

METRO SKYWARN

Net Control Stations
Operations Procedure 2008



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I. Purpose

This operating procedure guides Metro Skywarn Net Control Stations/Hubs in the performance of their duties. This document does not directly guide individual Skywarn spotters.

II. METRO SKYWARN geographic area of responsibility

METRO SKYWARN has agreed with the National Weather Service at Chanhassen Minnesota to assume the responsibility for providing and coordinating Amateur Radio Skywarn Spotter Operations for the Minnesota Counties of Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott and Washington.

These responsibilities are accomplished through cooperative agreements between Metro Skywarn and amateur radio groups, civic organizations, public services, businesses and local government entities.

Metro Skywarn will in no way usurp any responsibility or authority for non-amateur radio Spotter Operations performed by County or Municipal Governments in this area of responsibility.

III. Definitions

Communication Mode

A form of radio emission. In the context of Skywarn operations, communications modes include amateur radio transmissions, cellular phone transmissions, and other means of communicating with others electronically.

Modes of Net Operation

Formal Net:

A formal net is a directed net operated by METRO SKYWARN Net Control Operators (NCO) in which all communication comes through the NCO. Traffic is limited by the discretion and direction of the NCO to emergency traffic and only those priority reports deemed important or appropriate to keep an orderly net, a manageable workload for NCOs, and to keep the NWS sufficiently informed.

Informal Net:

At the discretion of the NCS Supervisor, the net may be opened to routine traffic to the extent emergency and priority traffic allows. An informal net may or may not be directed by the NCO at the discretion of the NCS Supervisor.

Standby Net:

Severe weather is expected but not imminent. The NCS Supervisor wishes to ensure the participation of spotters for the expected event. Normal communication is allowed on the frequency. The NCO breaks in on the quarter hour or more frequently to inform spotters of the current conditions.

Message Precedence

Corresponding to standard traffic types used in amateur radio message handling tasks, Skywarn utilizes three levels of traffic, which also correspond to the severity of the weather situation. These three levels are as follows:

Emergency:

There is an imminent risk for injury to the spotter or the public at the discretion of the NCS Supervisor. This could include a tornado or funnel cloud in a populated area, a traffic accident with injuries, or any other condition identified as an injury risk. All other reports are suspended until the emergency passes. Only emergency traffic will be allowed on the net. It is recommended that all priority traffic be referred to another net frequency.

Priority:

Traffic during a Priority condition is limited to severe weather conditions and emergencies. Priority traffic is defined as information that may alert the public to the risk of personal injury or property damage and includes tornado, funnel, rotating or non-rotating wall cloud, hail, significant wind damage, a traffic accident or severe traffic congestion. The NCS Supervisor may at his discretion limit reports to keep an orderly net, a manageable workload for NCOs, and to keep the NWS sufficiently informed. For example, reports may be limited to above 3/4 inch hail or only severe wind damage, rotating wall clouds, funnels and tornados.

Routine:

At their discretion, the NCS Supervisor may allow reports of a routine nature, either at the request of the NWS, or during informal net operations. Routine traffic is defined as information that does not relate to the risk of injury or property damage and may include net check-ins, casual discussion of weather conditions, discussion of net operations and weather in general.

Reportable Conditions:

Reportable conditions are those defined by the NCS Supervisor. During emergency conditions, the NCO will limit reports to the immediate emergency. During priority conditions, the NCO may allow some or all of the following: tornado, funnel, a rotating or non-rotating wall cloud, hail, and significant wind damage. Emergencies are always reportable.

Net Control Station (NCS) or Hub:

Net Control Stations are the amateur radio stations at which a NCO collects reports from Skywarn spotters. In the Metro Skywarn system, there may be up to four net control stations operating during a severe weather event. During Skywarn nets, each NCO uses their amateur radio station to control a particular frequency and corresponding repeater. The four hubs are Golden Valley, Bloomington, Ramsey County, and Wright County-West Metro.

