

Polk County Amateur Radio Emergency Service

SKYWARN Procedures and Protocol 3/13/24

Radio Frequencies

All Polk County ARES Skywarn net activations will be on the 146.610 (-) (114.8) located in Grimes. In the event that the Grimes 146.610 repeater is not working, the following frequencies may be used for a backup: 146.940 (-) 114.8) DSM. 2 repeaters may be needed at the same time.

Keep in mind that if Skywarn nets are going on outside of Polk County and they need to join in for a backup repeater. They are able to do so and would be part of the Polk County Skywarn net. Have a NOAA weather radio on and monitor.

Activation

Polk County ARES may activate a local Skywarn net under the following conditions:

- At the request of the NWS Des Moines
- At the request of Polk County Emergency Management
- At the request of local ARES leadership (EC or AEC)

Severe Weather conditions that warrant a Polk County ARES Skywarn net activation include:

- An imminent threat of Tornadoes impacting (or may impact) Polk County or areas adjacent and upstream of Polk County (depending on storm development)
- An imminent threat of Severe Thunderstorms impacting (or may impact) the above areas that are capable of producing Large Hail, Wind Damage or Flash Flooding.

Activation of a formal Polk County Skywarn net will be contingent on the availability of an approved Net Control Operator. In the event that a formal Skywarn net is not able to be established, spotters should use (radio, phone, text, email, social media, NWS website report form) to directly contact the NWS Des Moines with reports.

To activate the net, contact should first be made with the net control operators. In addition to requests for activation made by the agencies listed above, Any ARES member may reach out to a net control operator when severe weather is possible that recommends a net to be established. A final decision to activate a formal net will be subject to a available net control operator.

Net Activation Notification

Notification that a Polk County Skywarn net has been activated will be announced over the 146.610 repeater. Additionally, a mass text message will be sent out to all members of the Polk County Skywarn group or notification by Polk County Emergency Management.

Amateur radio stations are encouraged to monitor the 146.610 Grimes repeater when severe weather is forecasted. (Tornado or Severe thunderstorm watch has been issued and/or severe weather is imminent.

Skywarn Net Modes

During activation of Skywarn, the net may operate in one of the following modes:

1. **SKYWARN NET STANDBY:** Severe weather is possible within 30 minutes to 2 hours. Amateur radio operators may use the repeater frequency as normal, but please keep transmissions brief so that weather briefings or activation may be transmitted.
2. **SKYWARN NET ACTIVATION:** Severe weather is imminent or possible with in the next 30 minutes. All radio traffic should be directed through net control, traffic should be limited to checking in and severe weather reports.

Severe Weather Reports

The following severe weather reports are of interest to the National Weather Service and radio traffic should be oriented towards reporting weather information. Reports like “heavy lightning” or “dark clouds” or similar information is not useful and net control operators may need to coach net participants that the following is a useful storm report:

- . Tornadoes, Funnel Clouds, Rotating Wall Clouds, Shelf Clouds
- . Hail (related to 1 inch or greater or game ball size... No Marble size hail reports.
- . Damaging Winds 50 MPH or greater (if possible, if you are able, Please estimate speed and describe what it is doing or use an Anemometer wind instrument if available). Be descriptive in the magnitude of damage and give approximate time.
- . Flash Flooding. (Be descriptive with what the water is doing. If there is flooding to Homes, Roads or Businesses etc..) and please give approximate time occurred.
- . Damage to Structures, Roofs, Siding, Windows, Vehicles, Downed Trees, Power lines/Poles

Reference the **NWS Des Moines Spotter Training Notes** for additional information on what would be a useful report. Please print from the NWS Des Moines web page and keep with you.

Net Control Information

Net control Qualifications

The pool of Polk County Skywarn net control operators will be approved by the Polk County EC. Net control operators need the following for Skywarn NC:

- The necessary training and competency to conduct a net in a professional manner.
- This Skywarn Protocol
- Must be reliable to relay reports to the NWS Des Moines.
- Reliable connectivity with the repeaters used for Skywarn activation.
- A means to receive timely weather warnings and statements from the NWS
- The ability to send out a mass text to the radio spotter team.

