NWS Duluth Skywarn Spotter Reference

What to Report

Tornado Signs

- ✓ **Tornado** (including **waterspouts**)
- ✓ **Rotating Wall Clouds**
- ✓ **Funnel Clouds**

Severe Thunderstorms

- ✓ **Hail** (Especially half-inch or larger - we want to know the LARGEST size hail)
- ✓ **Wind Damage**
- ✓ **Wind Gusts** over 50 mph *(if measured - no estimates!)*

Precipitation

- ✓ Any **unusual flooding**
- ✓ **Rainfall amounts** (greater than 1")
- ✓ **Winter precipitation amounts** - snow, sleet, freezing rain

How to Report

*Remember to include **Time**, **Location**, **Condition**, and **Source** in your report!*

- ➔ **Phone Call**: **1-800-685-8612**
- ➔ **Online Report Form**: https://inws.ncep.noaa.gov/report/ - Include your name/phone!
- ➔ **Facebook**: http://fb.com/NWSDuluth - Comment or Send Message
- ➔ **X**: https://X.com/nwsduluth - Mention @NWSDuluth
- ➔ **Email**: nws.duluth@noaa.gov
- ➔ **Amateur Radio** - See local club for details
- ➔ **mPING App**: https://mping.nssl.noaa.gov/ - Great for small hail

Urgent Reports of Severe Weather (Large Hail, Wind Damage, Flash Flooding, Wall Cloud, Funnel Cloud, Tornado)	**Best Choice: Phone call** Acceptable: Online Report Form
Urgent Reports of Sub-Severe Weather (Small Hail, Minor Flooding)	**Best Choice: mPing App** or **Online Report Form** Acceptable: Phone call or Social Media/Email
Delayed Reports (Hours to Days Ago)	**Best Choice: Online Report Form** or **Social Media/Email** Acceptable: Phone call
Rain/Snow Amounts	**Best Choice**: Sign up for **CoCoRaHS**! Acceptable: Online Report Form, Social Media/Email, or Phone call

Want to report rain/snow reports on a regular basis? We are always looking for volunteers to sign up for **CoCoRaHS**, especially if you live in a rural area! Participation requires use of a standard rain gauge ($30-40). For more information, visit cocorahs.org or email Ketzel at ketzel.levens@noaa.gov.

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Hail Size Helpers			
0.25” - Pea	1.00” - Quarter	1.75” - Golf Ball	2.75” - Baseball
0.75” - Dime/Penny	1.25” - Half Dollar	2.00” - Lime or Hen Egg	3.00” - Tea Cup
0.88” - Nickel	1.50” - Ping Pong Ball or Walnut	2.50” - Tennis Ball	4.00” - Softball
Remember: We want the LARGEST hail stone size. *Tip: Two-part reports are great - call with an estimate when you see hail outside your window, then follow-up with a final measurement after the storm has passed!*			

Links and Contact Information

- **NWS Duluth Website**: https://www.weather.gov/dlh/
  - Hazardous Weather Outlook: https://www.weather.gov/dlh/hwo
  - Area Forecast Discussion: https://www.weather.gov/dlh/afd
- **Storm Prediction Center (SPC) Website**: https://www.spc.noaa.gov/
- **NWS Duluth Facebook**: https://www.facebook.com/NWSDuluth
- **NWS Duluth Twitter**: https://x.com/nwsduluth
- **NWS Duluth Office Phone**: 218-729-6697 (press “0” to reach forecaster, 24/7)
- **Office Tours, Outreach Requests, Skywarn Spotter Questions, etc** - Contact WCM Joe Moore at joseph.moore@noaa.gov or Meteorologist Bryan Howell at bryan.howell@noaa.gov

Additional Training/Resources

- **Skywarn Spotter Guide** - reviews everything we talked about and more! https://www.weather.gov/spotterguide/
- **Skywarn Spotter Guide PDF** (similar content) https://www.weather.gov/media/owlie/SGJune6-11(1).pdf
- **Advanced Spotter Guide PDF**: https://www.weather.gov/media/oun/spottertraining/advancedspotterguide.pdf
- **COMET/MetEd Skywarn Modules** - Free online class - good as a refresher course! https://www.meted.ucar.edu/training_course.php?id=23

NOAA Weather Radio Information

Where to buy: Most discount, hardware, and electronic stores, and many online retailers