Check-in

Spotters check in to a Skywarn net in a slightly different fashion than would be typical in most amateur radio nets. The Net Control Station will announce whether check-ins are invited, depending on weather severity and the traffic condition. Spotters check in to a Skywarn net by providing their Skywarn Identification Number, their location, and their state of readiness, as per Appendix A.

Stand-down

The closing of a Skywarn net and return of the frequency to regular amateur radio use is called 'stand-down'.

Enhanced Wording

As defined by NOAA:

1. An option used by the SPC in tornado and severe thunderstorm watches when the potential for strong/violent tornadoes, or unusually widespread damaging straight-line winds, is high. The text that accompanies a watch of this type will include the line "THIS IS A PARTICULARLY DANGEROUS SITUATION."
2. Strong wording or emphasis used in a zone forecast issued by a NWS Forecast Office highlighting a potential condition (e.g., "some thunderstorms may be severe").

Hazardous Weather Outlook (HWO)

The Hazardous Weather Outlook is produced by the local NWS office and contains information related to potential hazardous weather in the coverage region. The HWO is updated as weather conditions change.

Significant Weather Alert (SWA)

As defined by NOAA:

The Significant Weather Alert is produced by the local NWS office and provides "information about thunderstorms causing any of the following problems: 1) unusually frequent or intense cloud-to-ground lightning, 2) winds of 40-50 MPH, 3) hail smaller than pennies, and 4) heavy rain causing significant visibility restrictions...especially near major highways during high traffic times... or ponding of water on roadways."

Convective Outlooks

The Convective Outlook is produced by the Storm Prediction Center and is comprised of a map showing geographic areas of concern along with a narrative, typically containing more technically-oriented information. This SPC product is defined more completely in Appendix F, "Convective Outlooks", available to NCS hubs only.

Abbreviations

EF	Enhanced Fujita Scale
NCO	Net Control Officer/Operator
NCS	Net Control Station
NWS	National Weather Service – Local Office
NWSRG	National Weather Service Radio Group
PDS	Particularly Dangerous Situation
SPC	Storm Prediction Center – Federal Center

For other weather-related terms, see also the NOAA Glossary at <http://www.crh.noaa.gov/glossary.php>.

IV. General METRO SKYWARN NCS Operations

For the purpose of redundancy and notification each METRO SKYWARN member group that provides Net Control Station (NCS) services must provide each of the other member groups, the National Weather Service Radio Group (NWSRG), and the National Weather Service forecasters with copies of the information that would be necessary for activating their net operations (calling trees, rosters, etc).

The primary means of notification should not require another organization to use more than a single method of contact. The contact individual can be scheduled, in any manner that person's home organization deems needed. This contact person will be referred to as the NCS Supervisor. The on call NCS Supervisors are responsible for coordinating and activating their NCS Team.

Throughout the severe weather season, at least one NCS group will be on call. If one of the Scheduled NCS groups can not properly staff for formal net operations then it is necessary for that NCS to ask another NCS that is not on call to cover for them or if appropriate to share personnel.

Skywarn net activation has four basic phases from the perspective of a Net Control Station: readiness, station activation, net activation, and closure. These phases, along with operational procedures, are detailed in Appendix A, "Procedures for Modes of Net Operation."

During each activation, the on-call NCS will activate. The last NCS group at the conclusion of the annual rotation schedule will be the standby NCS from the ending of their last rotation until the next schedule goes into effect.

V. Net Activation Guidelines with Triggers & Responses

Severe storms are some of the most unpredictable and dynamic complexes on earth. They are very difficult to predict with certainty well before they occur and even so as they transition throughout their very short life cycle. The element of uncertainty surrounding each individual severe weather event in any given area can pose difficult challenges to the proper response type utilized by severe storm spotters and Skywarn organizations throughout the severe weather season.

The greatest challenges faced by the Skywarn organization are the questions of

- when to activate a weather net,
- what type of weather net to activate, and
- what criteria to utilize in the decision-making process to activate a weather net while considering the individualistic and dynamic nature of severe storms.

