

**The National Capital Area SKYWARN Support Group  
In cooperation with  
The National Weather Service Baltimore/Washington  
Forecast Office  
Sterling, Virginia**



**SKYWARN Amateur Radio  
Net Control Station Manual**



**2006 Edition National Capital Area SKYWARN Support Group, Sterling, VA v. 2006-03**

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# SKYWARN Net Control Guidelines

By Randy Sly, W4XJ

Thank you for volunteering as a net control station for SKYWARN. Some of you have probably served as a net control station for other nets, and most of you have observed net operations with the National Traffic System and other nets. While SKYWARN operates similarly to most other directed nets, there are some differences that we want to highlight as you prepare to operate as an NCS.

## **Net Operation:**

The local SKYWARN net operates on the 147.300 Mhz repeater located in Bluemont, Virginia. This is a wide-coverage repeater that encompasses a significant portion of the area served by the National Weather Service Office in Sterling, VA. A local radio amateur serves as SKYWARN Coordinator and becomes our official liaison with the SKYWARN Coordinator at the NWS. It would be a good idea for potential net control operators to familiarize themselves with the subnets and other information on the SKYWARN website at: <http://www.erh.noaa.gov/er/lwx/skywarn/skywarn.htm>.

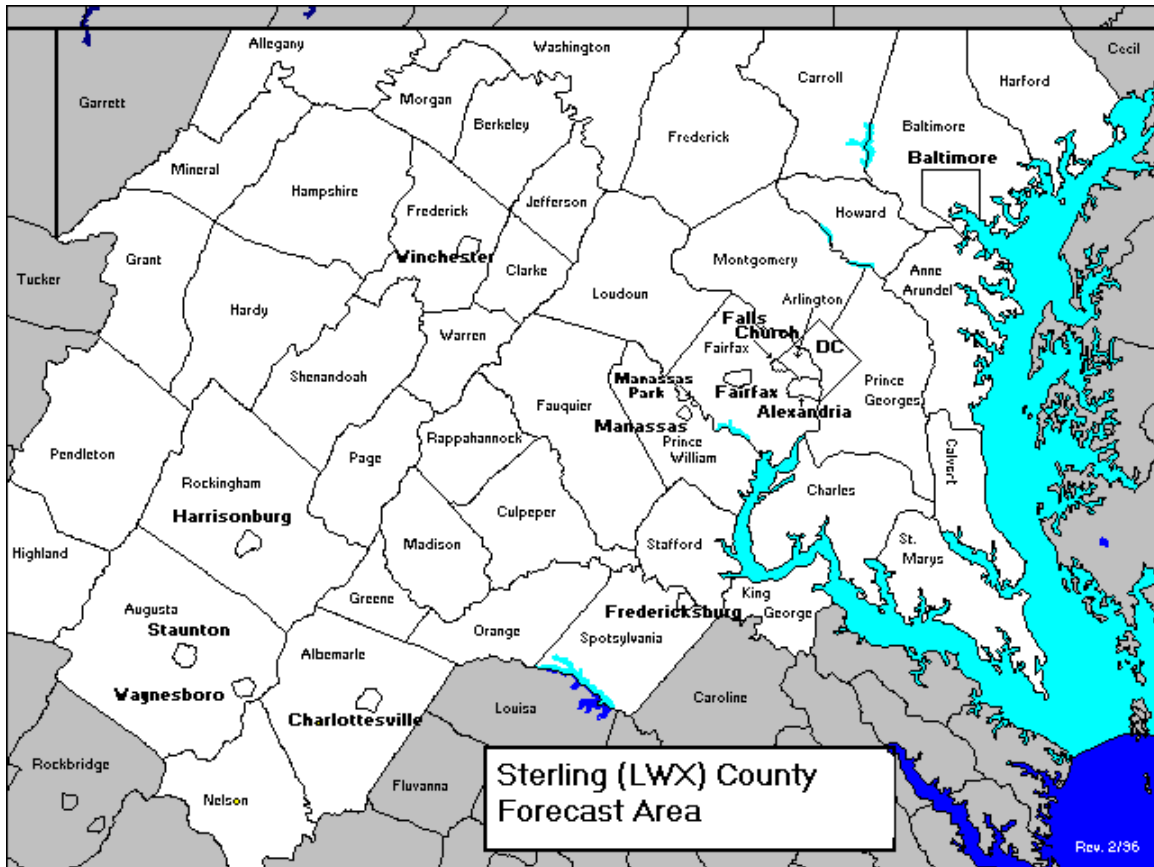
## **Training:**

Net Control Stations do not necessarily need to have SKYWARN training, so don't hesitate to step up if you don't have training when volunteers are asked for. It is preferred, however, that net control operators have received at least the Basic I training class. This allows control operators to understand SKYWARN and weather terminology that much more and be on the same "playing field" with spotters. If you are interested in working with SKYWARN long-term, classes are a really necessary. The schedule of classes can be found on the SKYWARN website.

