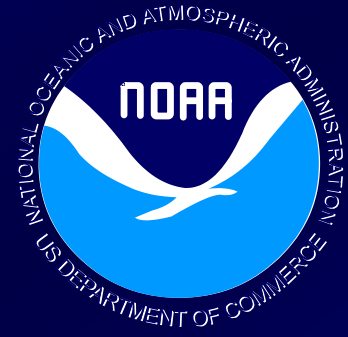
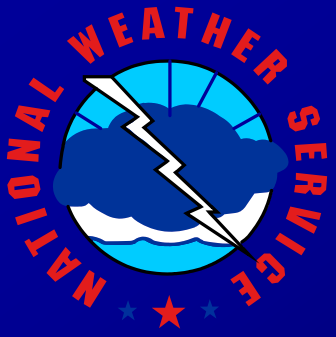


# Net Control Training

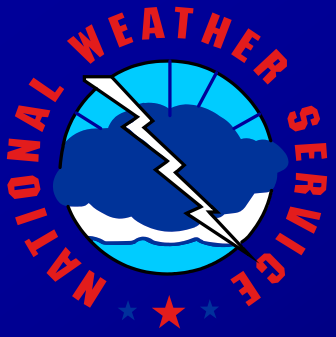
Doug Anderson, W4NWS  
NWS Forecast Office Columbia, SC



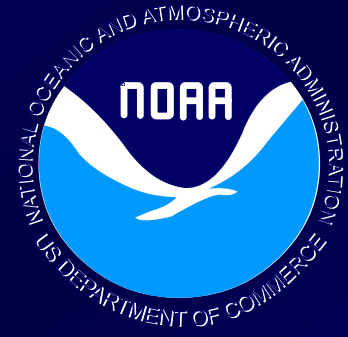
# Introduction

## SKYWARN Net Control Operators (NCS)

- Along with spotter certification, NCS operators are trained in areas including:
  - Overview of SKWARN and the Team
  - Identifying valid severe criteria reports, asking probing questions to develop/log a full spotter report
  - Traffic handling, net etiquette and operations
  - Handling sensitive information
  - NWS Chat, and relaying reports to CAE
  - Repeater operation and controls (as required),
  - NWS equipment familiarization, and
  - Acquaintance with NWS personnel.



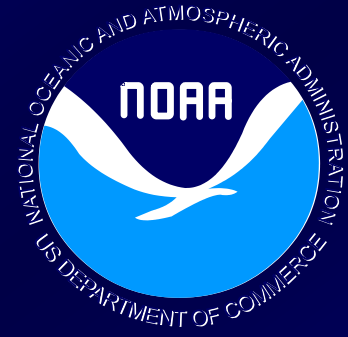
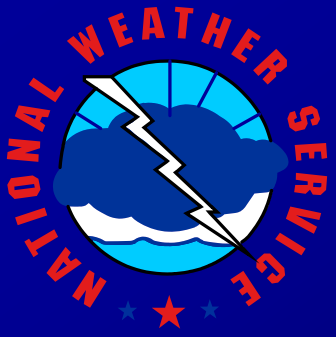
# Summary of Course



## Key take-aways from today's session:

- – What is a **SKYWARN** net?
- – When and How are **SKYWARN** nets activated and deactivated?
- – What is the function of the NCS?
- – How is weather information passed on a **SKYWARN** net?
- – How does an NCS handle problems on a net?
- – How does an NCS interact with NWS forecasters?

It is assumed participants have completed the NWS **SKYWARN** Spotter Training

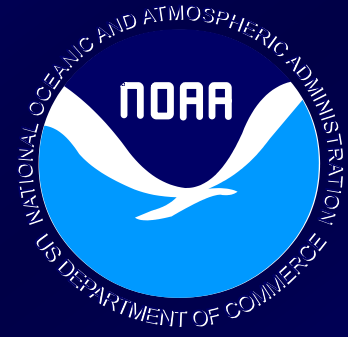
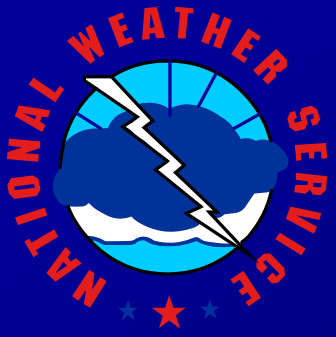


# Overview

Net Control Operator proficiency is gained by *experience...and*

- The willingness to take and carry out the orders of the served community agencies but...
- Ability to make and communicate decisive judgments based on information and circumstances.
- A sound understanding and practice of effective operating techniques.
- A sense of equilibrium...the ability to keep one's head when all about are losing theirs!