Metro Skywarn utilizes four primary net control hubs located in different locations throughout the Twin Cities metro area. These hubs serve as the local command and control centers for Skywarn operations during severe weather events. Each respective hub operates under a uniform set of operations protocols which allows for synchronized response and continuity of operations.

While net operations work smoothly once a weather net is activated and the respective on-call hub is adequately staffed, the primary difficulty and grey area begins well before the net activation stage occurs. The question remains of “shoot or don’t shoot,” that is, whether or not to activate a Skywarn net and what type of net is appropriate based on the given weather situation.

The best approach to address the “when and what to activate” challenge is to enact a single standard through which decision making can occur.

A Formal Skywarn Net may be activated at any time at the request of the National Weather Service or its designee. An email or cell phone text message will be the likely method of the above request. Formal Skywarn Nets are conducted as RACES Nets, as per the NCS Scripts in Appendix B, “NCS Scripts: Formal Net.”

Informal and Standby Net Modes may be activated by the NCS Supervisor and will be determined by the proximity and severity of the expected weather situation and the lead time needed to effect operational status, in the judgment of the NCS Supervisor. Informal and Standby Nets are not conducted as RACES Nets.

Weather situational information used in determining activation mode will be that information available by observation, from NWS products, from nearby Skywarn operations, from NWSRG and from National Weather Service professionals as needed.

RESPONSE A. MOVE TO HEIGHTENED STATE OF READINESS

The Metro Skywarn net control hub on duty's primary and or senior staffing should prepare and plan for a heightened state of readiness on days when significant severe weather potential exists. This practice would include some of the following.

1. The Day 1 Convective Outlook shows a Moderate or High Risk of severe storms.
2. The Hazardous Weather Outlook contains specific enhanced wording for the Metro Skywarn Area of Responsibility, for example, "Skywarn spotter activation will be needed this late afternoon and evening across east central Minnesota."
3. Inter-Hub Coordination Call. The on-call Net control supervisor would participate in a Net control coordination call with for example, the NWSRG, at a specific predetermined time to discuss the day's significant weather potential. Inputs to this call include NWS forecast products and NWSRG emails. This call or email conference may or may not include a meteorologist from the local NWS forecast office. Items to be discussed in the call would include but are not limited to:
 - a. Review of available staffing for the next 12 hours.
 - b. Weather situation update with anticipated timing.
 - c. Decision whether or not to hold a special noon on-air briefing and update to brief spotters in preparation for the day's significant severe weather threat on all respective main net frequencies.
 - d. Decision when, how often, and what message will be sent out to the SWAlert mailing list to provide notification for the special briefing and the day's threat assessment.
 - e. Discuss which back up repeaters would be utilized should any of the primaries go down, as well as discuss the option of activating a second or third hub to help with support should the safety of the primary hub on duty be compromised.
 - f. Discuss back-up hubs for the event, as needed.
 - g. Determine an approach and plan of action based on the current available overall threat assessment.

4. On-air Briefing for Spotters. The Net control hub primary or senior officer may conduct an on-air briefing with spotters on the primary repeater frequency(-ies). Items to be discussed in the call would include but are not limited to:
 - a. Situation update to brief spotters in preparation for the day's significant severe weather threat.
 - b. State which back up repeaters would be utilized should any of the primaries go down, as well as discuss the option of activating a second or third hub to help with support should the safety of the primary hub on duty be compromised.

RESPONSE B. STATION ACTIVATION LEVEL 1: MOVE TO HEIGHTENED STATE OF READINESS & PREPARE NOTIFICATIONS

The Metro Skywarn net control hub on duty should move to a heightened state of readiness and begin procedures to notify and or activate minimal staffing during the following situations or criteria.

1. A Severe Thunderstorm or Tornado Watch is issued by the NWS Storm Prediction Center for the all or portions of the metro Skywarn coverage area of responsibility.
2. NWS information indicating an enhanced threat over a specific timeframe within the Metro Skywarn coverage area of responsibility on days with a high end potential.

