

Ashland County Skywarn Manual

This manual will give an amateur radio operator the basics of the Skywarn program as used in and around Ashland County. No information in the manual is to be used as weather spotting training, experience, or knowledge. The Ashland County Skywarn program or the Ashland Area Amateur Radio Club (AAARC) does not employ anyone nor do we encourage anyone to "storm chase". These actions are the sole responsibility of the individual, not of the program, AAARC, or any governmental agency of Ashland County.

SECTION I **General Overview**

The purpose of the Ashland County Skywarn (ACS) Program is to assist the National Weather Service (NWS) Cleveland Weather Forecast Office (WFO) by providing real time weather observations from around the Ashland County area. Trained storm spotters located throughout the county observe any severe weather, report it to the local net, which is then passed up to the WFO to better inform the forecasters of storm activity. This manual will give the amateur radio operator a basic understanding of Skywarn as a whole, and the necessary information for operating on a Skywarn Net.

Ashland County is located southwest of Cleveland Ohio, which is where the NWS office is located. Ashland is part of District 4, which consists of Ashland, Wayne, Holmes, Stark, and Summit counties. Each of these counties has their own VHF 2-meter, and/or UHF- 70cm repeater net to take local reports from storm spotters. From there, a report goes on to the district net, and is then passed to Cleveland WFO via the 6 meter "backbone" net.

This process also works in reverse, as Cleveland can call a district, and ask for specific reports from a particular area of one county. This helps the forecasters know what a storm has done, is doing, and will do. All nets are DIRECTED NETS and should be treated as such. A Net Control Station (NCS) will be in charge of the net, and will direct all traffic as they see fit. Follow the NCS directions, and the net will flow smoothly.

The "backbone" is also operated on DMR, the DMR net, although easy to monitor and operate on within Ashland County, is not an open net. The only people that are to be relaying information via this net are the ACS net control station, Ashland ARES-Emergency Coordinator, Ashland County Skywarn Coordinator, or a representative from the Ashland County Emergency Management Agency.

SECTION II **Local Skywarn Net**

ACS will use the following frequencies for all Skywarn Nets:

Widowville	N8IHI/R	147.105/ 147.5 PL 71.9
Backup	N8SIW/R	145.130/144.530 PL 110.9

All ACS Nets will be under net control, and stations checking into the net will follow the directions of net control. It is NOT necessary to always check into a net if you have no severe weather to report. We know you are there and appreciate everything you do to help. Net control may ask for specific reports from a specific area of the county, if this happens, please help by keeping the frequency clear. This is life or death for another county. Just follow the directions of net control.

SECTION III **District Nets**

After a report is taken from a county net, it is passed onto the District 4 net, then onto the 6 meter "backbone" NCS located at the NWS. Again, this process may be simplified via DMR.

One station from each county will monitor the District 4 net and DMR, and act as a liaison between the district net, and the county net. The liaison should have the ability to monitor both the district frequency and the county frequency at the same time. This is useful so no information is missed or miss directed. This net is also a directed net, so follow the NCS directions. The District 4 net operates on the following frequencies:

<u>Primary</u>	<u>Wooster</u>	<u>WB8VPG/R</u>	<u>147.345/147.945</u>	<u>PL 110.9</u>
Back-up	Massillon	W8NP/R	147.180/147.780	PL 110.9

The "backbone", also known as F-2, is a high profile 6 meter repeater located in Newbury, and is operated by SMART. This repeater is running 1300 watts and has remote receivers scattered all over northern Ohio and western PA. It covers all of the Cleveland WFO area, and is only open to Skywarn Coordinators, EMA offices, and amateurs who have passed their liaison training. Operators with access to the backbone are county Skywarn Coordinators, ARES-Emergency Coordinators, and County NCS stations approved by the Skywarn Coordinator. This is a closed repeater, and requires membership in SMART to use the repeater outside of Skywarn operations. **DO NOT** give the frequencies out to the general amateur population.

