

Spotter Quick Reference Guide

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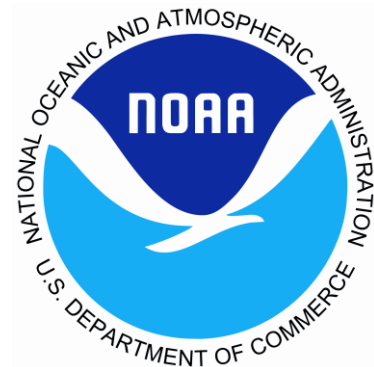
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What's the forecast? (Self-Briefing)

- **What should I expect today?**
 - Weather Story – [Visit Link](#)
 - Hazardous Weather Outlook – [Visit Link](#)
- **There's a chance for hazardous weather today. I want more information. Where should I look next?**
 - Briefing Page – [Visit Link](#)
 - Video Briefing - [Visit Link](#) (for some events)
 - Storm Prediction Center – [Visit Link](#)
 - Area forecast discussion – [Visit Link](#)
- **What's the forecast beyond today?**
 - Hazardous Weather Outlook - [Visit Link](#)
 - Storm Prediction Center - [Visit Link](#)

Understanding Severe Thunderstorm Risk Categories

THUNDERSTORMS (no label)	1 - MARGINAL (MRGL)	2 - SLIGHT (SLGT)	3 - ENHANCED (ENH)	4 - MODERATE (MDT)	5 - HIGH (HIGH)
<p>No severe* thunderstorms expected</p> <p>Lightning/flooding threats exist with <u>all</u> thunderstorms</p>	<p>Isolated severe thunderstorms possible</p> <p>Limited in duration and/or coverage and/or intensity</p>	<p>Scattered severe storms possible</p> <p>Short-lived and/or not widespread, isolated intense storms possible</p>	<p>Numerous severe storms possible</p> <p>More persistent and/or widespread, a few intense</p>	<p>Widespread severe storms likely</p> <p>Long-lived, widespread and intense</p>	<p>Widespread severe storms expected</p> <p>Long-lived, very widespread and particularly intense</p>
 <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.



