

How Big are Your Marbles?

A few weeks ago I went to the Hazardous Weather Spotter Training class to become a trained spotter. Actually, I took the Cella clan and headed out to NIU for the training session. My youngest is dreadfully afraid of storms and I thought this might help him quell some of his fears when the sirens go off in our neighborhood. He fell asleep toward the end of the session, so time will tell as storm season approaches.

The class was hosted by Gilbert Sebenste, Meteorologist at Northern Illinois University (check out his weather reports –he'll email them to you: <http://weather.admin.niu.edu/subscribe.html>), and conducted by Jim Allsopp of the National Weather Service NWS. Some of you may remember Jim. He spoke to our group several years ago at White Pines Golf Course and his name is all over NWS reports in our area.

As we approach the coming months, hazardous weather may hit our area. The United States is the most severe weather prone country in the world. Each year, people in this country cope with an average of 10,000 thunderstorms, 5,000 floods, 1,200 tornadoes and two landfalling hurricanes. Approximately 90% of all presidentially declared disasters are weather related, causing around 500 deaths each year and nearly \$14B in damage.

Why a Spotter?

The National Weather Service has access to data from Doppler radar, satellite, and surface weather stations, technology cannot detect every instance of hazardous weather. Spotters help fill in the gaps by reporting hail, wind damage, flooding, heavy snow, tornadoes and waterspouts. Radar is an excellent tool, but it is just that, one tool among many that the NWS uses. Spotters are needed to report how storms and other hydrometeorological phenomena are impacting a given area.

Spotter reports provide vital "ground truth" to the NWS. They act as eyes and ears in the field, confirming what is seen or depicted on the radar and help to meteorologists issue timely, accurate and detailed warnings.



What do Spotters Report?

Trained spotters are asked to report:

- **Tornadoes**, citing the damage that has occurred, how long it was on the ground, when it started, when it ended, its width and how far it traveled.
- **Flash Flooding**, including rivers, streams, and roadways reporting approximate water depth. Spotters are asked to report whether the water is moving or still, if still rising and if the area is prone to flooding.
- The presence of **Wall Clouds** and whether or not they are rotating and how long they have existed.
- **Funnel Clouds** and their organization, persistence and rotation.
- **Lightning** – oddly enough, NWS only wants to know about lightning when damage or injuries occur from it.
- **Winter Weather** not important now, but the occurrence of freezing rain, ice accumulation, snow accumulation and blizzard conditions.
- **Wind** is a factor that the NWS wants to know about, specifically wind speed and damage. Without the aid of an anemometer, wind speed estimation is difficult that is why description of moving objects or damage is useful.
- The discussion on **Hail** provided the most notable line of the presentation. "I'm not sure how big your marbles are, so when defining the size of hail, please use the following scale":
 - » BB >1/4"
 - » Pea = 1/4"
 - » Dime = 7/10"

(continued on next page)

- » Penny = 3/4"
 - » Nickel = 7/8"
 - » Quarter = 1"
 - » Half Dollar = 1 1/4"
 - » Ping Pong Ball = 1 1/2"
 - » Golf Ball = 1 3/4" (actually not greater than 1.680, but I didn't correct him)
 - » Lime = 2"
 - » Tennis Ball = 2 1/2"
 - » Baseball = 2 3/4"
 - » Large Apple = 3"
 - » Softball = 4"
 - » Grapefruit = 4 1/2"
- **Marine Hazards** - items such as waterspouts, squall lines, heavy freezing spray, wave heights, high surf and lakeshore flooding are noted by spotters.
 - **Other Environmental Hazards** can be relayed to the NWS such as dense fog, dust storms, volcanic ash accumulation and when there are injuries or death as a direct result of weather.

Allsopp did a nice job of going through thunderstorm basics, explaining their development and life cycle. He defined the different types of thunderstorms; Single Cell Storm, Pulse Storm, Multicell Cluster Storm, Multicell Line Storm, and the Supercell. The Supercell was further classified into Low Precipitation Supercell, Classic Supercell, and the High Precipitation Supercell. He explained what makes a thunderstorm severe and trained us to look for specific features as storms begin

Lightning Safety


Lightning takes nearly as many lives as tornadoes annually, but because it only hits one or two people at time, fatalities due to lightning receive less publicity. Lightning occurs with every thunderstorm. It is the most common weather hazard people on golf courses face. About 5% of all US lightning deaths occur on golf courses every year. Remember: "When Thunder Roars, Go Indoors!"

to develop. There was a lot of information that was covered in the class. A part was a good review while more than half was information that was new to me. It was a good reminder that every storm is different and no matter how well we think we know something, we don't. Maybe the education committee can work with the NWS and train our members to become Hazardous Weather Spotters. **-OC**

For more information, please visit:

weather.gov/chicago

nws.noaa.gov/os/brochures/SGJune6-11.pdf



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