Net Control ID for Skywarn Activations

A Polk County Skywarn net activation is dependent on net control availability. In the event of an activation, net control operators should coordinate selection of a net control operator via the 146.610 repeater or via text message.

Net control operators will use tactical call sign of **Net Control** and close with their own FCC call sign.

Relaying Information to the National Weather Service

Net control should summarize and relay reports of severe weather gathered via the Polk Co. Skywarn net.

All reports should include the following information:

- The specific **event** occurring (tornado, hail, damage report, ect.)
- The **location** of the event (be specific)
- The estimated **time** of the event (occurring now, occurred 5 minutes ago, ect..)
- The **source** of the report (amateur radio spotter)

Net control should relay reports to the National Weather Service office in Des Moines by one of the following:

NWS Chat

Amateur radio DMR Network (Iowa talk group DMX/SEOC 31199 or KØDMX)

Text message (515-240-5515),

By Phone at 1-800-759-9276 (1-800-SKYWARN),

Email (dmx.spotterreport@noaa.gov) ,

Social media (X/twitter): @NWSDesMoines with hashtags #nwsdmx or #iawx

When and What Should I should Transmit?

- **Do not tie up the repeater with reports that do not meet the criteria given by net control or the NWS**
- **Do not tie up the repeater with check-ins**
- **Do not tie up the repeater with something you saw or heard on tv/radio/social media**
- **Do not tie up the repeater with chitchat**
- **Listen to net control for reporting criteria, if your report does not meet the criteria, do not report**
- **If You Have A Report, Call net control, wait for reply**
- **Calmly give your call sign, observed weather, time and location**
- **Wait for any follow up questions from Net Control**

Logging

Net control operators should keep a log of all net participants and reports gathered and/or relayed during the net. A sample log is included with this document and make copies for net operation. At the conclusion of the event, the net control operator should send a photo (or email) of the log and/or a summary of the activation (time activated, number of participants, key details of the activation) to the Polk County EC for activity reporting to the ARRL, Polk Co. EMA and NWS.

NWS Des Moines SKYWARN Amateur Radio Severe Weather Operations Support

Through the years, amateur radio has played an important role in relaying severe weather reports to the local NWS office in Johnston. In early 2019, NWS Des Moines updated its Amateur Radio Severe Weather Operations Support protocol that amateur radio groups operate Skywarn nets locally using a remote net control station under the majority of circumstances; however at the discretion of the lead Forecaster a SKYWARN net may be operated directly from the NWS Des Moines during high-impact or widespread severe weather outbreaks. Amateur radio station KØDMX at NWS Des Moines will continue to be available and in good working order for these events.

Skywarn Program

SKYWARN is a volunteer program run by the NWS to receive reports of severe weather from the public for the purpose of advising the public about impending danger due to severe or hazardous weather conditions. Amateur radio operators participate in SKYWARN as trained severe weather spotters and provide a radio emergency communications network for relay of severe weather reports to the NWS.

SKYWARN spotters need not be ARES members to participate in SKYWARN nets; however ARES (a program of the American Radio Relay League, or ARRL) is the primary amateur radio organization with whom the NWS works with to establish the SKYWARN communications networks. Much of this is addressed through a joint Memorandum of Understanding (MOU) dated 6/21/2011 which serves as the framework within which volunteers of the ARRL may coordinate their services, facilities and equipment with the NWS in support of nationwide, state and local early weather warning and emergency communications.

Training

The National Weather Service provides spotter training on an annual basis throughout the area, including locally in Polk County. Amateur radio operators who participate in storm spotting activities are strongly encouraged to attend this spotter training at least every other year. Furthermore, amateur radio operators participating in SKYWARN nets are strongly encouraged to have taken the ARRL “Introduction to Emergency Communication” course (currently going through changes) though this training is not considered mandatory to participate in a SKYWARN net. Per the revised NWS Des Moines Severe Weather Operations Support protocol, net control operators need to have past network controller experience; hold a General Class or higher license; and be vetted by local amateur radio groups and approved by NWS Des Moines.