Backbone Newbury	WB8APDIR	52.680/52.920	Closed Back-up
DMR Backbone	Brandmeister Talkgroup	313932	

Same rules apply to DMR as do the 6- meter backbone

SECTION IV **Net Activation**

A Skywarn Net may be activated if any of the following conditions are met:

- A) The NWS has issued a severe thunderstorm or tornado warning for Ashland County
- B) A storm spotter has run into or is experiencing severe weather
- C) Severe weather is affecting a neighboring county and will affect Ashland County very soon.
- D) A tornado watch has been issued for Ashland County
- E) The Cleveland WFO has requested skywarn be activated for whatever reason.

Net control stations should follow the script as needed. Weather is an unpredictable thing, and writing a script to cover all aspects of a storm is virtually impossible. The script is only a guide to get you started, how the weather progresses will change how the net is run

SECTION V

Directed Net Script

The following is only a guide and does not necessarily need to be followed directly. If you have any questions while directing a net, don't hesitate to ask, more than likely someone on the net will be able to assist you!

When a Skywarn Net is needed, net control will place the repeater in Weather Mode by entering the DTMF code _____. This should be followed by the opening script.

Opening Script:

This is *(your call)* for Ashland County Skywarn. The National Weather Service in Cleveland has issued a *(type of warning)* for Ashland County effective until *(time am/pm)*. Are there any stations with severe weather traffic, call now.
Is there a District 4 liaison on frequency, please call now.
Is there a back-up net control station on frequency, please call now.

This is *(your call)* for Ashland County Skywarn. The National Weather Service has issued a *(type of warning)* for Ashland County effective until *(time am/pm)*

- You should now read the text of the warning, including cities in the path of the storm.*

(You should only do the following if the weather situation allows it)

This is *(your call)* for Ashland County Skywarn. This is a directed net; direct all traffic to net control. When stations check-in, allow the repeater transmitter to drop before proceeding, this allows stations with priority traffic to break-in. Also, when giving weather reports, keep them short! Give the location, event witnessed, time of occurrence, and if it was estimated or measured. The net will now take check-ins.

When the warning for the county is allowed to expire, proceed with the closing script.

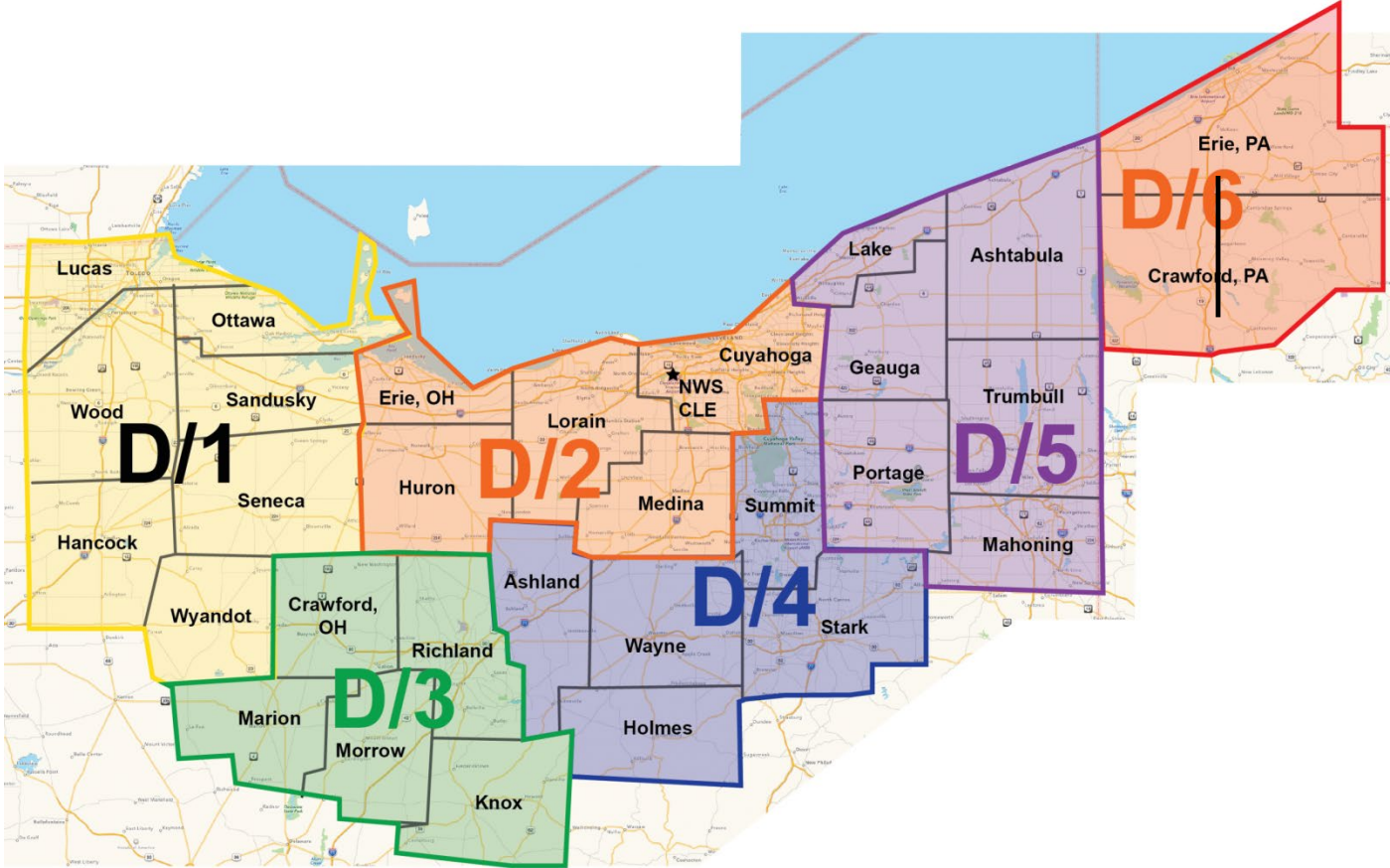
Closing Script:

This is *(your call)* for Ashland County Skywarn. The *(type of warning)* has been allowed to expire. Before we close the net, are there any last minute reports or check-ins, please call now. Thank you to all that checked in today, we appreciate your help and dedication. And thank you to the Ashland Area Amateur Radio club for the use of their repeater, N8IHI. The repeater will now be returned to normal use, please stand-by.

Return the repeater to normal operation by entering DTMF code _____. Thanks to all and 73s!

- **Record the total number of check-ins and total time of the net in minutes and report this to Scott KD8OTQ for reporting to the state**

Cleveland WFO District Map



NWS Cleveland Skywarn Coordinators as of 1.23.2025

County	Primary Frequency	PL	Secondary Frequency	PL	Tertiary Frequency	PL	Contact Person	Call Sign
NWS Cleveland Office	52.68	107.2	444.975	DPL 251	146.475 simplex	100	Mat Nickoson	KC8NZJ
Ashland	147.105	71.9	145.13	110.9			-Mike Beck -Scott Engelhardt	KE8VHF KD8OTQ
Ashtabula							Matt Welch	W8DEC
Crawford, OH	146.85	71.9						
Crawford, PA	145.13	186.2	147.03	186.2			James Tolbert	WW3S
Cuyahoga	146.76	110.9	442.125	82.5	146.475	100	Mat Nickoson	KC8NZJ
Erie, OH	146.805	110.9	146.655	110.9			Bob Heim	K8HLH
Erie, PA	146.61	186.2	146.82	186.2			Brian Zentis	KA3JVX
Geauga	146.94	110.9	444.8125	131.8	147.435 simplex	100	Dave Andrzejewski	AD8G
Hancock	147.15	88.5	444.15	88.5	147.51		Evan Hartman	W8KJR
Holmes	146.67	71.9	147.21	88.5				
Huron	146.865	110.9	147.48				Clay Benner	KB8DNA
Knox	146.79	71.9	442.1	71.9				
Lake	444.475	131.8	147.21	110.9	443.3375	132	Nick Cerreto	N1TVI
Lorain	146.625	110.9	444.125	131.8				
Lucas	146.94	103.5	147.27	103.5			Brent Stover	WD8PNZ
Mahoning	146.745	110.9	147		147.57		Dean DeMain	W8YSU
Marion	147.3	250.3						