**Coverage Area:**

The jurisdiction for the Sterling office of the NWS includes the following:

- Maryland: Alleghany to Hartford County and down to St. Mary's County. (It does not include any part of Maryland east of Chesapeake Bay.)
- Virginia: Everything north of a line from King George County to Nelson County.
- West Virginia: the panhandle area.
- Washington, D.C.



## Practical Guidelines for Net Control Stations

By Randy Sly W4XJ

### I. Should you volunteer for net control? Here are some things to consider:

- A. You should be able to communicate reliably on the 147.300 repeater.
- B. You should have a backup radio that can also reliably communicate with the repeater.
- C. Ideally, battery power for your main and/or backup radio should be available. The lack of battery-power limits your ability to function as a SKYWARN NCS during severe weather as power outages are very common occurrences.
- D. Another advantage for net control stages is the availability of an internet-ready computer at your operating position. This will allow you to receive updated weather bulletins, advisories, etc.
- E. The following also needed as resources for a SKYWARN NCS:
  - 1. the appropriate scripts for the SKYWARN net.
  - 2. a map of the coverage area for the National Weather Service – Sterling.
  - 3. a list of subnets used in total coverage of the coverage area.
  - 4. SKYWARN reporting sheets for logging severe weather information.
  - 5. phone numbers and email address for severe weather reporting to the NWS.
  - 6. these resources can be found on the [www.147300.com](http://www.147300.com) website.

### II. Before you begin

- A. If possible, listen to the net for at least one-half hour prior to assuming net control. Take notes on keys stations, conditions, etc.
- B. Make sure you have tested both your main and backup radios prior to assuming your position as net control.
- C. Check your backup battery for a full charge (if you have one).
- D. SKYWARN operates in either a “standby” (watch) or “full” (warning) mode, depending on conditions and the needs of the National Weather Service office.

Normally, this decision is made by the Amateur Radio Coordinator (or one of his assistants) in consultation with the SKYWARN Program Manager. Ascertain which way the net is currently operating.

E. When SKYWARN is activated, the Amateur Radio Coordinator, one or his assistant coordinators, or another delegated SKYWARN operator appointed by the Coordinator will act as net manager. They will take care of managing NCS schedules and other logistical aspects of the net activation.

F. National Weather Service

1. If you have computer access, bring up the National Weather Service website, displaying the link for watches, warnings, and advisories. Normally there is an overlap, but you may need to bring up three windows to cover them all: MD/DC, VA, and WV.
2. You may also want to bring up a separate window with a display of the NWS radar imaging.
3. Other programs, such as InterWarn® by Storm Alert can provide a more comprehensive source of information in an easy-to-use format.

### **III. Assuming Net Control**

A. At the time you are to assume net control, make a contact with the current NCS and notify them that you are ready to take over.

B. Be sure that you have received the information you need in order to assume net control. This would include:

1. current weather advisories, watches and warnings.
2. any severe weather activity being experienced in the repeater coverage area.
3. any particular weather phenomenon the weather service is especially interested in tracking.
4. active subnets and the call signs of liaisons for those nets.
5. status of WX4LWX: whether it is staffed or not, etc.

C. If you do not have battery backup, please appoint a backup net control that has battery capability, or confirm that someone on the net can take over should your power be disrupted.

## IV. Operating Guidelines

### A. Standard Guidelines

1. While serving as the net control station, you maintain total responsibility and authority in providing a smooth running net. The NCS, however, must accept any direction, guidance, or changes given by the SKYWARN Amateur Radio Coordinator, his assistants, or the current net manager.
2. Remember that you are in charge. Do not allow any arguments or unregulated operating to take place. Often, in emergencies, nerves become frayed and tempers can get short. Operate as a peacemaker and calm people down. Remember that your tone of voice is the most powerful part of your speech.
3. When transmitting, be sure to “hang back” after the courtesy tone, in order to give stations a chance to break in. During severe weather things can happen quickly. This lag time allows stations who are experiencing severe weather to access the net.
4. In times of critical emergency or a high traffic load, it is recommended that you appoint a backup net control, to be sure all information is properly reported and all stations are being acknowledged.
5. As NCS, you are responsible to read the appropriate script (winter, summer watch, summer warning) on the hour and half-hour. In the case of a warning, the script is read every fifteen minutes.
6. When reading the script, please do so clearly and slowly. Pause about half-way in order to allow the repeater to reset then continue.
7. Read the script as it is written in order to maintain a sense of professionalism on the net. For example, don't change it by saying something like “This is \_\_\_\_\_. Well, I'm in touch with those great people down at that building we like to call the National Weather Service. They say we're gonna have bad weather.”
8. At all times the NCS should be concerned with the health and safety of spotters. Do not encourage “storm chasing” and caution those who are encounter severe weather to regard their safety over reporting.
9. At no time should you argue with the SKYWARN Coordinator, Assistant Coordinators, WX4LWX operators, or net manager on the repeater.

- a) If a disagreement occurs, either handle the conflict through a more private medium (email, phone, or, in extreme situations, on an alternate frequency) or wait until later.
- b) Those involved in the net and the scores of additional hams and others who are monitoring need to see you as a unified team.

10. Remember that, in compliance with FCC regulations, that you must “ID” (identify your station by call sign) every ten minutes if you involved in constant communications.

## B. Receiving Weather Traffic

1. When receiving weather reports accuracy is very important. Have reporting stations report any information that you may have a question about.

- a) Don't assume you heard correctly.
- b) Be sure to find out if such figures as wind speed, amount of rain, and depth of snow are measured or estimated.
- c) Please note: The weather service is not interested in rainfall rates. Please do not pass these on to LWX.

2. During an actual severe weather event traffic on SKYWARN can become quite intense, hectic, and sometimes confusing.

- a) When multiple calls are made to net control, write down their calls and respond with the order in which you desire to receive their information.
- b) Remember, you are in control. Stations will follow you if you are definite in your directions.

3. Subnets:

- a) Subnets exist to cover sections of the NWS Sterling operational area that are not reached by the 147.300 repeater.
- b) Liaisons from subnets may check in from time to time with additional weather information. Be sure they are given adequate attention in passing their information.
- c) If severe weather is seen to be moving toward an area covered by a subnet, the NCS should confirm that a liaison to that subnet is available.

d) If no subnet liaison exists for a net that needs one, the NCS has the authority to appoint a liaison station.

#### 4. WX4LWX

a) Should WX4LWX be active on the net, it is good operating procedure to confirm that they have received any reports, particularly during times when severe weather is occurring or the report is particularly important.

b) Even with multi-operators, things can sometimes get confusing at the NWS and transmissions are missed. LWX may break in after a report (often times depending on the operator) and say, "WX4LWX copied direct." If there is no such transmission is given, you may say, "WX4LWX, did you copy direct?" if you want to be sure that they have received important information.

5. If no operator is present at LWX, reports are normally sent by email or – in the case of information that may need to get to the forecasters more quickly – by phone.

### C. Handling Difficulties

#### 1. Other Emergency Operations

a) SKYWARN works closely with all other amateur radio emergency communications groups, but is not a subgroup of the Amateur Radio Emergency Service (ARES) or any other agency. SKYWARN is exclusively a program of the National Weather Service and operates under their authority.

b) If any complications or confusion about this arises on the net, please contact the SKYWARN Coordinator or one of the assistant coordinators for help.

c) SKYWARN nets should not be used to carry on any other emergency operations, except in the case of serious emergency.

#### 2. Improper Net Reporting

a) Sometimes you will get uninformed or irresponsible reports, such as "This is (CALLSIGN), Well, the clouds are getting darker over this way and it is starting to rain."

b) Don't respond with critical remarks. Politely acknowledge their transmission and, if there is not a great deal of activity, you may be able to explain the type of report we are looking for.

- c) In the case of a critical weather situation with a significant amount of traffic, the best response is to say, “(CALLSIGN), please standby. This is SKYWARN Net Control calling for reports from any stations with specific reports of severe weather.”
  - d) As time allows and when no severe weather is occurring, you may try to re-contact any persons making an improper report and explain how SKYWARN reporting works.
  - e) If an operator becomes irate, take a deep breath before responding. Acknowledge their problem and work toward a reasonable solution. If no resolution seems immediately available, do not jeopardize the flow of the net. Encourage the operator to contact the SKYWARN Coordinator with any grievance.
3. Northern Virginia Traffic Net Coordination
- a) Sometimes SKYWARN extends into the time of the net. There is so much overlap between SKYWARN volunteers and the NVTN that this happens almost seamlessly.
  - b) During actual severe weather activity, the net will only call for any emergency or priority traffic that may be present to be handled. Traffic can then be moved off to other repeaters to be passed.
  - c) If no severe weather activity is actually taking place, the net will normally call for traffic to be passed and then turn the repeater back to SKYWARN. The net always defers to any severe weather reporting that would come while the NVTN is active.
  - d) In the case of any confusion, seek the assistance of the SKYWARN Coordinator, Assistants or NVTN Net Manager in bringing resolution.

## **V. Handing Off Net Control**

### **A. Handing off net control responsibilities with SKYWARN is a critical activity.**

1. When the new net control station makes contact, indicating they are ready to take over, be sure to inform them of the same information as found in section II:B.
2. Also, confirm that the new NCS has the capability of receiving bulletins from the NWS; if not, help them make arrangements for a backup net control or bulletin station to monitor this for them.

B. Normally, NCS's serve one or two hour time slots. If you become weary or find yourself getting frustrated under pressure, don't hesitate to find a replacement.

C. Should your ability to clearly hear the repeater becomes hindered, immediately turn the net over to your backup NCS or call for a replacement.

D. To terminate SKYWARN

1. The net control station does not have the authority to terminate SKYWARN on his own authority.
2. The notification to terminate can come from one of the following sources:
  - a) SKYWARN Coordinator,
  - b) Assistant Coordinators
  - c) WX4LWX Operators
  - d) From the NWS forecasters by direct contact
3. If you do not know the tone sequence for removing the repeater from weather alert status, check to see if anyone on the net has the sequence before beginning the script.
4. Read the closing script, pausing for the tones to be transmitted as indicated in the script.