	4: MDT	5: HIGH



A SEVERE THUNDERSTORM is defined as producing 1" + diameter hail and 58+ mph wind.

- TSTM:** There will be non-severe scattered thunderstorms in your area. Being aware of lightning should be your biggest concern.
- MRGL:** There's between a 2-5% of thunderstorms deemed to be SEVERE within the darker green areas.
- SLGT:** There's as much as a 15% chance of a severe thunderstorm occurring for any place within the yellow area.
- ENH:** There is as much as a 30% chance of certain types of threats (tornado, large hail, high wind) occurring for any place within the light orange areas on the map.
- MDT:** There is as much as a 45% chance of certain types of threats (tornado, large hail, high wind) occurring for any place within the red areas on the map. **NOTE: Take it to the bank that you likely WILL see some kind of dangerous weather. Consider rescheduling.**
- HIGH:** There's as much as a 60% chance of certain types of threats (tornado, large hail, high wind) occurring for any place within the red areas on the map. **Note: Fortunately, SPC**

only declares a HIGH risk 5-6 times per year. DEFINITELY consider rescheduling.

What does all this mean to you? If you're going to a show, a long trail ride, or running any kind of outdoor activity, take a peek at the 3-Day Convective Outlook the day before and certainly the day of. If there are bullseyes that cover your area, consider adjusting your plans. You can read what time of day they are expecting the storms to fire up. If they're predicting late afternoon for storm initiation, consider making a short-notice change to start up the show earlier in the morning so you can get the rides in and send folks on their way before the storms start happening. If somebody can't alter their plans, you'd be far better off simply offering a refund than taking the chance of somebody getting injured or worse. Even though something like this would be an "Act of God", you're only as **non-liable** as the mood a jury is in the day of the trial.

Be able to receive a watch or warning: Know the difference between the two:

A **WATCH** means conditions are favorable for severe thunderstorms to develop.

A **WARNING** means a dangerous event IS HAPPENING.

Think of the difference between a watch and a warning in these terms:



There is another category of WATCH which you should be familiar with. A PDS WATCH means a Particularly Dangerous Situation is developing and it means exactly what it sounds like. Typically, they only get issued when SPC has gone to a Moderate or High risk outlook. A PDS WATCH means not if, but WHEN storms initiate, they will be strong, violent, and long-lived. This usually precedes an outbreak which is frequently deadly. Pay close attention and make adjustments to your plans if you're in a PDS WATCH area.

What's the best way to receive this information? There are more ways now than there have ever been to receive weather information on our smart phones. This is NOT necessarily the GOOD news because the government has no established standards, rules, guidelines, or even best practices in place for entities disseminating their official information. Some do it extremely well. MANY do it very poorly. Don't assume your weather app on your phone actually does know exactly where you are at any given time because they don't even though many claim otherwise. GPS is the single biggest drain on your phone's battery, and most phones now come with a program running in the background which is monitoring which apps are allowed to be using GPS. If you have multiple apps running, the user has no way to tell which ones the "ghost" program trying to preserve your battery

life, is allowing access to location services. It's a false sense of security that has the capability of getting you killed.

A review of what's available:

NOAA Weather Radio: The legacy system used to be the only way to PROACTIVELY push a warning to you. While it is still a very important part of the warning and communication universe, it is only capable of delivering warnings for the entire county which in the Midwest is problematic, as most counties average 1,000 square miles. It is a "heads-up" that a warning has been issued for your county, but you must seek additional information to determine whether the threat will impact YOU. The most important thing about NOAA weather radio is it operates off a completely unique, discreet, radio network which is not subject to compete for wireless bandwidth during a disaster, making it incredibly reliable.

Government Wireless Emergency Alerts (WEA): This free system sends "push" notifications to smartphones that are WEA-enabled for Presidential emergencies, Amber Alerts, and tornado and flash flood weather warnings. A WEA alert is only a "heads up" that you must seek additional information to determine whether the warning actually means your specific area. There are other serious issues with the reliability of WEA. Think of the "Inbound missile warning-this is NOT A DRILL" which scared people in Hawaii out of their wits. The weather alerting is equally capable of delivering a very scary warning which has no effect on where you currently are. Personally, I have disabled them because they're not trustworthy.

Free Smartphone Weather Apps: There are literally THOUSANDS of them in the app stores. Some are trustworthy, most are not beyond getting current conditions and a NWS forecast. If they are free, their true purpose is a Trojan Horse delivering click-through advertisements which is the only way they make any money. The more push notifications they deliver to you, the more \$ they make- it has nothing to do with your personal safety.

You have heard the adage: "You get what you pay for". Nothing could be more true with it comes to the critical alerting capabilities and accuracy of FREE weather apps. If you're relying on free, you're taking a gamble that could cost you your life. It's the reason they are referred to internally within our industry as "crap apps". Be very wary of free when it comes to something this important, especially living in the Midwest.

I am not promoting any companies, including mine. I'm enlightening the members to be more weather-aware, and to be cautious regarding your short-fused warning source. If you want more detailed information as to what to trust, contact me. I'll then direct you to the National Weather Service to verify what I am saying.

Lastly, what is the best course of action for you and your horse to survive a dangerous convective thunderstorm? Here are some facts and some of these are painful, but true.

If lightning is within 6 miles or less, get yourself and them inside. Flash-to-bang rule: See the flash, start counting "One thousand 1, one thousand 2 or use your watch or phone. If the thunder happens BEFORE you count to 30, the lightning is LESS than 6 miles away and you're at risk of being struck. OR, get a reliable lightning app on our phone but remember to be wary of FREE. Hopefully

your barn has lightning rods installed. It's a very worthwhile investment considering most barns have metal roofs.

If you're out at a venue where you can't get inside, put the horse in the trailer, close it up the best you can, and get yourself into the vehicle with the windows up. The myth that the rubber tires prevent the lightning from going to ground is just that. If you're struck, the metal vehicle will deflect the lightning into the ground. There are no guarantees something bad won't happen to the horses in the trailer, but if they're outside, tied up to it, they're MUCH more vulnerable.

Unfortunately when it comes to an inevitable tornado, there's a trade-off that has to be made. There's going to be lightning, BUT if one is confirmed and/or observed and heading your way, horses are much safer turned out in a large field than being confined in a barn which if struck, will result in a possible collapsed roof and walls, sharp projectiles flying around, etc. Horses can get themselves out of the path of a tornado. A close friend and veteran storm chaser, Jeff Piotrowski has observed this many times. <http://www.twisterchasers.com> He once told me of a few horses running away from a tornado on the ground that eventually came to a fence line. He watched them all go flat-prone onto the ground. The tornado went right over them. Afterwards, they all stood up and shook themselves off. None seemed to have suffered any injuries. Trust their instincts. Again, no guarantee but it's the best of no really GOOD choices under the circumstances.

Please stay SAFE and survive the storm!