Medina	147.03	141.3, 88.5, 131.8	147.285	110.9	Tracey Liston	W8TWL
Morrow	147.3	250.3				
Ottawa	442.25	100	147.075	100	Ryan Merrow	KE8WAY
Portage	145.39		442.875		Gregg Gary	WB8YYS
Richland	146.94	71.9	147.36	71.9	Danny Bailey	W8DLB
Sandusky	145.49	107.2	443.45		Owen Fritz	KD8GSI
Seneca	145.15	107.2	145.45	107.2	Dan Stahl	KC8PBU
Stark	147.12	110.9	146.79	141.3	Dave Beltz	WD8AYE
Summit	146.64	110.7			Martin Copfer	KC8NOV
Trumbull	146.97		147.045	141.3	Gail Wells	KC8LRH
Wayne	147.21	88.5			Stan Kinney	N8RNK
Wayne NE	147.39	114.8			Fred Sheppard	KD8GYS
Wood	146.79	103.5	147.18	67	Steve Ashenfelter	N8XSF
Wyandot	147.21	107.2	146.5			

Reporting Severe Weather

The Ashland County Skywarn Program requests that area spotters use the following criteria during severe weather nets, and that reports be confined to these criteria. Other reports tie up the net frequency and really do not provide necessary information. Please do not report anything you have not seen personally. If it is on the Internet, TV, or radar, the National Weather Service, most likely, already knows about it. Reports such as "It's getting cloudy here" or "There is a lot of lightning" are not valid reports.

Occasionally, we will ask for reports that differ from the above criteria. When this occurs, it is OK to report what we request. Such special information requests are usually from the NWS to coordinate with their radar and other information they may have.

Spotter reports help the WFO in the warning process. Your report becomes part of the warning decision making process, and is combined with radar data and other information and used by WFO forecasters to decide whether or not to:

- Issue a new warning
- Cancel an existing warning
- Continue a warning
- Issue a warning for the next county
- Change the warning type (from severe thunderstorm to tornado, for example)

For your reports to be the most useful, they should be as detailed, accurate and timely as possible. Use the guidelines below to help you make your report:

HOW TO REPORT (T E L E system)

- Time of observation & direction of movement
- Effects, such as wall cloud or hail
- Location, such as the closest intersection
- Estimated or measure

WHAT TO REPORT

Although reporting criteria may vary slightly depending on the spotter network and local needs, these are the events the National Weather Service would like to know about as soon as possible:

TORNADO		
FUNNEL CLOUD		Organized, persistent, sustained rotation
WALL CLOUD		Organized, persistent, sustained rotation
HAIL	Dime size or larger	Report the largest size hailstone
WIND GUSTS	50 mph or higher	Specify estimate or measurement
FLOODING		Flooding that impacts roads, homes or businesses.
STORM DAMAGE		Damage to structures (roof, siding, windows, etc) Damage to vehicles (from hail or wind) Trees or large limbs down Power/telephone poles or lines down Damage to farm equipment, machinery, etc

Some commonly used hail sizes

Pea	.25 inch	Golf Ball	1.75 inch
Half-inch	.50 inch	Hen Egg	2.00 inch
Dime	.75 inch	Tennis Ball	2.50 inch
Nickel	.88 inch	Baseball	2.75 inch
Quarter	1.00 inch	Tea Cup	3.00 inch
Half Dollar	1.25 inch	Grapefruit	4.00 inch
Ping Pong Ball	1.50 inch	Softball	4.50 inch