**The NCS is a Team Player**



# Overview

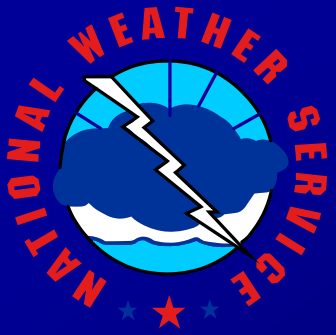
## Remember...

- No two NCS operators will have the exact same skill set
- No two nets will be the same

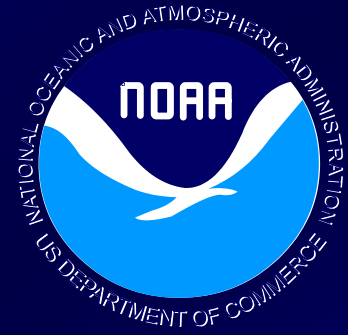
## But...

- An effective NCS cares about people and the event
- Balances direction with decisions
- Understands the structure of the event
- Has operational skills to **communicate effectively** in an often chaotic environment

Today's Goal is to Help You with these Points



# SKYWARN Review



SKYWARN is a National Weather Service spotter program consisting of a nationwide network of volunteers managed and trained by the **National Weather Service** that provide timely and accurate severe weather reports

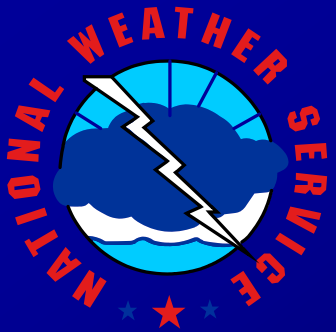
- SKYWARN spotters are not by definition "Storm Chasers"

Reports from volunteer citizens are used by the NWS to send out warnings, statements, and short-term forecasts to the public.

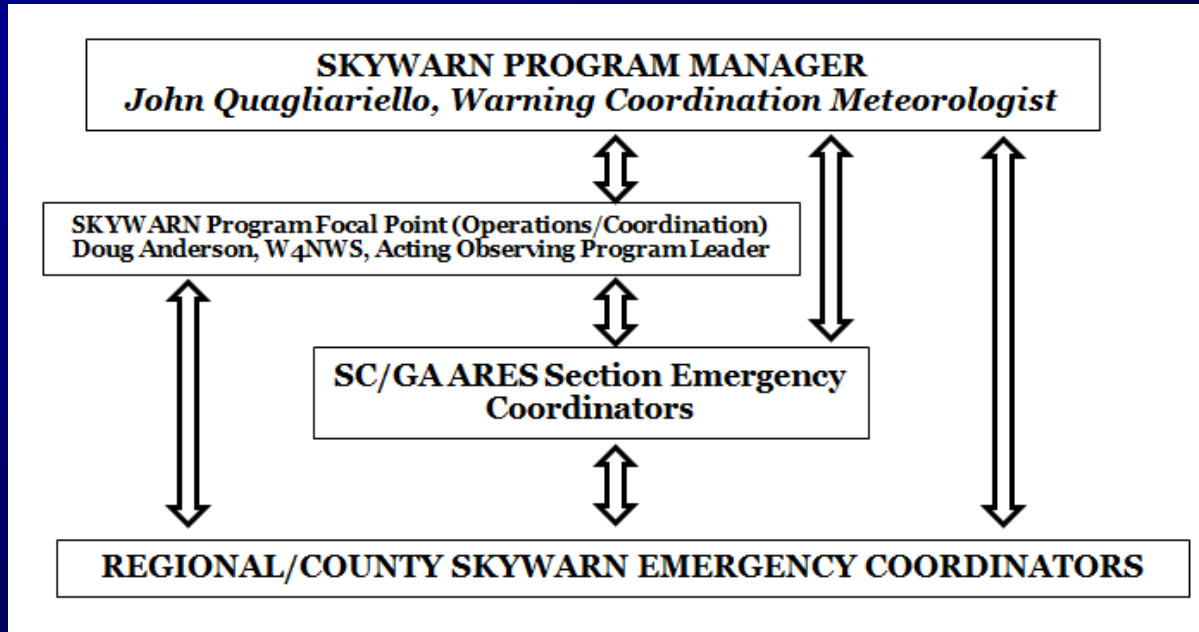
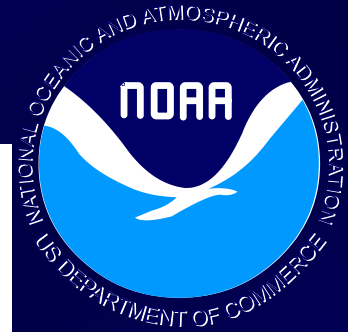
Reports are via:

- licensed Amateur Radio Operators - **ARES**, **ARRL**, **RACES**, non-affiliated
- phone, internet, social media,
- citizen band radio operators, or
- the general public...also an integral part of **SKYWARN**

**SKYWARN** Spotters provide "ground truth" on the atmosphere that the NWS observes from radar, satellites and various reporting stations.



# TEAM STRUCTURE



Amateur Radio Coordinators

We need volunteers!

Area Managers

Net Managers

Net Control Operators

Who did I miss? (most important)

Responders (staff WX4CAE)





# Ideal CAE SKYWARN Ham Operations



Net Control Station

Unlisted SKYWARN Phone  
(Secondary)



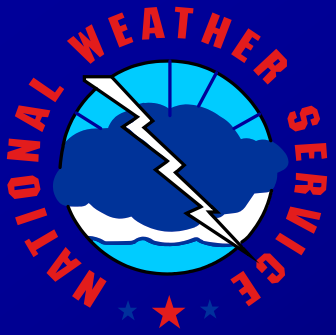
NWS Chat (Internet – PREFERRED)



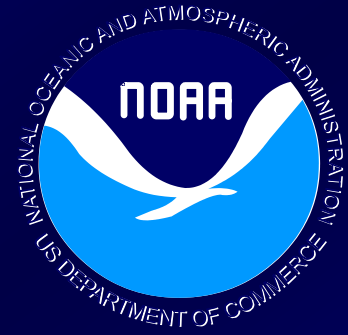
WX4CAE (rarely activated)







# What to Report



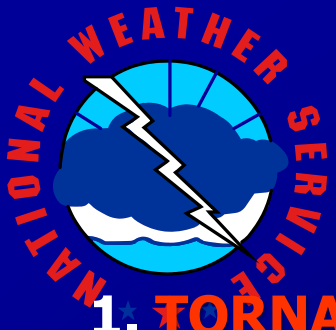
Spotters should report:

- **WHAT** they saw or are seeing
- **WHERE** they are or where they were when it occurred
- **WHEN** it occurred

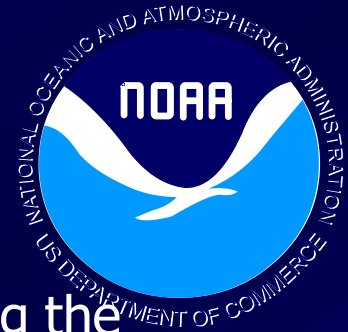
Or in other words.... **TIME, EVENT, LOCATION ("TEL")**

They should also include their name, location and their call sign. Also a good idea to leave another contact method.

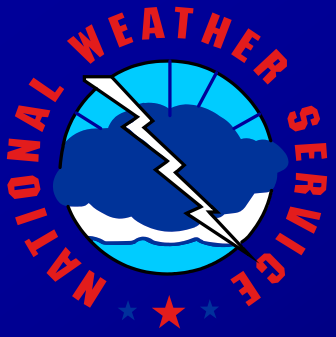
**SPOTTERS SHOULD NOT CALL NWS PERSONNEL WITH ROUTINE WEATHER REPORTS OR FOR FORECASTS DURING SEVERE WEATHER EVENTS!!**



