

Sandusky County Skywarn™

Operations Manual

Created June 13th, 2008 Updated January 1stth 2011



*** The Operations in this manual can be altered at ANY time during Skywarn™ events by the Skywarn™ Coordinator, Assistant Skywarn™ Coordinator, and the Emergency Coordinator of Sandusky County. ***

Purpose:

Skywarn™ is a program created by the National Weather Service whose purpose is, above all, to save lives and property. The idea behind this program is to have NWS-trained weather spotters look for the visible signs of severe weather in their area and report these sightings directly to the local NWS Field Office or go through an Amateur Radio Net.

Sandusky County Skywarn™ is an organization composed of interested individuals whose major purpose is to provide volunteer county wide severe weather spotting services.

The purpose of this Manual is to provide set guidelines for the Operation of Sandusky County Skywarn™.

Limitations:

The information contained in this Manual is to be used as a guide. It is not the intent of this Manual to limit the actions of any operators who are on site and best able to assess the prevailing conditions in their area. However, members of the Sandusky County Skywarn™ spotter program are encouraged to adhere to these guidelines.

Sandusky County Skywarn™ is organized to provide severe weather spotting services only. Personnel on Skywarn™ duty are neither expected nor required to serve in any other function. The authenticity of all reports is the sole responsibility of the originating authority. Either shall determine the validity of such messages:

- A) The Net Control Station – if reports are taken by radio by a Net Control Operator**
- B) The Sandusky County Skywarn™ Coordinators - if reports are sent to the Sandusky Skywarn™ Center**
- C) The telephone operator at the National Weather Service in Cleveland - if reports are called in directly to the Cleveland Office of the National Weather Service (NWS) using NWS-SKYWARN HOTLINE 1-800-262-9683.**

Note: Reports of severe weather will be given greater consideration and a higher sense of urgency if reported through the above official channels by officially trained Skywarn™ personnel. The highest credibility will always be given to those who have had NWS Skywarn training.

Any radio operator may report the weather conditions, but trained spotters may verify the reports.

Legal:

Sandusky County Skywarn hereby relinquishes all responsibility for any and all damages incurred to life and property of storm spotters, chasers or any other terms used to identify persons reporting to our net control.

All Sandusky County Skywarn members and any net control are prohibited from directing any spotter or chaser to any specific area. The NWS may ask for reports from a specific area and net control can relay this request to members, but may not ask specific mobile stations to respond to specific areas.

We are not here to “chase, follow, tag along with” or “look for” storms! There is a difference between looking for a storm and keeping an eye on an approaching storm.

Spotting storms carries a certain inherent element of danger of its own.

Chasing storms is not sanctioned by Sandusky Skywarn. You do so at your own risk.

All spotters will be required to sign a Release Form to acknowledge their acceptance of this Legal position.

This Manual is subject to alterations and/or revisions as required by the Skywarn™ Coordinator, Assistant Skywarn™ Coordinator, and the Emergency Coordinator of Sandusky County.

Organizational Structure:

The following are leadership positions and responsibilities in the Sandusky County Skywarn™:

A) SKYWARN™ Coordinator shall:

- 1) Coordinate operations within Skywarn™
- 2) Coordinate Skywarn™ activities with other surrounding counties, where appropriate, and offer assistance when requested.

B) Assistant SKYWARN™ Coordinator shall:

- 1) Assist the Coordinator in the performances of his duties
- 2) Keep an up to date roster of Skywarn Members.
- 3) Act on other requests by Coordinator

C) Net operator(s) shall:

- 1) Be appointed before severe weather arrives
- 2) Serve as an operator to start a net if needed.
- 3) Perform functions as needed by the Coordinators.
- 4) Perform Safety Officer operations if no one else is available to do so.

Membership

Membership in Skywarn™ is open to any individual who has taken the National Weather Service Spotter Training Class. Training every 2 years is required to keep your status current.

The National Weather Service upon completion of their spotter Training Class will issue spotter Identification Cards.

All members should report their operating equipment and capabilities to the Skywarn Coordinator or Asst. Coordinator and advise of any changes.

All members are encouraged to take part in further training sessions that may be provided.

Training:

The Sandusky County Skywarn™ will operate under the authority of the Amateur Radio Emergency Service of Sandusky County. Training nets are held every Sunday at 8:00 P.M. local time on the W8NCK repeater 145.250.

The Coordinator or the Asst. Coordinator when deemed necessary will hold preparedness classes. Training classes are the most effective means of training Skywarn™ members.

Training functions may include Skywarn™ participation in local events and other functions, such as weather-related talks and presentations to improve knowledge, communication, organization, discipline, and judgment skills.

There shall be a minimum of two Simulated Emergency Tests per year, preferably at six-month intervals.

Sandusky County Skywarn™ members are encouraged to continue development of a strong background in spotting procedures and net operations on their own through outside education. Pertinent literature is available from various sources including Internet sites and the Sandusky County Emergency Management Office.

EOC Access and Procedures

Criteria for entering the EOC and radio room:

1. During normal business hours, Monday thru Friday, 8 am to 4:30 pm, notify EMA director upon entry.
2. After business hours key holders call the jail at 419-334-6452 before entry or from the radio room phone immediately upon entry. Key holders do not use their keys during business hours.
3. After business hours non-key holders call the jail at 419-334-6452 **BEFORE** coming to the jail. Tell the jailer when you will be arriving and your reason is Skywarn activation. This is the **ONLY** reason to enter the EOC after business hours. When you arrive at the jail use the door buzzer and let them know who you are and why you are there.

ARES ID IS REQUIRED AT ALL TIMES TO ENTER THE BUILDING AND WHILE IN THE BUILDING.

All trained net operators know entry to the radio room.

Procedures for activation in EOC for Skywarn™:

- 1) Sign in on clip board just left of entrance inside of radio room, and execute call list above sign-in clipboard
- 2) Get all necessary supplies that you will need. (Paper, Pens, Ect.)
- 3) You may turn on T.V. in radio room on table next to phone and change channels to your preference.
- 4) Turn on 2m/440 radio by computer on north wall in corner. If you are the first station to start a net, all Skywarn papers are above the radio on the shelf. Check into the Toledo Skywarn Net (Call: "Toledo Skywarn Net Control, this is N8SCA Sandusky County" to get Toledo call sign). Revert to the frequency list and operation guide for the radio on cork board near radio. The computer should and will be left on, just by pressing the power button on monitors and moving mouse they will turn on. **PASSWORD FOR BOTH COMPUTERS IS 145250.** Storm Lab and the Internet are available on both computers.
- 5) If a Skywarn net has already been activated, inform them that you are at the EOC and will take over the net as soon as you are ready.
- 6) When the watch or warning for Sandusky County has expired and the Toledo District 1 net is still active, inform them that you are ending the weather net for our counties. On most occasions our net will end when the Toledo District 1 net ends.
- 7) Leave both computers ON and turn the radios OFF.
- 8) Leave all paperwork underneath the computer keyboard for Coordinators.
- 9) Turn lights off, sign out, lock door and return key.

Red Cross Building:

This building is to be used at the coordinators or Net Control decision ONLY. This will be a backup building to EOC or if an additional radio is needed for Skywarn. Building is located at 1247 Napoleon Street in Fremont. Access to inside is at East door. To obtain code for door contact a Coordinator. Bring flashlight for inside, as you walk in, the radio room will be to your right when you approach the hallway. A Kenwood dual band (Pre-Programmed) and a HF rig are available. No Internet, No Phone, and No Backup Power. Restrooms are down the hall and to the right. Light switches in building are located in various/odd places, Flashlight is recommended for entry and until the setup of the light switches are understood by user. You are NOT permitted to enter any other rooms with the exceptions of Conference Room and Kitchen. Building must be kept secured during your use and when you leave. You are NOT to use ANY equipment other than HAM rigs. You must advise Net Control that you have arrived and/or departed the Red Cross. You MUST also advise Net Control if anyone else is in building with you. Only Red Cross personnel and HAM'S are permitted inside.

District 1 Procedures

How to call District 1

"District 1 Net Control, this is N8SCA, Sandusky County Skywarn"

Weather Traffic Types and what to report for each type.

Routine

- Hail less than ½", including "pea-sized hail".
- Winds between 40 and 50 mph.
- Measured rainfall over a measured amount of time.
- Old reports of storm damage.

Priority

- Hail, 1 Inch or larger not associated with any tornadic activity.
- Winds in excess of 50 mph.
- Flooding in progress
- Storm related damage (recent)

EMERGENCY

- Tornadoes (including waterspouts and cold-air funnels that are on the ground).
- Funnel Clouds.
- Wall Clouds.
- Hail, 1 Inch in diameter or larger during a Tornado Watch, Warning or when there have been reports of rotation in the area.

After making initial contact, you must give the report in this manner:

County name, City name (or miles and direction from a known town), the report and time of occurrence.

A typical exchange with W8MTU District 1 Skywarn Net Control might sound like this:

N8SCA calls District 1 - "W8MTU, N8SCA Sandusky County Skywarn with priority traffic."

District 1 responds - "Sandusky County, District 1, go with your report.

N8SCA responds - "2 miles south of Fremont, 64 mph measured winds, two 12" live trees down, time of occurrence 6:15pm, N8SCA

District 1 responds - "Thanks for that report. We will pass it along to Cleveland. W8MTU

Activation:

Sandusky County Skywarn™ shall activate a spotter net:

- A)** When the NWS indirectly requests spotter net activation by a tagline appended to the bottom of a severe weather alert/statement.
- B)** At the direct request of the National Weather Service Staff either by telephone, cell phone, text message or amateur radio to the Skywarn™ Coordinator, Assistant Skywarn Coordinator or Emergency Coordinator.
- C)** Upon issuance by the National Weather Service of any severe weather related Watch or Warning.
- D)** At the request of the Sandusky County Emergency Management Agency Director or assistant.
- E)** When the Skywarn™ Coordinator, Asst. Skywarn™ Coordinator or Emergency Coordinator deems it necessary to activate weather net based on weather conditions.

When requesting the establishment of a Skywarn™ net by bulletin, the National Weather Service will, in most cases, add a line to the bottom of a local severe weather bulletin or special weather statement, such as:

SPOTTERS SHOULD REMAIN ALERT FOR POSSIBLE ACTIVATION LATER

-- Or --

SPOTTER ACTIVATION IS LIKELY

Or similar statements.

Regardless of whether, the National Weather Service has issued an official request for spotter activation or not, the Skywarn™ Coordinator, Asst. Skywarn™ Coordinator or Emergency Coordinator may at any time determine a weather condition exists that requires the activation of Skywarn™ spotters, and act to establish a spotter net.

If spotter activation is warranted the Skywarn™ Coordinator, Asst. Skywarn™ Coordinator or Emergency Coordinator shall:

1) Notify Skywarn™ members via the W8NCK / N8SCA Fremont repeater 145.250 PL 186.2, via Telephone, Text Messaging or the n8sca email account on yahoo.

2) Send Net Control Operators(s) to the Emergency Operations Center to:

A) Monitor weather-related RADAR and satellite imagery and reports any pertinent information to the Toledo District 1 Skywarn™ net or the National Weather Service in Cleveland if Toledo is not operating.

B) Notify all operators of weather-related warnings and bulletins that come into the EOC.

All Sandusky County Skywarn™ members should monitor the 145.250 MHz repeater for call-up advisories and operations whenever a severe weather condition appears to be developing or is already apparent.

On rare occasions, the National Weather Service may specify the information and time they want to receive reports. For example, they might request that observed wind speed, wind direction, temperature, and precipitation type be reported every hour or half-hour.

The Cleveland National Weather Service may also indicate particular areas in which they are interested.

They will break into an active Skywarn™ net to request any information.

Mobilization:

SKYWARN™ members should monitor the primary net frequency if they suspect that a severe weather condition may exist such as the presence of a severe storm.

Mobilization is initiated by the opening of a Skywarn™ Net on the primary net frequency by a Net Control Station.

SKYWARN™ members will check into the net from their home or mobile stations.

The Sandusky County Sheriff's Dispatch will be notified by the Skywarn™ Coordinator, Assistant Skywarn™ Coordinator, Emergency Coordinator or Net Control Operator that Skywarn™ spotters are active in the county. This will eliminate confusion with law enforcement.

NOTE:

If you are approached by law enforcement or public safety units, show them your ARES ID or SKYWARN ID, tell them who you are and why you are in your current location. If they order you to leave, YOU MUST LEAVE IMMEDIATELY. ALWAYS OBEY AN OFFICER'S COMMANDS. As soon as you are in compliance, call net control to report your move but do NOT announce anything about the officer's commands or behavior over the radio. Remember everyone is listening and this is the time for us to be professional.

If you are asked to do ANY operations by public safety units during Skywarn™, (Traffic control, block road, CPR, ETC) Please remove any identification on your person that refers you to Skywarn™, ARES or EMA

Sandusky County Skywarn™ will activate using the following sequence:

1) A station that has been designated or available for net control will contact an authorized station to link up repeaters (Clyde to Fremont). If an authorized linking station is not found within ten minutes, start the net on the 145.250 repeater. The net control station can search for an authorized station later during the net as long as the net is in condition GREEN.

2) The net control station will use the following script for opening Skywarn™:

This is (Your Call) net control activating the Sandusky County Skywarn net.

This is a controlled emergency weather net that will remain in effect until further notice.

This net is linked to the Clyde 2 Meter

My name is _____ and I am located in Sandusky County in the town of (Your Town) My ID is (Your Call)

NOTE:

THE ONLY STATION TO CALL TOLEDO OR CLEVELAND WITH REPORTS THAT COME TO THE SANDUSKY COUNTY SKYWARN™ NET IS THE ACTIVE NET CONTROLLER OF SANDUSKY COUNTY SKYWARN™ NET.

After activating the Skywarn™ Net for Sandusky County, tune to 147.375 NO PL for the District 1 Skywarn™ Net (separate radio if available). Tell net control your call, location, and that you are Sandusky County Skywarn™ Net control.

If you are a temporary net control station (until someone arrives at EOC), once you transfer net control to N8SCA at the EOC, they will call District 1 Skywarn™ Net and tell them the change of call sign, location, and their name for Sandusky County Skywarn™.

ONLY if Net is in condition GREEN will N8SCA and the previous net control station exchange check-in's and weather reports. (You may use e-mail; call the EOC at 419-557-8348 (White Cordless Phone) or 419-334-6426 (Tan Wired Phone), or the CHAT feature in WXSPOTS to transfer information).

If you are able, please monitor 147.375 NO PL on a separate radio for traffic your way. IF the Toledo Net is not up, still monitor the frequency until it is activated.

ONLY if any of the below happens and the Toledo net is **NOT** up, call the direct number to the National Weather Service in Cleveland 1-800-262-9683. Give them your name and tell them you are running the Sandusky County Skywarn™ net. Give them your report and location of report.

ONLY REPORT THE FOLLOWING TO TOLEDO AND NWS:

Gust front arrivals with their wind speed and locations

Funnel Clouds

Tornado on ground

Hail with size

Property damage from winds more than 40MPH.

Skywarn™ Scripts:

Once the Skywarn™ Net is activated, the following scripts will be used by Net control:

GREEN:

Tornado WATCH
Severe Thunderstorm WATCH

ECHOLINK MAY STAY ON UNLESS IT INTERFEARS WITH TRAFFIC EXCHANGE OR BY NET CONTROL

DISCUSSION
Net Condition **GREEN**

This is (Your Call) Sandusky County Skywarn Net Control.
The net is in condition **GREEN**, low priority.

The National Weather Service has issued a:

- Severe Thunderstorm WATCH for ____ until ____.
- Tornado WATCH for ____ until ____.
- High Wind WARNING for ____ until ____.
- Special Marine WARNING for Lake Erie until ____.

If you are a mobile station, please contact net control and advise the area or location you will be spotting at. There will be check-ups with you during the net.

Report tornados, funnel clouds, wall clouds, flash flooding, hail, wind speed greater than 40 mph, rainfall 1 inch or more per hour, gust front arrivals, power outages, and any weather related damage to property.

Reports must include your call sign, event time, location, wind and rain measured or estimated, hail size and duration, size of live or dead downed tree branches, if flood water is common in flooded area and if water is over curbs.

The net is in condition **GREEN**, low priority, normal radio use may continue. Leave longer pauses between transmissions for break-ins. Please check in now, (Your Call).

⇒ (Repeat every 10 minutes)

Always ask:

- | | |
|---------------------------------------|-----------------------------|
| • Call sign | Limb diameter, live or dead |
| • Time of event | Hail size and duration |
| • Location | Common flooding area |
| • Estimated or measured wind and rain | Water over curbs |

YELLOW:

Severe Thunderstorm WARNING
Special Marine WARNING

Net Condition **YELLOW**

DISABLE ECHOLINK DTMF Command on 145.250

This is (Your Call) Sandusky County Skywarn Net Control.

The net is in condition **YELLOW**, high priority.

The National Weather Service has issued a

- Severe Thunderstorm WARNING for ____ until ____.
- Special Marine WARNING for Lake Erie until ____.

If you are a mobile station, please contact net control and advise the area or location you will be spotting at. There will be check-ups with you during the net.

No check-ins, only report tornados, funnel clouds, wall clouds, flash flooding, hail, wind speed greater than 40 mph, rainfall 1 inch or more per hour, gust front arrivals, power outages, and any weather related damage to property.

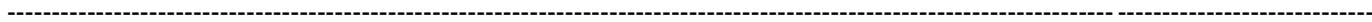
Reports must include your call sign, event time, location, wind and rain measured or estimated, hail size and duration, size of live or dead downed tree branches, if flood water is common in flooded area and if water is over curbs.

The net is in condition **YELLOW**, high priority, please limit your radio traffic to severe weather only. No check-ins. (Your Call).

⇒ (Repeat every 10 minutes)

Always ask:

- | | |
|---------------------------------------|-----------------------------|
| ○ Call sign | Limb diameter, live or dead |
| ○ Time of event | Hail size and duration |
| ○ Location | Common flooding area |
| ○ Estimated or measured wind and rain | Water over curbs |



RED:

Tornado WARNING

Net Condition **RED**

DISABLE ECHOLINK

This is (Your Call) Sandusky County Skywarn Net Control.

The net is in condition **RED**, urgent priority.

The National Weather Service has issued a Tornado Warning for _____ until _____.

If you are a mobile station, please contact net control and advise the area or location you will be spotting at. There will be check-ups with you during the net.

No check-ins, only report severe weather including tornados, funnel clouds, wall clouds, wind speed greater than 50 mph, hail, power outages, and any weather related damage to property.

All stations maintain radio silence unless you have a severe weather report.

The net is in condition **RED**, urgent priority. No check-ins. (Your Call)

⇒ (Repeat every 5 minutes)

Always ask:

- | | |
|---|--------------------------------------|
| <input type="checkbox"/> Call sign | Estimated or measured, wind and rain |
| <input type="checkbox"/> Time of event | Limb diameter, live or dead |
| <input type="checkbox"/> Location | Hail size and duration |
| <input type="checkbox"/> Common flooding area | Water over curbs |

Sandusky County Skywarn™ will De-Activate using the following sequence:

1) Use the following script:

This is (Your Call) net control. Are there any additional storm reports before we close the net? Please call now.

This is (Your Call) net control de-activating the Sandusky County Skywarn™ net.

The National Weather Service has either cancelled or let expire the weather watch or warning for our area. (Other comments)

Thanks to all who have checked in, with or without reports. The National Weather Service uses your reports to confirm what they see on radar. You are also providing a valuable service to your community.

Please wait until the links are dropped.

(Contact station that brought up link, or see attached station list)

I will now turn the repeater back to normal amateur radio use.

ENABLE ECHOLINK IF IT WAS TURNED OFF

Spotter Guidelines:

Once you have checked into a net, be sure to monitor the operation as continuously as possible. Often, vital information is given during the early stages of an operation. If, at any time during the operation, you must leave the net for any reason, inform the Net Control Station of how long you expect to be out of the net and notify Net Control when you are back on frequency. This allows the Net Control Station to conduct the operation with greater efficiency.

Identification

1. Once operations have commenced, the NCS is required to satisfy the FCC station identification requirements. He/she shall do so by identifying the station at least once every 10 minutes in accordance with FCC regulations.
2. When calling to be recognized by Net Control, it is not necessary to give the Net Control Station call sign; (e.g., `N8SCA this is KD8ERV'). Just give your call sign. In a Directed Net, all stations will communicate with Net Control unless directed to do otherwise. Therefore, transmitting your call sign and nothing else means that you are requesting to be recognized by the NCS. If you have pertinent information for Net Control or for another station on the net, your call sign plus the word `info' is sufficient to make your needs known. Net Control will acknowledge as soon as possible. If you are not recognized within a reasonable time, repeat your call. If you have reason to believe that you are not being heard by the NCS, then a longer call may be appropriate or you may request a relay.
3. If your information carries a high priority or is of some extreme importance, such as when a funnel cloud, tornado, large hail, damaging winds, or similar have been spotted, then your call sign followed by the words `Priority' should be used.
4. Further identifying by stations on the net is not necessary unless Net Control needs to know who is transmitting.
5. The use of `tactical' call signs may be helpful in some situations. Acronyms of duty/purpose may also be used (such as RSAT, WBO, SSO, EC, or NWS, etc.). Tactical call signs are only to be used if assigned by the NCS and will thereafter be used for the duration of the operation. The use of tactical call signs can greatly increase net efficiency, but does not obviate the need to meet FCC identification requirements.

Care should be taken to listen carefully before transmitting. All stations may not be able to hear all other stations on the net, especially during simplex operations. Try to determine that the frequency is clear before transmitting. The NCS may in order to facilitate a particularly noisy spotter's report, request the noisy spotter transmit into a repeater nearer to his/her location and listen on the main repeater, if the spotter has the capability to do so. For example, if a station in Green Springs is on an HT and cannot easily make the 145.250 repeater in Fremont, but he/she can reach the 145.350 repeater in Clyde, then the spotter could be instructed to transmit into the 145.350 repeater and to listen for responses from the NCS on the 145.250 repeater.

Pay as close attention as possible to the net operations. Often, information passed to the NCS from another station will be of importance to you. If you copy this information direct, it can save the time necessary to repeat it.

When Net Control recognizes you, state your business as quickly and clearly as possible. Avoid unnecessary verbiage.

1. If you have traffic, state the nature and destination of your traffic, but do not launch into your message until you are advised that the NCS is ready to receive it. You may be given instructions to move to another frequency or to transmit your traffic direct to another station, if necessary. So, wait for instructions.
2. If you have a question or information for the NCS, use good judgment and follow the patterns that have been established for the particular operation in progress. If you have a lengthy communication, you should so advise the NCS and wait for instruction.

Questions may arise for many reasons. If you do not understand something clearly, ask the appropriate questions to be sure that you can fulfill what is needed of you. However, questioning the procedures set by Net Control is generally not appropriate. Remember, the NCS usually has a better view of the overall picture and has set up the net to meet the needs of the operation as seen from a centralized vantage point. On the other hand, from your vantage point in the field, you may be able to directly observe a changing situation that could affect the entire operation. If you feel a suggestion is in order, by all means offer it, but as a suggestion only. Under no circumstances argue with or criticize Net Control during an operation. There will be plenty of time for that after the operation is over; if you still feel that constructive criticism is warranted.

The use of alternate or additional frequencies may be necessary during a complex operation. It is up to the NCS to assign all frequencies. Stations may use the ARES simplex frequency if they are spotting together very closely. They should still be monitoring the 145.250 or other linked repeaters for traffic. Net control DOES need to be aware of the frequency being used for talk around.

In our role as spotters, we must strive for efficiency. However, being efficient does not necessarily mean being fast. Transmissions should be made at a speed that allows the receiving station to copy easily and to write down important information, if necessary.

'Prowords' or procedural words help speed communications and often are able to express complex ideas in a single word. They are only effective, however, if everyone understands them and uses them correctly.

1. 'Over' is used to indicate the end of a transmission and is an invitation for the receiving station to reply.
2. 'Out' indicates the end of a transmission and the end of the 'conversation' or series of transmissions. No reply is expected.
3. 'Roger' means that a message has been received and understood. It does not mean 'yes,' or signify agreement.
4. 'Affirmative' and 'Negative.' Someone once quipped that these were short for 'Yes' and 'No.' In any case, they are appropriate because they are distinctive sounding words and their meaning is clear. This can be helpful, especially under marginal conditions.
5. 'Direct' as in, 'Are you direct?' means 'Did you copy directly?' and refers to one station's copy of another's transmission.

Warning Lights

1. Color of lights that can be used ONLY in Skywarn Operations are Yellow, Amber, or White.
2. Use of the above lights can ONLY be turned ON while parked. However can remain on vehicle, while in motion when OFF.
3. You MUST have identification on left, right, and on rear of vehicle telling others that you are a Certified Skywarn Spotter.
4. These lights can be used ONLY to warn drivers on road behind you that there is a distressed vehicle in front of you, if you are unable to pull fully off the road for spotting, you have been asked by law enforcement to activate them for additional warning power to their red and blues, there is an object in roadway that can cause hazard or injury, and if at anytime you are outside but close to your vehicle.

NOTE: You MUST wear a reflective vest at ALL times when outside your vehicle during Skywarn Operations. Use common sense and due regard in stopping for spotting, Do NOT park in middle of intersections, do not block traffic unless Law Enforcement has advised you to, and do not park on private property unless given permission by owner, State Highways or other roads that have high volume of traffic. If Law Enforcement asks you to turn off your lights for any reason, you must comply. Advise Net Control if you are using Warning Lights at start of net.

The Spotter Safety Officer (SSO) (Second Station at EOC or Net Control)

The Net Control shall assign a Spotter Safety Officer (SSO), whose duty shall be to at all times keep constant tabs on spotter positions relative to storms and, when appropriate, to immediately recommend to the Net Control the removal of a spotter to an alternate position if it becomes at any time apparent that any spotter may be in the path of danger, or placed in a situation which could endanger him. The SSO should have a good general knowledge of storm structures and storm characteristics so as to be able to understand what is happening -- or might be happening -- within a storm, and where the areas of highest danger are at all times, so that he is able to properly direct spotters away from them. The Spotter Safety officer is either the second person or Net Control station that is in the EOC.

The duties of the Spotter Safety Officer shall be to:

1. Keep an eye on the RADAR and visible satellite imagery.
2. Pay close attention to reports from spotters on bearings and distances to rain areas (downdraft areas), areas of falling hail, and/or any funnel clouds or tornadoes in the vicinity of each spotter, so that the SSO can --
3. Plot these events on a map of the county, including:
 - A) The locations of each spotter,
 - B) The locations of rain areas, hail areas, and/or tornadic areas relative to each spotter,
 - C) The directions of storms.
 - D) Asst. the net controller as needed.

...And then, when it looks like it is necessary...

Immediately advise Net Control of any possible spotter danger situations, and can recommend the quickest and most direct route away for each spotter.

The SSO shall only relay his recommendations to the Net Control, and the Net Control shall handle the actual removal of the spotters that the SSO has recommended be removed.

Radio Operations and Frequencies

All radios in the EOC have picture informational sheets to them. Pay close attention to the radio's HAMS cannot touch. The Kenwood Dual Band radio is preprogrammed with frequencies ARES uses. The KENWOOD commercial radios (over by the HF radio) cannot be self-programmed. Top is 460 MHZ which will not be used by HAMS. Bottom is VHF Programmed with local 2 Meter repeaters and simplex frequencies. A list is located next to radio.

Channel Listing For Kenwood TM-V71

<u>0. 144.900</u>	<u>A.R.E.S. Cross Band</u>
<u>1. 145.150 PL 107.2</u>	<u>Seneca County</u>
<u>2. 145.230 PL 110.9</u>	<u>District 2 Skywarn</u>
<u>3. 145.250/R PL 186.2</u>	<u>Fremont SVARC Repeater</u>
<u>4. 145.250/S PL 186.2</u>	<u>Fremont SVARC Simplex</u>
<u>5. 145.350 PL 110.9</u>	<u>Clyde</u>
<u>6. 145.490/R PL107.2</u>	<u>Sandusky County A.R.E.S/Skywarn Repeater</u>
<u>7. 145.490/S PL 107.2</u>	<u>Sandusky County A.R.E.S/Skywarn Simplex</u>
<u>8. 146.430</u>	<u>Sandusky County A.R.E.S Simplex # 2</u>
<u>9. 146.520/S</u>	<u>National Simplex</u>
<u>10. 146.610</u>	<u>District 1 Skywarn ALT 1</u>
<u>11. 146.625 PL 110.9</u>	<u>Huron County</u>
<u>12. 146.655</u>	<u>Erie County</u>
<u>13. 146.685</u>	<u>Bascom</u>
<u>14. 146.790 PL 103.5</u>	<u>Wood County</u>
<u>15. 146.805 PL 110.9</u>	<u>Berlin Hts.</u>
<u>16. 146.835 PL 103.5</u>	<u>Lucas County</u>
<u>17. 146.865 PL 110.9</u>	<u>Willard</u>
<u>18. 146.910/R</u>	<u>KC8EPF, 590&20 Repeater</u>
<u>19. 146.910/S</u>	<u>KC8EPF, 590&20 Simplex</u>
<u>20. 147.075 PL 100.0</u>	<u>Oak Harbor</u>
<u>21. 147.150</u>	<u>Findlay</u>
<u>22. 147.180</u>	<u>Bowling Green</u>
<u>23. 147.210 PL 107.2</u>	<u>Upper Sandusky/Wyandot</u>
<u>24. 147.345 PL 103.5</u>	<u>District 1 Skywarn ALT 2</u>
<u>25. 147.375</u>	<u>District 1 Skywarn Primary</u>
<u>26. 147.430</u>	<u>Sandusky County A.R.E.S Simplex # 1</u>
<u>27. 442.250</u>	<u>Oak Harbor St. Rt. 163 East</u>
<u>28. 442.425 PL 100.0</u>	<u>Davis Bessie Backbone</u>
<u>29. 442.625 PL 110.9</u>	<u>Bellevue</u>
<u>30. 442.675 PL 162.2</u>	<u>Norwalk OARN Link</u>
<u>31. 442.950 PL 103.5</u>	<u>Lucas County</u>
<u>32. 443.000 PL 107.2</u>	<u>Fremont N8TRQ</u>
<u>33. 443.450</u>	<u>KC8EPF, 20 & 19</u>
<u>34. 443.850 PL 186.2</u>	<u>Oak Harbor WB8JLT Link</u>
<u>35. 446.000</u>	<u>National Simplex</u>

Frequencies/channel detail, and functions to the Kenwood HT's in EOC:

0. Fremont 2 Meter (EOC) 145.250 PL 186.2
1. Fremont 2 Meter Simplex 145.250 PL 186.2
2. Sandusky Co. ARES Simplex 147.430
3. Fremont ARES Backup 2 Meter (St. Rt. 590 & 20) 146.910
4. Fremont ARES Backup 2 Meter Simplex 146.910
5. Fremont 70 Meter (St. Rt. 590 & 20) 443.450
6. Fremont 70 Meter Simplex 443.450
7. Clyde 2 Meter (Clyde) 145.350 PL 110.9
8. Bellevue 70 Meter (Downtown Bellevue) 442.625 PL 110.9
9. Seneca 2 Meter (Tiffin) 145.450 PL 107.2
10. Bascom 2 Meter (West Bascom) 146.685
11. Wood County 2 Meter (Bowling Green) 146.790 PL 103.5
12. Oak Harbor 70 Meter (West Oak Harbor, RAYS) 443.850 PL 186.2
13. Oak Harbor 70 Meter (West Oak Harbor, RAYS) 443.850 PL DEC 179.9 ENC 186.2
14. Oak Harbor 70 Meter (East Oak Harbor) 442.250
15. Oak Harbor 2 Meter (East Oak Harbor) 147.075
16. Gibsonburg 70 Meter (Gibsonburg Water Tower) 443.1875 PL 107.2
17. Fremont 70 Meter (Central Fremont) 443.000 PL 107.2
18. NW Ohio Skywarn Link Mode 2 Meter (Toledo) 147.375
19. NW Ohio Skywarn 2 Meter (Oregon) 146.940 PL 103.5
20. Oregon 70 Meter Toledo ARES (Maumee Bay) 442.950 PL 103.5
21. Toledo 2 Meter (Central Toledo) 147.265 PL 88.5
22. Davis Bessie 70 Meter Skywarn Backbone (Davis Bessie) 442.425 PL 100.0
23. National Simplex 2 Meter 146.520
24. National Simplex 70 Meter 446.000
25. Toledo ARES TMRA 2 Meter (Toledo) 147.270 PL 103.7
26. Toledo ARES GTMRA 2 Meter (Toledo) 146.610 PL 103.7
27. Sandusky Co. Fire & EMS Page East (Fremont Water Tower)
28. Sandusky Co. Fire & EMS Page West (Oak Harbor)
29. Sandusky Co. EMS Talk (Fremont Water Tower)
30. Sandusky Co. 911 Sheriff Tactical (Fremont Water Tower)
31. Sandusky Co. Sheriff LAW Dispatch (Fremont Water Tower)
32. Fremont Fire Tactical (Fremont Fire Building.)
33. Fremont Police Dispatch (Fremont Police Building.)
34. Clyde Fire Dispatch & Tactical (Clyde Water Tower)
35. Seneca Co. Page & Dispatch
36. North Central EMS Page & Dispatch (St. Rt. 101)
37. GMRS Channel 1
38. Ottawa Co. Fire & Page
39. Sandusky Co. Fire Dept's 3 Tactical (St. Rt 19 Futronics)
40. Sandusky Co. Fire Dept's 4 Tactical (St Rt. 19 Futronics)
41. Ottawa Co. Page
42. Wood Co. Page
43. Statewide LAW
44. Cross Band 2 Meter
45. Cross Band 70 Meter
46. Weather Band Bellevue
47. Weather Band Toledo

FUNCTIONS:

VOLUME- Turn Bottom Knob on Top of Radio

CHANGE CHANNEL- Turn Top Knob

SCAN- Press And Hold (MR)

SEE FREQUENCY- Press (F) Then (5) <REPEAT TO SEE NAME

SQUELCH- Press (F) Then (1), Use Channel Knob To Change, Press PTT When Done

Kenwood Red Cross Dual Bander- Left and Right

LEFT

<u>1. 144.900</u>	<u>A.R.E.S. Cross Band</u>
<u>2. 145.150 PL 107.2</u>	<u>Seneca County</u>
<u>3. 145.230 PL 110.9</u>	<u>District 2 Skywarn</u>
<u>4. 145.250/R PL 186.2</u>	<u>Fremont SVARC Repeater</u>
<u>5. 145.250/S PL 186.2</u>	<u>Fremont SVARC Simplex</u>
<u>6. 145.350 PL 110.9</u>	<u>Clyde</u>
<u>7. 145.490/R PL107.2</u>	<u>Sandusky County A.R.E.S/Skywarn Repeater</u>
<u>8. 145.490/S PL 107.2</u>	<u>Sandusky County A.R.E.S/Skywarn Simplex</u>
<u>9. 146.430</u>	<u>Sandusky County A.R.E.S Simplex # 2</u>
<u>10. 146.520/S</u>	<u>National Simplex</u>
<u>11. 146.610</u>	<u>District 1 Skywarn ALT 1</u>
<u>12. 146.625 PL 110.9</u>	<u>Huron County</u>
<u>13. 146.655</u>	<u>Erie County</u>
<u>14. 146.685</u>	<u>Bascom</u>
<u>15. 146.790 PL 103.5</u>	<u>Wood County</u>
<u>16. 146.805 PL 110.9</u>	<u>Berlin Hts.</u>
<u>17. 146.835 PL 103.5</u>	<u>Lucas County</u>
<u>18. 146.865 PL 110.9</u>	<u>Willard</u>
<u>19. 146.910/R</u>	<u>KC8EPF, 590&20 Repeater</u>
<u>20. 146.910/S</u>	<u>KC8EPF, 590&20 Simplex</u>
<u>21. 147.075 PL 100.0</u>	<u>Oak Harbor</u>
<u>22. 147.150</u>	<u>Findlay</u>
<u>23. 147.180</u>	<u>Bowling Green</u>
<u>24. 147.210 PL 107.2</u>	<u>Upper Sandusky/Wyandot</u>
<u>25. 147.345 PL 103.5</u>	<u>District 1 Skywarn ALT 2</u>
<u>26. 147.375</u>	<u>District 1 Skywarn Primary</u>
<u>27. 147.430</u>	<u>Sandusky County A.R.E.S Simplex # 1</u>

RIGHT

<u>1. 442.250</u>	<u>Oak Harbor St. Rt. 163 East</u>
<u>2. 442.425 PL 100.0</u>	<u>Davis Bessie Backbone</u>
<u>3. 442.625 PL 110.9</u>	<u>Bellevue</u>
<u>4. 442.675 PL 162.2</u>	<u>Norwalk OARN Link</u>
<u>5. 442.950 PL 103.5</u>	<u>Lucas County</u>
<u>6. 443.000 PL 107.2</u>	<u>Fremont N8TRQ</u>
<u>7. 443.450</u>	<u>KC8EPF, 20 & 19</u>
<u>8. 443.850 PL 186.2</u>	<u>Oak Harbor WB8JLT Link</u>
<u>9. 446.000</u>	<u>National Simplex</u>

NOAA Information:

Channels:

162.400 Mhz.
162.425 Mhz.
162.450 Mhz.
162.475 Mhz.
162.500 Mhz.
162.525 Mhz.
162.550 Mhz.

S.A.M.E. Codes:

Sandusky County - 039143
Ottawa County- 039123

Skywarn™ Frequency Directory (NWS List) Updated March 3rd, 2010

NWS Nets Primary PL Backup PL EchoLink

Cleveland, Closed 52.68 107.2

Nothern Indiania 146.820/R

Pittsburgh 147.090/R 88.5

Group Nets Primary PL Backup PL

Cleveland District 1 147.375/R 147.610/R 103.5

Cleveland District 2 145.230/R 110.9 147.150/R 110.9

Cleveland District 3 146.940/R 71.9

Cleveland District 4, clo 147.345/R 110.9 147.180/R 110.9

Cleveland District 5, clo 443.450/R 103.5 443.650/R 103.5

Cleveland District 6 145.130/R 186.2

IWX IMO Skywarn 147.150/R 146.820/R

ILN Central Ohio 146.760/R 147.240/R

ILN Miami Valley N. 147.000/R

ILN Miami Valley S 146.640/R

INL WARN 146.880/R 147.090/R

Cleveland NWS Nets Primary PL Backup PL

Ashland 147.105/R 71.9 145.130/R 110.9

Ashtabula 145.330/R 103.5 146.715/R 141.3

Crawford, OH 146.850/R 71.9

Crawford, PA 145.130/R 186.2 147.030/R 186.2 349977

Cuyahoga 146.760/R 110.9 146.880/R 110.9

Erie, OH 146.805/R 110.9 146.655/R 110.9

Erie, PA 146.610/R 186.2 146.820/R 186.2 146.7 (South) 186

Geauga 147.015/R 110.9 146.940/R 110.9

Hancock 147.150/R 88.5

Holmes 146.670/R 71.9 147.210/R 88.5

Huron 146.865/R 110.9 147.48

Knox 146.790/R 71.9

Lake 443.700/R 131.8 147.255/R

Lorain 147.150/R 110.9 146.700/R

Lucas 146.835/R 103.5

Mahoning 146.745/R 110.9 146.835/R 110.9

Marion 147.300/R 71.9

Medina 147.030/R 141.3 147.030/R 110.9 147.030/R 88.5

Morrow 147.300/R 71.9

Ottawa 443.850/R 186.2

Portage 145.390/R 145.68 CSQ

Richland 146.940/R 71.9 147.360/R 71.9 225112

Sandusky 145.250/R 186.2 146.910/R CSQ

Seneca 145.450/R 107.2 146.685/R

Stark 147.120/R 110.9 146.790/R 110.9

Summit 147.135/R 110.9 147.270/R 110.9

Trumbull 146.970/R 147.045/R 141.3

Wayne 147.210/R 88.5 147.390/R 114.8

Wayne 147.390/R 114.8 147.210/R 88.5

Wood 146.790/R 103.5 147.180/R 67.0

Wyandot 147.210/R 107.2 146.5 CSQ

Sandusky County Skywarn™ Application Form

Participant Information:

Name: _____ Callsign: _____

Date of Birth: ____/____/____

Address: _____

City: _____ State: _____ Zip: _____

Home Phone: _____

Cell Phone: _____ Cell Phone Carrier: _____

Would you like weather alert text messages? _____

Email Address: _____

Would you like to receive weather alert emails? _____

Spotter Vehicle Information:

Vehicle Make: _____ Vehicle Model: _____ Vehicle Year: _____

Vehicle Color: _____ Vehicle License Plate #: _____

Radio Equipment:

Other Information:

Do you have any Weather Instruments that you use? _____

If so, what? _____

Do you have Emergency Power for Equipment? _____

Have you taken a Skywarn™ Training Class in the last two years? _____

If yes, What Year and Where? _____

Do you have a Spotter Number? _____

If yes, what is your Spotter Number? _____

I agree that I have provided the information above to the best of my knowledge. I understand that my information will not be given out to anyone unless I have authorized to do so. I also agree that if I am mobile spotting that at no time I can hold the Sandusky/Ottawa County Skywarn™ group that is part of Sandusky County A.R.E.S. responsible for anything such as injury, damage, or otherwise that may occur while I am mobile spotting.

X _____
Participant Signature Date