Estimating Wind Speeds with Visual Clues

Beaufort Number	Description	Speed	Visual Clues and Damage Effects
0	Calm	Calm	Calm wind. Smoke rises vertically with little if any drift.
1	Light Air	1 to 3 mph	Direction of wind shown by smoke drift, not by wind vanes. Little if any movement with flags. Wind barely moves tree leaves.
2	Light Breeze	4 to 7 mph	Wind felt on face. Leaves rustle and small twigs move. Ordinary wind vanes move.
3	Gentle Breeze	8 to 12 mph	Leaves and small twigs in constant motion. Wind blows up dry leaves from the ground. Flags are extended out.
4	Moderate Breeze	13 to 18 mph	Wind moves small branches. Wind raises dust and loose paper from the ground and drives them along.
5	Fresh Breeze	19 to 24 mph	Large branches and small trees in leaf begin to sway. Crested wavelets form on inland lakes and large rivers.
6	Strong Breeze	25 to 31 mph	Large branches in continuous motion. Whistling sounds heard in overhead or nearby power and telephone lines. Umbrellas used with difficulty.
7	Near Gale	32 to 38 mph	Whole trees in motion. Inconvenience felt when walking against the wind.
8	Gale	39 to 46 mph	Wind breaks twigs and small branches. Wind generally impedes walking.
9	Strong Gale	47 to 54 mph	Slight or minor structural damage occurs, such as chimney covers, roofing tiles blown off, and television antennas damaged. Ground is littered with many small twigs and broken branches.
10	Whole Gale	55 to 63 mph 58 mph*	Considerable structural & vegetative damage occurs, especially on roofs. Small trees may be blown over and uprooted. 58 mph = Severe Thunderstorm Warning criteria.
11	Storm Force	64 to 75 mph	Widespread damage occurs. Larger trees blown over and uprooted. Corn stalks may be blown over.
12	Hurricane Force	over 75 mph	Severe and extensive damage. Roofs can be peeled off. Windows broken. Trees uprooted. RVs and small mobile homes overturned. Moving automobiles can be pushed off the roadways. Corn down.

The severe weather criteria listed here generally conforms to the published National Weather Service guidelines. It is important to note that in the case of hail, wind or rainfall we will assume that they are estimated unless the word "measured" is used in the report.

NWS Weather Reports

District: _____	County: _____	City: _____	Report time: _____
Time occurred: _____	At intersection: _____	_____	Reported by: _____
Additional info: _____			
Wind: _____	Estimated: _____	Trees down: _____	Size: _____ Healthy: yes <input type="checkbox"/>
Speed: _____	Measured: _____	Limbs Down: _____	Size: _____ no <input type="checkbox"/>
Damage incurred? _____			
Rain: _____	Estimated: _____	Began: _____	Flooding: yes _____ Common flooding area: yes _____
Amount: _____	Measured: _____	Ended: _____	no _____ no _____
How deep? _____			
Hail size: _____	Pea: _____	Dime: _____	Penny: _____ Nickel: _____ Quarter: _____ Measured: _____
Cloud Type: _____	Rotating: _____	Wall cloud: _____	Funnel: _____ Tornado: <input type="checkbox"/>

District: _____	County: _____	City: _____	Report time: _____
Time occurred: _____	At intersection: _____	_____	Reported by: _____
Additional info: _____			
Wind: _____	Estimated: _____	Trees down: _____	Size: _____ Healthy: yes _____
Speed: _____	Measured: _____	Limbs Down: _____	Size: _____ no _____
Damage incurred? _____			
Rain: _____	Estimated: _____	Began: _____	Flooding: yes _____ Common flooding area: yes _____
Amount: _____	Measured: _____	Ended: _____	no _____ no _____
How deep? _____			
Hail size: _____	Pea: _____	Dime: _____	Penny: _____ Nickel: _____ Quarter: _____ Measured: _____
Cloud Type: _____	Rotating: _____	Wall cloud: _____	Funnel: _____ Tornado: _____

District: _____	County: _____	City: _____	Report time: _____
Time occurred: _____	At intersection: _____	_____	Reported by: _____
Additional info: _____			
Wind: _____	Estimated: _____	Trees down: _____	Size: _____ Healthy: yes _____
Speed: _____	Measured: _____	Limbs Down: _____	Size: _____ no _____
Damage incurred? _____			
Rain: _____	Estimated: _____	Began: _____	Flooding: yes _____ Common flooding area: yes _____
Amount: _____	Measured: _____	Ended: _____	no _____ no _____
How deep? _____			
Hail size: _____	Pea: _____	Dime: _____	Penny: _____ Nickel: _____ Quarter: _____ Measured: _____
Cloud Type: _____	Rotating: _____	Wall cloud: _____	Funnel: _____ Tornado: <input type="checkbox"/>

