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

<table>
<thead>
<tr>
<th>THUNDERSTORMS</th>
<th>1 - MARGINAL (MRGL)</th>
<th>2 - SLIGHT (SLGT)</th>
<th>3 - ENHANCED (ENH)</th>
<th>4 - MODERATE (MDT)</th>
<th>5 - HIGH (HIGH)</th>
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</thead>
<tbody>
<tr>
<td>(no label)</td>
<td>No severe*</td>
<td>Isolated severe</td>
<td>Scattered severe</td>
<td>Widespread</td>
<td>Widespread</td>
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<td>severe storms expected</td>
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<tr>
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<td>severe possible</td>
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<td>expected</td>
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<td>and/or intensity</td>
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<td></td>
<td></td>
<td>isolated</td>
<td>intense</td>
<td>and intense</td>
<td>and particularly intense</td>
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</table>

- **Winds to 40 mph**
- **Small hail**

- **Winds 40-60 mph**
- **Hail up to 1”**
- **Low tornado risk**

- **One or two tornadoes**
- **Reports of strong winds/wind damage**
- **Hail ~1”, isolated 2”**

- **A few tornadoes**
- **Several reports of wind damage**
- **Damaging hail, 1 - 2”**

- **Strong tornadoes**
- **Widespread wind damage**
- **Destructive hail, 2” +**

- **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.

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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? (UPdrafts vs. DOWNdrafts)

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)

**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

**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)

Take a deep breath

Are you looking at the Updraft?

No, likely not rotating

Yes, Are you seeing this?

Yes, Are you seeing this?

That light gray cloud in the background is moving opposite of the dark gray cloud in the foreground

No, no rotation

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

Yes, ROTATION! Call us!!
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

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

**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

Submit a [web report](#)  Twitter @NWSQuadCities  Facebook:NWSQuadCities