

WEEKLY TRAINING NET SCRIPT

This is {callsign} opening the W5YM University WeatherNet. This net meets every Monday night on the Amateur Radio Club of the University of Arkansas repeater at 147.135, positive offset, with a PL-tone of 110.9. This is a open, but directed, information net. As a directed net, all stations should direct their calls to Net Control.

[pause]

This net was created to serve four purposes. To allow Net Control Operators to keep in practice calling nets, to provide information about severe weather in Northwest Arkansas to interested parties, to inform amateur radio operators on weather net operations, and to allow any licensed stations to make any comments or ask any questions about emergency communications programs. In the event of weather-related emergencies, this local weather net will convene to coordinate the collection of specific information and relay it forward to the appropriate authorities.

[pause]

We will now proceed with the check-in portion of the net.

All stations are requested to give my call sign, {callsign}, that's {callsign in phonetics}, then pause and listen for doubling before giving your call sign, name, location and list any requests from the net. I will now break for any stations with Emergency or Priority Traffic.

[pause]

This is {callsign} for the W5YM University WeatherNet. Any stations mobile or short of time please check in now.

[pause]

This is {callsign} for the W5YM University WeatherNet recognizing stations:

[list checkins]

Does anyone need to contact [list short-time checkins]?

[pause]

If not, then [list short-time checkins] are dismissed. We will now take regular checkins for the W5YM University WeatherNet. Please call {callsign} Net Control.

ALTERNATE GEOGRAPHIC CHECK-IN SEQUENCE

If not, then [list short-time checkins] are dismissed. We will now take regular checkins for the W5YM University WeatherNet. Check-in will be by geographic tiers, progressing from west to east, following the natural direction of weather in Washington County. Check-in when the town or area nearest your location is called.

Western County Line Tier One -- Cincinnati, Summers, Westville, Lincoln, Dutch Mills, Evansville

Western County Line Tier Two -- Weddington, Prairie Grove, Strickler/Devil's Den

Central Tier -- Elm Springs, Tontitown, Farmington

540 Corridor -- Springdale, Fayetteville, Greenland, West Fork

Eastern County Line Tier -- Sonora/Spring Valley, Goshen, Elkins, Winslow

Check-ins from persons who missed their tier, or towns and areas outside of Washington County

Please call {callsign} Net Control.

[pause]

WEEKLY TRAINING NET SCRIPT, Cont.

Recognize list of check-ins.

Thank you for all check-ins this week. Again, this is the W5YM University WeatherNet. Each week this net presents a brief informational program on emergency communications skills. This net is a local weather net. It is not a storm chaser net. The primary goals of the W5YM University WeatherNet are assisting with "ground truth" reports on severe weather from the Washington County area and promoting severe weather awareness in both the amateur radio community and general public.

In the event of severe weather, Net Control for the W5YM University WeatherNet will serve as relay to outside agencies. For persons wishing to serve as spotters for the W5YM University WeatherNet, here are basic ground rules.

The W5YM University WeatherNet is looking for reports of severe weather. This includes:

- Hail, particularly penny sized or larger
- Winds in excess of 35 mph, and which cause damage
- Flooding where none regularly occurs or flooding across roadways
- Sudden downburst winds or dramatic shifts in wind direction
- Rotating funnel clouds or tornadoes
- Significant damage to property such as downed trees or power lines
- Heavy rain measured in excess of one inch in three hours or less

During times of severe weather activation of the University WeatherNet, stations are asked to report any of these conditions to the W5YM Net Control Station. When making reports, remember to give your name, call sign and T.E.L. information:

- Time
- Effect
- Location

Please keep in mind these National Weather Service definitions:

- A severe thunderstorm is one which produces a tornado, and/or winds of at least 58 mph, and/or hail at least 3/4 inch in diameter.
- A **severe weather watch** is issued based on the probability that these conditions may develop during the watch time period
- A **severe weather warning** is issued when conditions meeting these criteria are imminent
- A tornado is defined as a **violently** rotating column of air, pendant to a cumulonimbus, with circulation reaching the ground.

As a reminder, the W5YM University WeatherNet is activated by any severe weather warning issued for Washington County. Participants are asked to make sure they have multiple means of receiving National Weather Service alerts. The net often operates in standby mode during severe weather watch periods, and when warnings have been issued for neighboring counties.

Printed version of these guidelines and other helpful tools for spotters in the field are available for download via the University of Arkansas club website at W5YM.org.

WEEKLY TRAINING NET SCRIPT, Cont.