Skywarn Risks and Spotter Safety

Spotters participating in SKYWARN activities do this as a voluntary activity at their own risk. No official certification, affiliation as a public safety authority, or license to break any law (including traffic laws) is provided to anyone participating in SKYWARN activities. Under no circumstances does Polk County Skywarn/ARES or any organization assume liability for individuals participating in SKYWARN activities. SKYWARN spotters should conduct themselves in a professional manner at all times in a way that reflects positively on the amateur radio community and the contributions it makes to serving the public during emergency and other events. Spotters need to maintain situational awareness and conduct SKYWARN activities in a safe manner including protecting themselves from weather hazards including tornadoes, lightning, strong winds, hail and flash flooding. Always have an escape route and seek a sturdy shelter if you are in danger. Avoid night spotting. Drive smart and safely obeying all traffic laws. Above all, use common sense. Remember, The National Weather Service (nor ARES) “officially” deploys spotters. Spotting is done at your own risk.

Useful Information Source

The following sources of information may be useful for stations conducting net control duties. Authorized net control stations may be granted access to NWS Chat upon approval by the National Weather Service Warning Coordination Meteorologist.

NWS Radar Sites (<https://radar.weather.gov>)

NWS Des Moines (<https://weather.gov/dmx>) – severe weather situation reports posted during severe weather events

Iowa Mesonet IEMBot Application (<https://weather.im/iembot/>) – allows you to monitor NWS messages and products real-time.

General Information:

- “ Remind operators to use Safe Operating Practices at all times
- “ Read NWS Statements on the Net when sent
- “ Maintain a log of all reports including time, date, location and call sign.
- “ Forward reports to the Des Moines NWS

SKYWARN NET PREAMBLE/CLOSE AND GUIDELINES

PREAMBLE:

ATTENTION ALL STATIONS. This is (your Callsign, Name, Location), your Net Control Station for the Polk County SKYWARN Net. The Polk County SKYWARN Net is now placed in (See Below) STATUS. (Read a description of Status below)

STANDBY STATUS: Severe weather is possible in the area. Amateurs should watch for signs of severe weather and monitor the 146.610 - PL Tone 114.8 Grimes repeater for further updates. Normal activity on this repeater is allowed, however, stations should keep all transmissions short to allow for break-ins. This is (your call sign), Net Control, standing by.

ACTIVE STATUS: Severe weather is (present or imminent) in this area. Amateurs are asked to actively search for signs of severe weather and provide appropriate reports to Net control. This is a directed net and all stations are asked to transmit only when recognized by Net Control. Only Stations with legitimate severe weather reports, or emergency traffic should break into this net.

Spotters should report: – WHAT they saw or are seeing – WHERE they are or Where they were when it occurred – WHEN it occurred Or in other words.... TIME, EVENT, LOCATION (“TEL”) They should also include their name, location and their call sign.

The only reports to be made are reports of Tornadoes on the ground, funnel clouds, wall clouds, hail (any size), winds 50 mph or greater, flooding and other actual storm damage (OR REPORTS AS DIRECTED BY THE NWS). Reports not meeting these criteria should not be passed unless specifically requested by Net Control. This is (your call sign), Net Control standing by.

EMERGENCY STATUS: A state of emergency exist in the area due to (State nature of actual emergency, i.e., Tornado touch down, River flooding, etc.). This a directed net. Net Control has ABSOLUTE CONTROL of the net. Transmissions on the repeater are PROHIBITED, unless made in response to a call by Net Control, or having life or death urgency. All Amateurs should monitor the repeater for additional instructions. This is (your call sign), Net Control standing by.

CONTINUITY ANNOUNCEMENT (Read at least every 10 minutes) ATTENTION ALL STATIONS. This is (your Callsign, Name, Location), Net Control Station for the Polk County SKYWARN Net. A severe weather net is in (See Above) Status at this time. (Read a description of Status above)

CLOSE THE NET:

Attention All Stations: The severe weather threat has now passed and we will now close down the Polk County Skywarn Net. I would like to thank all amateur radio stations who participated and provided reports. This is (insert call sign) returning the repeater to normal operation at (time).

REPORTING:

NWS Chat

Phone: 800-SKYWARN (800-759-9276)

Amateur Radio: KØDMX

Text or email, including pictures/video: nws.desmoines@noaa.gov or 515-207-2615

X (Twitter) & Facebook: [@NWSDesMoines](https://twitter.com/NWSDesMoines) #iawx Online form: inws.ncep.noaa.gov/report

NOTES:

