

Lee Co. ARES SKYWARN® Nets – by KD5BJ

SKYWARN Net is a net fired up when a warning has been issued by a local, state, or national agency, most of the times by the National Weather Service (NWS) when they issue a Severe Thunderstorm warning. SKYWARN nets aim at real-time weather (or other) observations and community safety.

Originally designed to serve the National Weather Service (NWS), the net serves local authorities, such as the Lee Co. Office of Emergency Management, First Responders tuning in to our reports, and the residents of Lee County and the area covered by the repeater. Our reports provide critical ground truth data during hazardous weather events, shaping vital warning decisions and supplementing radar observations. Again, SKYWARN nets can be a model to respond to, and report, any kind of hazard, emergency, or disaster.

During a weather event, we use GR Level III and/or Radar Scope radars. Net Control is also connected through a chat to the National Weather Service, receiving information and giving them information as reported by spotters.

In every weather net, safety takes precedence. Each spotter bears responsibility for their own safety and their property regardless if they are mobile or at home. If at any point a spotter feels unsafe due to approaching weather or any condition, we encourage them to prioritize safety, moving to a secure location and reporting their status to the Net Control Station (NCS) when practical. If Net controls find themselves in danger, they need to ask other operators to relieve them and seek safety.

We also recommend that spotters at home have what we call an “emergency antenna,” an antenna that transmits from the attic or inside the house. It can be a vertical on a tripod, or a J-pole antenna rolled by a window. Operators are highly encouraged to disconnect outside antennae during a severe storm to protect radios and the house from lightning surges.

We can offer two kinds of SKYWARN nets, one informal, involving an informal chat about the weather conditions at a given location. Generally, this kind of net is started when the NWS issues a watch and/or there are storms, possibly severe, in near-by counties.

We fire up a true SKYWARN net after receiving a warning and the storm is packing winds 40 mph or over, hail of any size, rain in excess of 2” per hour, wall clouds, funnel clouds, or possible or visible tornadoes. Net Control will instruct operators of the criteria as requested by the NWS or local agency and spotters should report only those criteria. Net control or backup net control will notify the NWS that Lee Co ARES started a SKYWARN net.

Spotters are also requested to state their call sign clearly and slowly using ITU phonetics only, their precise location, the timing of the observation, and the phenomenon observed, (please keep in mind that it is difficult to hear the call sign or the address, especially if the frequency is noisy as during a storm), and to quantify their reports with practical examples. For example,

“Net Control, KD5BJ.” After being recognized, “dime size hail at intersection of HWY 21 and CR 326 just now,” or “ about 40 mph wind at 290 and 77 ten minutes ago.” A bonus would be if they could send pictures to net control. Net control can forward those to the NWS.

Spotters should refrain to call net control reporting other information than the one requested, like “I am at home (no landmark nor cross roads) and is not raining yet.”

Those who are spotters are requested to take basic SKYWARN training on line or in person regularly. ARES members are required to attend basic training every other year.

As mentioned earlier, information flows in both directions. Net Control can describe what he or she sees on radar and official notifications from the National Weather Service. Net control shall NOT, and I repeat, shall NOT report anything but official notification. In the chat room, participants can read others’ questions, answers, opinions, and discussions, but those are not reportable per instructions of our host.

Spotters report to net control what they see on the ground, weather related or safety related. If there is a power pole down, a flooded road, ice on the road, black ice on the road, these are reportable pieces of information. Net Control or backup net control will notify the local OEM and the NWS.

Spotters are the eyes on the ground that report what the radar cannot see, such as small tornados like F0, F1, or F2, or small size hail or confirm what the meteorologist spots in the radar. By what spotters see, the NWS can then issue new warnings for communities in front of the storm.

Spotters are to give accurate information. If they see what looks like a funnel cloud, not turning, and they cannot see debris circulating on the ground, it is not a tornado and it is not reportable. If in doubt, however, just say so in your report.

Net Control generally repeats announcements every three or four minutes, often enough to let listeners know he or she is there, but leaving enough silence for observer to call in. The interval of the announcements can be changed according to need.

Once the threat is over, Net Control will thank all participants and closes the net, returning the repeater to regular amateur use; he or she will also notify the NWS that the net is closed.

SKYWARN nets generally last at most a few hours; however, during Winter Storm in February 2021, WC-ARES SKYWARN net was operated 24/7 for 138 consecutive hours, with 35 NCs and BNCs, 85% of which operating without electricity nor water, using solar panels and batteries.

They generated 1231 transmissions, of which 726 public service announcements, 495 public/ARES/emergency management reports. They were recognized to have saved at least 2 lives. Contacts were recorded on a Google Sheet ICS 309 that was accessible by multiple

operators playing the role of NCs, BNCs, and loggers. If a NC operator or logger was in difficulty, another one would take over. When the net was fast and furiously busy, more than one logger helped recording the transmissions.

This is KD5BJ and this was tonight's training.