What to look for: Get a radio with the “*Public Alert*” logo , or at least be sure it has *SAME* capability, which means the radio can be programmed to only alert you when a warning is issued for you local area

NOAA Weather Radio Programming Info: https://www.weather.gov/dlh/weatherradio

**Need help programming your radio? Give us a call or email and we’ll help!*

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Local/County Emergency Notification Service

Sign up for these free services to get weather alerts via email/phone call/text message/app as well as other important notifications from your county. *(Services vary - please contact your local Emergency Management or Sheriff's office for more info. Links may not be up-to-date.)*

Minnesota	Wisconsin
Aitkin County: Everbridge (More info)	Douglas County, Superior: CodeRED (More info)
Carlton County: Carlton County Emergency Alert Program (Everbridge) (More info)	*Bayfield County: Alert Center (More info)
Cass County: Nixle (More info)	*Ashland County: Official Website
Cook County: CodeRED (More info)	Iron County: CodeRED (More info)
Crow Wing County: Crow Wing County ALERT (Everbridge) (More info)	Price County: CodeRED (More info)
Itasca County: Itasca County Emergency Alert System (Everbridge) (More info)	Sawyer County: Nixle (More info)
Koochiching County: Koochiching County Citizen Alert System (Everbridge) (More info)	Washburn County: CodeRED (More info)
Lake County: Lake County Emergency Alerts (Everbridge) (More info)	Burnett County: BEACON (More Info)
St. Louis County, Duluth, Hibbing, Hermantown, Virginia: Northland Alert (More info)	
Pine County: Everbridge (More info)	
Tribal Nations	
Leech Lake Band of Ojibwe: CodeRED (Info)	St. Croix Chippewa: Official Website
Fond du Lac Band of Lake Superior Chippewa: Fond du Lac Reservation Emergency Alert Program (Everbridge) (More info)	Bad River Band of Lake Superior Chippewa: Nixle (More info)
Mille Lacs Band of Ojibwe: Official Website	Red Cliff Band of Lake Superior Chippewa: Official Website
Bois Forte Band of Ojibwe: Official Website	Lac Courte Oreilles band of Lake Superior Chippewa: Official Website
*Grand Portage Band of Ojibwe: Official Website	

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Thunderstorm Terms Covered

Updraft: An upward current of air. Look for a rain-free base to identify location.

Downdraft: A downward current of air. Look for a rain/hail shaft to identify location.

Rain-Free Base: The area below the thunderstorm's updraft. Not always clearly visible.

Rain Shaft/Hail Shaft: Dark vertical area of heavy rain/hail over a small area indicating the downdraft location of a storm. May not necessarily be heavy precipitation.

Virga: Streaks of rain appearing to hang below a cloud, evaporating before reaching the ground.

Wall Cloud: A local, often abrupt lowering from a cumulonimbus cloud base into a low-hanging accessory cloud. Rotates on vertical axis, sometimes strongly - look for persistent rotation.

Funnel Cloud: A rotating condensation funnel extending from the base of a thunderstorm.

Tornado: A violently rotating column of air in contact with the ground

Waterspout: A rotating column of air in contact with a body of water.

Damaging Winds: Wind gusts capable of producing property damage (NWS uses the definition of 58 mph or stronger gusts as "severe")

Hail: Precipitation in the form of balls or irregular lumps of ice produced by convection (thunderstorms) - NWS uses the definition of 1" or larger (quarter-size or larger) as "severe"

Severe Thunderstorm: A thunderstorm capable of producing either large hail (1"+ in size) and/or damaging winds (gusts 58 mph or greater)

Flash Flooding: Rapid flooding, typically caused by heavy rain. ("Flash" flooding means the flooding occurs within six hours of the rain falling.)

Scud Clouds or Scary Looking Clouds (SLCs): Ragged low clouds that occur under the cloud base. Sometimes they can "look" scary, but by identifying their location relative to the storm and watching them closely they can be correctly identified. May be rising but does not rotate persistently.

Shelf Cloud: A low, horizontal wedge-shaped arcus cloud, associated with a thunderstorm gust front and on the leading edge of the storm. Rising cloud motion often can be seen in the leading (outer) part of the shelf cloud, while the underside often appears turbulent, boiling, and wind-torn. Looks awesome, but is NOT associated with tornadoes - tornadoes cannot form along the shelf cloud.

Supercell: A strong, rotating thunderstorm. Typically long-lasting storms that can produce long-lasting and dangerous tornadoes.