[on weekly basis, select two or three of following items to read before presentation]

- A** The most common errors made by spotters involve field estimations. Underestimation of distance away from the spotter is affected by the height of the cloud base. A higher cloud base will make objects look smaller, and farther away. Wind speeds are extremely difficult to estimate, and are routinely overestimated. The main problem is a lack of opportunity to experience high winds regularly. Finally, errors in hail size are common. Spotters tend to drift toward three basic sizes, the minimum penny size hail, golf ball and baseball. Measurements should be more discrete, but are based on the largest dimension. The most problematic measure of all is “marble” size hail.
- B** When making reports on severe weather you are witnessing, it is natural to be caught up in the moment. When making a report, take a moment to organize your thoughts. Remember, we are looking for 4 pieces of information. Your call sign, your name, what the location of the observation is, and what the observation is.
- C** Speak slowly. The ARRL Emergency Communications guideline is at a pace of ten words per minute. As you speak, think about how fast you could write down what you are saying. It also helps the Net Control to be able to hear your words if there is static in your transmission.
- D** When you give your location, provide a street and an intersecting street. If you can provide a large intersection near you, preferably state highways or numbered county roads that will appear on county-level maps. The National Weather Service Radar does not show streets on top of the radar image. However since a storm cell powerful enough to generate severe weather will also be very large, a major street intersection will still let them know which severe storm cell is affecting you.
- E** The National Weather Service has access to APRS data. While in the field, please enable if you have APRS capability. As a rule of thumb it is best not to rely 100 percent upon APRS to place the spotter within the region. APRS should be used as an aid to, not the primary means, of location and navigation. Remember, other spotters -- particularly mobile spotters -- may not have computer access. They will need your traditional map-oriented location.
- F** When giving reports, please do not guess on wind speeds. The National Weather Service is most interested in measured wind speeds. If you do not have an anemometer, use the standard Beaufort Scale. If you are experiencing strong winds, please note any sudden changes of wind direction or intense downburst winds. Of particular importance are significant in-flow winds toward a threatening storm.
- G** Other information we are looking for is lightning & wind damage, power outages, flooding where flooding does not occur, funnel or wall clouds with visible rotation, or tornadoes. Remember, a funnel cloud has not reached the ground. A tornado is a rotating funnel cloud which has touched ground. The wall cloud is a lowered base, often located behind the major storm cloud.
- H** If you know of an area that always floods during a heavy rain, please do not report this. However, if water is flowing across streets or bridges, please give precise reports. Do not attempt to measure depth of any moving flood water. A leading cause of weather related death is flooding, not violent storms. Do not venture across flood waters in vehicles.
- I** Clouds can take on different shapes including funnel shaped clouds. Without rotation, these clouds are not dangerous. Try and confirm that there is rotation in the cloud you are seeing. Make sure the cloud is rotating rapidly. **Do not attempt to make Fujita Scale estimates of tornadic strength.** The Fujita Scale is based on damage, not appearance or wind strength. A F-Scale number will be assigned by the National Weather Service to a confirmed tornado by ground truth spotting after the weather has passed.

WEEKLY TRAINING NET SCRIPT, Cont.

- J** If you see tree limbs or trees down, make sure to give the size of the downed debris, and if it appears to have been dead or alive. The significance is dead wood breaks under less stress than green wood. Be careful when approaching downed trees, as downed power lines often are involved. Never approach a downed wire, and assume all wires are live. Wet ground will conduct power line voltage at dangerous levels for considerable distances.
- K** Among the items of interest to the National Weather Service in its ground truth of storm intensity are property damage. Report any winds which broke windows, caused roof or structural damage to buildings, or brought down permanent signage, mature trees, large limbs over four inches in diameter, power lines or large antennas.
- L** Visual clues of strong updraft in a major thunderstorm include a backward building against the upper level winds, an overshooting top that persists, a crisp, cauliflower midlevel structure, flanking line features and striations – corkscrew, soup can or barber pole – that run up the updraft tower. At the lower levels, the indicators are the rain free base as the wind shear within the storm blows rain away from the updraft area.
- M** Tornadoic wall clouds are persistent, lasting 10 to 20 minutes; present visible and violent rotation; and have a strong low level inflow of 20-to-30 miles per hour. This inflow will pull cloud fragments into the storm at the 500-foot level.
- N** While squall lines usually don't create the tornadoes as much as microbursts and strong outflow winds, there are hot spots that are more likely to foster severe storms or tornadoes. The breaks in the line allow individual updrafts to become more developed. The same for the tail-end storm which does not compete with the other storms in the line for energy and moisture. When an intense storm does form in the squall line, it is most likely to exhibit the bow echo that may indicate tornadoic activity.
- O** We request that stations please do not ask for information beyond the standard current conditions report we give at regular intervals. This information is also sent out through the other various means. If you need information about an area, please listen to N.O.A.A. weather radio, local TV or radio news.
- P** Respecting the valuable information you give us, we wish to help you provide the most concise information possible. It is assumed that if you are experiencing severe weather, you will always have lightning and possibly torrential rain fall. Please keep in mind our minimum criteria for severe weather.
- Q** The Amateur Radio Community, and all spotters in general, provide an indispensable service to the National Weather Service and local communities. Just as you have to calibrate a meter to measure your equipment, the National Weather Service is working to calibrate its technology to better predict and identify this weather. In weather, there is no better calibration device than a set of human eyes. NEXRAD and doppler radar cannot see a tornado. They can indicate conditions are right. Only a spotter can verify its presence. Doppler radar can indicate a storm has the potential for severe or tornadoic weather, but it cannot see to the ground. Only the spotter can provide the last thousand feet of observation, and the further away from the radar site, the higher this "last thousand" becomes.
- R** We provide the information that lets the National Weather Service improve its understanding of weather by comparing what their instruments say, and the "Ground Truth" they get from us. There are specific criteria the NWS seeks in ground truth – accurate wind speeds, size of hail, intensity of rain fall and damage. Despite the significant advances in remote monitoring of weather, the tree falls in the woods unheard without someone to hear it and report it. It is reports by spotters, often after the passing of the storm, which verify or disprove what was shown by radar.