RESPONSE C. STATION ACTIVATION LEVEL 2: DISCRETIONARY FORMAL OR STANDBY NET ACTIVATION

Metro Skywarn severe weather net hubs may activate in formal or standby modes in response to the following situations or criteria and should begin procedures to activate staffing assets to muster for possible weather net activation in the short term.

(Note: in the following situations Skywarn weather net activation would be strongly recommended but activation is at the net control hub on duty's discretion to be decided on a local case-by-case basis.)

1. A Significant Weather Alert issued by the NWS for the following counties or areas: Hennepin, Carver, Wright, Ramsey, Scott, Dakota, Washington, Anoka, Isanti, and Sherburne.

RESPONSE D. REQUIRED FORMAL NET ACTIVATION

Metro Skywarn severe weather net hubs will activate as RACES Nets in formal response to the following situations and specific criteria.

(Note: the following activation guidelines list specific counties and portions of counties in which to utilize in triggering activation. Application of these county lists should be aided by use of the NWS polygon warning system as well as radar interpretation of the track, direction and speed of the storm into the coverage area of responsibility).

1. Any Tornado Warning issued by the NWS for the following Minnesota counties and or areas: all Hennepin, all Ramsey, all Anoka, all Isanti, all Washington, all Scott, all Dakota, and Northeastern Carver.
2. Any Severe Thunderstorm Warning issued by the NWS for the following counties and or areas: all Hennepin, all Ramsey, all Anoka, all Isanti, all Scott, all Dakota, all Washington, and Northeastern Carver.
3. A severe thunderstorm or tornado watch is in effect AND a Severe thunderstorm or Tornado Warning has been issued with storm movement in the general direction of the Metro Skywarn Coverage Area by the NWS for the following counties or areas: Wright, Central & Western Carver, Eastern Sibley, Southern Sherburne, Southern Isanti, Northern Rice, and Northern LeSueur.

Appendix A: Procedures for Modes of Net Operation

A. Formal Net Activation: Detailed Procedure

Introduction

Formal net activation efforts are focused on placing the necessary personnel at the NCS, in sufficient time before the severe weather event to enable an orderly net activation, provide time for check-ins by spotters, and allow time for a pre-event briefing of the net participants.

When the NCS self-activates the NWSRG must be notified.

NCS Supervisors or their designees should endeavor to stay up-to-date on weather information on days of possible activation and be prepared to self-activate for most severe weather episodes.

- 1. Internal net activation procedures occur as part of readiness or station activation prior to formal activation:**
 - a. Verify all NCS equipment is in working order.
 - b. Check all Metro Skywarn repeaters to validate they are operational.
 - c. Determine the means or method to maintain contact with the NWS; this may include telephone, the 162 MHz radio or one of the ham frequencies.
 - d. Assure adequate staff is available at the NCS for the two net operator positions, the telephone or the NWS 162 MHz radio, and to operate any other adjunct equipment or communications modes needed in that particular NCS.
 - e. When the Net is ready to be activated, contact the NWS. Inform them of the status of the Net and obtain updated severe weather briefing so the Spotters can be informed of the conditions that made activation necessary.
 - f. Determine based on weather conditions what type of net procedure will be used. See Section IV of the Operations Procedure for “Net Activation Guidelines with Triggers & Responses.”
 - g. The NCS will also ensure timely notices are sent out on the SWAlert e-mail list as soon as possible on a day severe weather is expected, when severe weather is imminent, and when a formal, informal or standby net has been activated.

See the job aid for net control stations entitled, “Pre-activation NCS Checklist” in Appendix G.

2. Upon Formal Net Activation Net Control will open the Net:

- a. As soon as an NCS team has notice of a net activation, the team will announce the upcoming anticipated net activation plans on net frequencies, give approximate time lines and a summary of weather conditions warranting the net activation. NCS team members are encouraged to make their presence known on the net frequencies while transiting to the NCS, by chatting among each other, discussing the current weather conditions, expected net activations, etc. The purpose of this announcement and use of net frequencies is to promote greater spotter participation in nets. The idea is to create some chatter on the net frequency about the weather conditions and anticipated Net and to alert as many spotters as possible well in advance of activation.
- b. The Net Control reads the attached “Net Preamble” found in Appendix B, “NCS Scripts” and describes the current weather conditions that lead to Net activation.
- c. A spotter net general check-in session may or may not be taken at the beginning or during the Net at the discretion of the NCS Supervisor. It is preferred that the nets be activated to allow sufficient time for a spotter check-in session in MOST net activations.

3. Upon Formal Net Activation Net Control will maintain the Net:

- a. Net Control will maintain control of Net frequencies by
 - advising the net on the quarter hour or more frequently that a net is in progress,
 - providing situational updates on the weather,
 - explaining what information is desired from spotters,
 - discouraging non-net traffic on the frequency, and
 - reviewing spotter guidance information as to reportable conditions and spotter protocol.
- b. It is the responsibility of the on-call NCS Supervisor to be aware of the prevailing weather conditions at all times so that spotters can be kept informed and operations can be adjusted to meet changing needs.
- c. When accepting the report of a non-METRO SKYWARN station, Net Control will seek confirmation of severe weather reports by asking the net for a confirming report from a nearby METRO SKYWARN Spotter, if available.
- d. If conditions are of particular concern, and spotters cannot be raised on net frequencies in a particular location, NCS Supervisor may elect to use the

METRO SKYWARN database and make targeted phone calls to spotters in locations where weather data is needed. In these instances it is critical to specify that Spotters in the locations indicated who observe non-severe or routine conditions are encouraged to report their current conditions, since such a call would only be placed when information is required to facilitate a warning decision and the absence of severe conditions is at least as important as severe conditions in this situation.

- e. The call sign of the NCS during a formal net will be given at least every ten minutes. During formal nets, the Metro Skywarn tactical callsign of KØMSW will be used.
- f. In order to maintain control of the Net, Net Control should identify that the weather net is in operation and provide a weather update on the quarter hour or more frequently.

4. Formal Net Spotter Protocol

- a. Net Control shall instruct spotters to check in with their METRO SKYWARN ID number and a one or two-word tail message describing the traffic they have for the Net. Examples of the tail message include ‘tornado’, ‘wall cloud’, ‘funnel’, ‘hail’, ‘wind damage’, ‘emergency’, ‘check in’, and etc.
- b. Net Control will acknowledge the spotter by repeating his METRO SKYWARN ID number.
- c. The spotter will then respond with:
 - Their location including major cross streets and the city or rural area where they are located.
 - The condition that they are reporting can include:
 - the location of the reported condition, it’s direction, and distance;
 - the area the condition is over providing a city and intersection (e.g. Northern Shoreview or Apple Valley at the intersection of Cedar Ave and 142nd Street W); and,
 - the time the reportable condition was seen.
 - spotter’s amateur radio call sign.
- d. If necessary, Net Control may request additional information from the Spotter. When Net Control is finished receiving the report they may repeat it back to the spotter to verify that the information was copied correctly. The decision to repeat the report back to the spotter may be made based on the importance, complexity and how busy the net operators are.

- e. The Spotter will confirm his communication with his amateur radio call sign.
- f. Net Control will acknowledge correct receipt of the report and availability for another report by giving the local 24-hour time (HH:MM) at which the report was logged.
- g. If spotters make reports of non-reportable conditions, Net Control will politely thank the spotter on the Net and request from the net only currently accepted conditions as defined by the NCS Supervisor, listing each for reference by spotters. The intent is to remind spotters of the appropriate conditions and encourage reports only of those conditions, but not to embarrass or discourage enthusiastic spotters.
- h. Net Control will solicit reports from specific areas, as conditions warrant, based on requests from the NWS or the judgment of the NCS supervisor. Net control will not direct any spotter to any location for spotting purposes.

B. Discretionary Standby Net Activation

When certain High-End severe weather potential criteria has been reached over a given geographic area, The National Weather Services Storm Prediction Center in Norman OK will issue a (PDS) "Particularly Dangerous Situation" convective weather watch for that area. Similarly, the local NWS office may be particularly concerned about an approaching system. These types of severe weather watches are relatively rare and reserved for times when forecast weather conditions are favorable for a major widespread outbreak of severe thunderstorms or tornadoes.

The NWS may highlight these types of convective weather watches with stronger more enhanced text as follows:

"THIS IS A PARTICULARLY DANGEROUS SITUATION WITH THE
POSSIBILITY OF VERY DAMAGING TORNADOES AND DAMAGING
WINDS EFFECTING A LARGE AREA. ALSO... VERY LARGE HAIL.
DANGEROUS LIGHTNING "

The above is an example of a (PDS) type watch that would meet the criteria for activating a formal standby net on all 3 respective METRO SKYWARN main frequencies shortly after or upon watch issuance:

1. When the National Weather Services Storm Prediction Center issues a (PDS) "Particularly Dangerous Situation" weather watch that includes any or all of the METRO SKYWARN geographic area of responsibility, the following actions may be taken by the on duty NCS.

2. The decision to activate well in advance of the approaching storm to ensure sufficient spotter participation should be considered based on the seriousness of the situation, the need for spotter coverage, and availability of advance warning and resources available to activate. Consultation with the NWSRG and/or the NWS Lead Meteorologist is strongly recommended.

- a. Net control may announce to the net:

"THIS IS METRO SKYWARN NET CONTROL STATION KØMSW. AT THIS TIME WE ARE GOING TO ACTIVATE A STANDBY WEATHER NET IN RESPONSE TO THE ISSUANCE OF "PARTICULARLY DANGEROUS SITUATION" [WATCH OR OTHER WEATHER CONDITION] WHICH COVERS ALL [GEOGRAPHIC AREA] AS WELL AS THE ENTIRE TWIN CITIES METRO AREA VALID UNTIL [24:00 TIME]."

THE PURPOSE OF THIS METRO SKYWARN STANDBY NET IS TO GET AREA WEATHER SPOTTERS ACTIVATED, PREPARED AND INFORMED IN ADVANCE OF POTENTIALLY SIGNIFICANT SEVERE WEATHER MOVING TOWARD AND DEVELOPING INTO OUR COVERAGE AREA. WE WILL INITIALLY BE TAKING SPOTTER CHECK-INS FROM IN AND AROUND THE METRO AREA. AFTER THE INITIAL ROUND OF CHECK-INS IS COMPLETE NET CONTROL WILL BREAK IN ON THE QUARTER HOUR OR MORE FREQUENTLY AND GIVE AN ON-AIR WATCH / WARNING / RADAR AND SEVERE WEATHER SITUATIONAL UPDATE AS WELL AS CALL FOR ANY ADDITIONAL SPOTTER CHECK-INS TO THE STANDBY NET. THIS FREQUENCY WILL BE AVAILABLE FOR GENERAL AMATEUR RADIO USE IN BETWEEN SCHEDULED WEATHER UPDATES. ONCE THE NET CONTROL SUPERVISOR DETERMINES THAT SEVERE WEATHER WILL SOON BEGIN TO AFFECT THE COVERAGE AREA IT WILL BE ANNOUNCED ON AIR THAT FORMAL METRO SKYWARN WEATHER NET HAS BEEN ACTIVATED.