National Weather Service

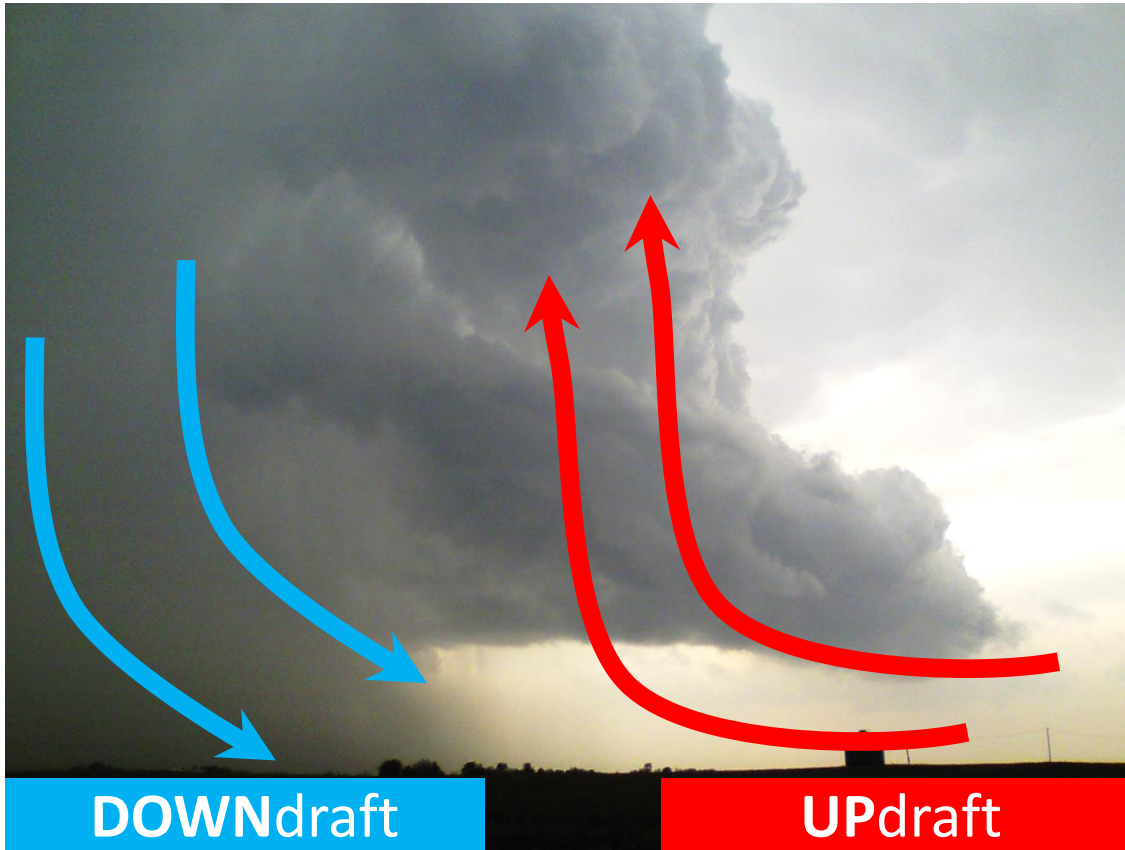
www.spc.noaa.gov



7 Steps to Live By (one page handout from training):

1. Find UPdraft and DOWNdraft
2. Determine storm motion
3. Check location (Am I safe?)
4. Assess strength
5. Rotation in UPdraft?
6. Watch UPdraft for wall cloud/tornado
or Watch DOWNdraft for wind/hail
7. Report things from list

What's This? (**UP**drafts vs. **DOWN**drafts)



UPdraft

- Tornadoes occur in the UPdraft
- Imagine the storm breathing in, this is the UPdraft
- *To identify:*
 - Look** for clouds that look like cauliflower
 - Look** for the rain-free base
 - Look** for a wall cloud
 - Look** for rotation
 - Look** for a tornado
 - Feel** warm air moving towards the storm

DOWNdraft

- Rain, wind and hail comes DOWN from the DOWNdraft
- Imagine the storm exhaling, this is the DOWNdraft
- *To identify:* **Look** for the rain
 - Look** for a shelf cloud
 - Feel** the rain cooled air moving away from the storm

Am I safe? (Safety)

- If you don't feel safe, seek shelter!
- No report is worth risking your life!
- Fast moving storm = less time to respond!
Know storm speed!!
- If tornado does not appear to be moving **you are not safe!**
- Trees and hills block views, choose your spotting location carefully.
- Lightning **can strike 20 miles** away from the storm!
- ***Dangers:*** Lightning, Flooding, Wind, Low visibility, Tornadoes, Hail, Drivers.

What's This? (Shelf cloud vs. wall cloud)



Credit: Fred Demeter Stockton, IL 6/22/13

Shelf Cloud

- Ahead of DOWNdraft
- Outflow edge (leads storm)
- Extends for miles
- **Horizontal (sideways)**
- May “roll” like a rolling pin
- **Look** for rain with its passage
- **Look** for a lower cloud, the winds will be faster!
- **Feel** wind with its passage

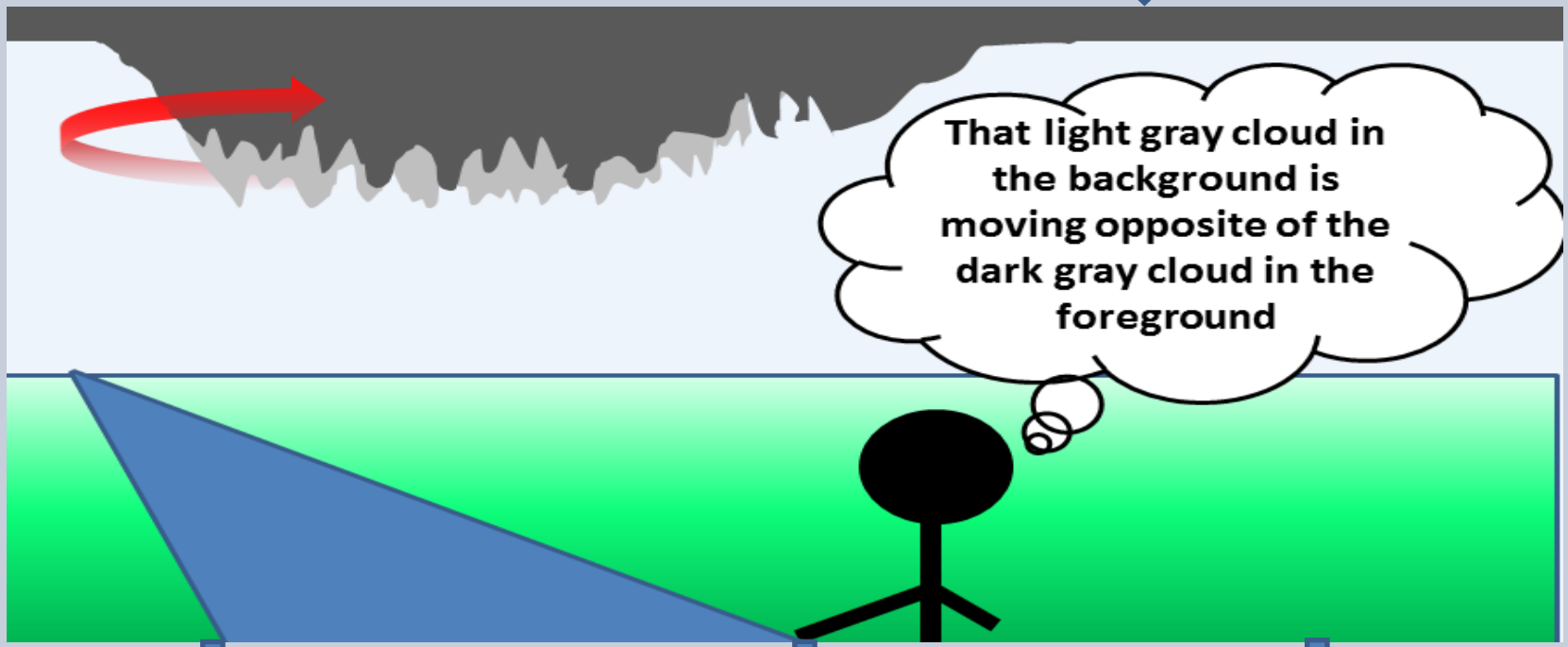


Credit: Danny Murphy Buchanan County 6/12/13

Wall Cloud

- Supercells
- Under UPdraft
- Inflow side (back side of storm)
- **Vertical (up and down)**
- May tip toward the rain
- Rotating, like a spinning skater
- Rain-free base
- Favored tornado development area

Is it rotating? (Wall Clouds)



No, no rotation

Yes, ROTATION! Call us!!

Still not sure? Call us and explain what you are seeing

Is that a tornado?

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Tornadoes

- Are you looking at the UPdraft?
- TORNADOES **ALWAYS ROTATE**. Look for rotation, **VERIFY** it is rotating
- Often near or connected to a wall cloud
- Rotation on the ground with no visible funnel is a tornado

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Look a-likes

DO NOT ROTATE

Remember:

S = Spin?

C = Connected to cloud base?

U = Under the UPdraft?

D = Debris?

NO to any of these means it's not a tornado.

If it spins, is connected and under the UPdraft and doesn't have debris –It's a funnel cloud

Report back to us!

- Be calm, and provide appropriate details when possible.
- Report only things on the following list. (Other things should not be reported. For example: Shelf clouds are NOT reported, but wind damage is.)
- **PROVIDE YOUR SPOTTER ID, TIME, LOCATION AND EVENT DETAILS**

Submit a [web report](#)

Twitter @NWSQuadCities

Facebook:NWSQuadCities

What to report:

- Storm-related Injuries/Fatalities
- Storm-related Damage:
 - Trees down (snapped or uprooted? diameter?)
 - Branches broken (diameter?)
 - Power poles down
 - Structural damage
- Tornado (rotation?) **CALL US**
- Funnel Cloud (rotation?) **CALL US**
- Wall Cloud (rotation?) **CALL US**
- Wind Gusts (40 mph or greater)
- Hail (all sizes)
- Heavy rain (1" or more in a storm)
- Creeks out of banks
- Water > 6 in. deep with current on roads
- Water > 2 ft. deep standing on roads
- Unusual road and/or bridge closures
- Buildings filling with water
- Mud or rock slides or debris flow
- Ice jam, levee failure, dam break