WEEKLY TRAINING NET SCRIPT, Cont. – WINTER WEATHER TRAINING

- S** Severe weather does not occur only in the spring and summer. During the winter months, the W5YM University Weather-Net will activate to assist with reports of severe weather. The criteria for reports during a winter active net are:
- Snowfall in excess of two inches
 - Severe icing on trees, streets or power lines
 - Sleet or freezing rain
 - Winds in excess of 30 miles per hour
 - Downed trees or power lines
 - Impassable or closed roads
- T** During winter severe weather, the net will operate on a 30 minute cycle. At the top and bottom of each hour, the W5YM University WeatherNet Control Station will take traffic and reports from the field on conditions. Between the reporting cycles, amateur operators are asked to keep their transmissions short with breaks to allow urgent reports to be made to Net Control. While the nature of winter weather is not as dramatic, sudden loss of public utilities may result in the activation of emergency net operations at any time during the winter storm. Please be prepared for these events.
- U** We do not encourage or request mobile operations to ascertain the state of road conditions during a winter weather active net. We leave this to the trained professionals of law enforcement. However, if you are traveling to or from your home QTH, we do appreciate your updates on road conditions.
- V** When measuring snowfall, the net is looking for two reports. Upon first reporting to a winter net, please give the accumulation on the ground as your baseline measurement. All other reports should take the baseline into consideration. For example, on first check-in, the snowfall is three inches deep. Next report an hour later and there are four inches on the ground. Please report this as one inch of new accumulation on top of your baseline of three inches. This avoids the "heat of the moment" error of a new snowfall of four inches.
- W** For proper snow measuring technique, pick a spot that appears to be average depth. It should be in an open area, away from buildings or trees that would create areas of snow drifting. The ideal is to take five readings and average the measurements. Round the measurement of snow to the nearest full inch. For example, anything four-tenths of an inch or less would be trace, but a half-inch or more rounds up to one inch. Keep in mind that after snow reaches the ground, it will condense. This may reduce your measured baseline. For increased accuracy, consider using a snow board to capture new snow fall totals.

WEEKLY TRAINING NET SCRIPT, Cont.

**This week's subject is [fill in] presented by [call sign].
Net Control now recognizes [call sign].**

Weekly program follows – Standard rotations are:

- Estimating wind speeds
- Spotting severe weather
- Scales for hail
- Proper terminology for reporting
- Emergency communications protocol
- Winter severe weather

Closing for training net

The W5YM University WeatherNet exists for two reasons. The main reason is to channel reports from trained spotters and others into the National Weather Service office in a quick and efficient manner. The other is to educate the public about Severe Weather. However, the University WeatherNet is not designed to disseminate information back out during a storm. We recommend that every home in the northwest Arkansas area have more than one means of receiving severe weather information, including a NOAA Weather Radio equipped with Specific Area Message Encoding (S.A.M.E.) receiving technology. In times of severe weather, local television and cable may become disabled and power lines may be down. Make sure that you can receive weather warnings and alerts in the event of the loss of power.

I would like to thank everyone that has participated in the net tonight, as well as the members of Amateur Radio Club of the University of Arkansas for the use of the repeater. Thank you. I will now bring the weekly meeting of the W5YM University WeatherNet to a close at [time UTC] and return this repeater to regular amateur radio use.