- b. At this point the net control would give an overall on-air watch / warning / radar and severe weather situational update that may include the following:

ONCE AGAIN THE NATIONAL WEATHER SERVICE HAS ISSUED A (PDS) TORNADO WATCH FOR ALL OF CENTRAL AND SOUTHERN MINNESOTA INCLUDING THE ENTIRE TWIN CITIES METRO AREA UNTIL 1:00 AM CDT. NO SEVERE WEATHER WARNINGS ARE CURRENTLY IN EFFECT FOR THE METRO AREA AT THIS TIME. NATIONAL WEATHER SERVICE DOPPLER RADAR IS CURRENTLY INDICATING SEVERAL AREAS OF SEVERE WEATHER OVER SOUTHWEST

MINNESOTA. THERE ARE CURRENTLY TORNADO WARNINGS ACTIVE FOR REDWOOD AND RENVILLE COUNTIES UNTIL 7:00PM. THESE STORMS ARE CURRENTLY TRACKING TO THE NORTHEAST AT 50 MPH. WHICH WOULD POSSIBLY BRING THEM INTO THE WESTERN TWIN CITES METRO AREA WITHIN THE NEXT HOUR AND A HALF SHOULD THEY HOLD TOGETHER.

- c. Once the opening update is given, net control will then make a request for spotter check-ins to the (PDS) watch standby net under the following net script:

AT THIS TIME WE ARE NOW LOOKING FOR GENERAL SPOTTER CHECK-INS TO THIS INFORMAL NET. SPOTTERS PLEASE CHECK INTO THE STANDBY NET USING YOUR METRO SKYWARN ID # INITIALLY. NET CONTROL WILL THEN ACKNOWLEDGE YOU WITH YOUR METRO SKYWARN ID# IN ORDER RECEIVED. AT THAT TIME YOU WILL THEN RESPOND WITH YOUR SPOTTING LOCATION CITY AS WELL AS YOUR STATE OF READINESS ENDING WITH YOUR CALL SIGN.

- d. Once all initial spotters on air check into the net, net control may then remind persons on air that the frequency will remain open to general amateur radio use while the standby net is running.
- e. The Net Control Station will also make attempts to ensure that timely notices are sent out on the SWAlert e-mail list and check that the status has updated on the Metro Skywarn website.
- f. They will also make it known that they will update spotters on the current severe weather situation on the quarter hour. Net control will then sign clear until the next update:

THIS IS KØMSW WITH METRO SKYWARN ONCE AGAIN REMINDING EVERYONE THAT WE ARE IN A STAND BY NET AT THIS TIME; THE FREQUENCY WILL REMAIN AVAILABLE FOR GENERAL AMATEUR RADIO USE THROUGHOUT OR UNTIL A FORMAL WEATHER NET ACTIVATION IS NEEDED. WE WILL BE BREAKING ON THE QUARTER HOUR WITH A SEVERE WEATHER SITUATIONAL UPDATE AS WELL AS A WATCH/WARNING AND CURRENT RADAR OVERVIEW. THIS IS [NCO CALL] CLEAR AT [24:00 TIME].

- g. On the quarter hour the NCS will break in if needed or come on the air with a complete overview of the current severe weather situation. This

should include any new updates or information on watch and warning status, current area radar image including details on where the storms are, what areas they are affecting, what their current track is, direction, speed and severity and when they are expected begin affecting the primary coverage area.

- h. This process will be repeated under the discretion of the NCS on duty based on the overall severe weather threat at hand to the coverage area. Once it is clear that severe weather will soon begin affecting portions of the primary coverage area net control will then announce on-air the upgrade in net status to a Formal Net.

C. Informal Nets

1. During the slow periods the NCS is encouraged to consider standing down to an informal net to take “Check ins” from spotters as a method of maintaining both activity on the net and interest by the spotters.
 - a. “Check ins” should be conducted so that repeaters being used for net operations are not tied up in case some station has an emergency.
 - b. The NCS Supervisor may also elect to invite informal discussion of non-severe weather, spotter operations, and other routine traffic.

D. Net Closure

1. NCS operations will be terminated only after consultation with the NWS.
2. Depending on the conditions, the NCS Supervisors may on their own decide whether to step down to an informal net or go to a standby condition.
3. Prior to terminating net operations Net Control will make an effort to solicit any last reports from spotters. This effort should target areas not heard from or where weather may still be active.
4. The “Closing Statement” found in Section D. of Appendix B, “NCS Scripts” is used to close formal net operations and return a frequency back to normal amateur radio operation.