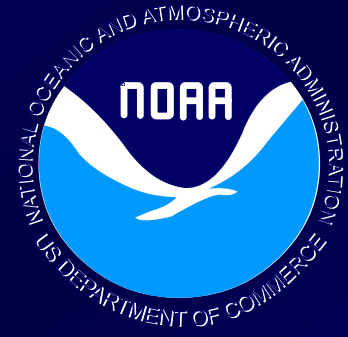
# Review of Criteria



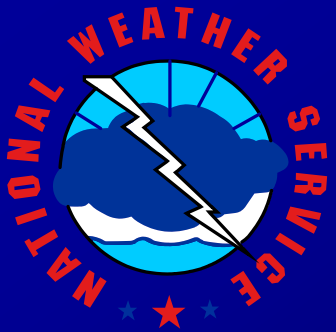
1. **TORNADO** (on the ground), **FUNNEL CLOUD** (not touching the ground) or **ROTATING WALL CLOUD**
2. **WIND** (estimated or measured at **50 mph** or more)
3. **HAIL** of any size (useful to reference in relation to a US coin)
4. **STRUCTURAL DAMAGE** and/or **TREES/BRANCHES/POWER LINES down** (be specific!)
5. **RAINFALL** (**1** inch or more within **1 to 2 hours**)
6. **FLOODING** (any kind), and **IMPASSABLE OR CLOSED ROADS**
7. **DEATHS** and/or **INJURIES** due to the weather event (be specific!)
8. Anything considered important (to NWS or state/local govt)



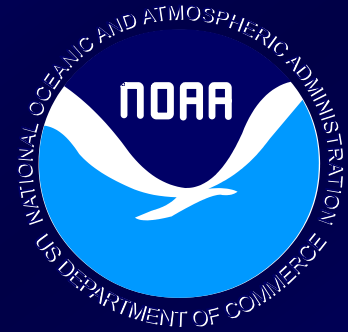
# Review of Criteria (Winter Weather)



1. **SNOWFALL** (accumulation in inches)
2. **SLEET** or **FREEZING RAIN**
3. **ICE ACCUMULATION** (in inches) on **TREES, STREETS, POWER LINES**
4. **WINDS 35 MPH OR HIGHER** with ice accumulation or significant snow buildup on trees
5. **TREES, BRANCHES, or POWER LINES** down, **POWER OUTAGES**
6. **IMPASSABLE** or **CLOSED ROADS**
7. **DEATHS** and/or **INJURIES** due to the weather event (be specific!)



# Severe Weather Criteria Includes:

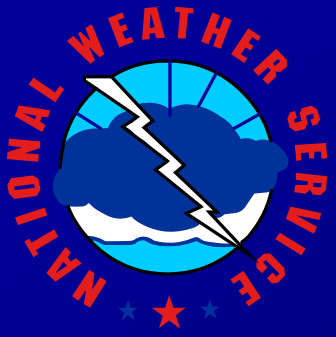


- Rotating wall clouds, funnel clouds or tornadoes

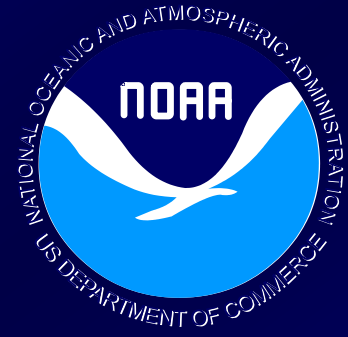


Blacksburg NWS Photo Gallery

Top & bottom photos courtesy NOAA Photo Library



# Severe Weather Criteria Includes:



➤ Measured/Estimated wind speeds of 50 mph or greater

25-31 mph – large branches in motion

32-38 mph – whole trees in motion

39-54 mph – twigs break off, wind impedes walking

55-72 mph – damage to chimneys and TV antennas, large branches broken, some trees uprooted

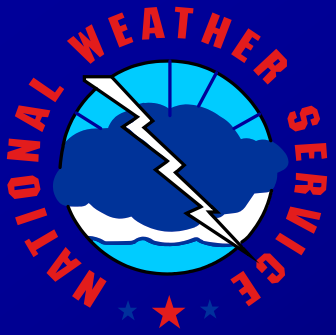
73-112 mph – removes shingles, windows broken, trailer houses overturned, trees uprooted

113+ mph – roofs torn off, weak buildings and trailer houses destroyed, large trees uprooted

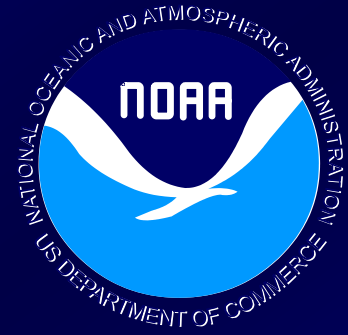


Photo courtesy John Van Pelt





# Severe Weather Criteria Includes:



- Measured rainfall of 1" or more within 1 to 2 hours
- Flooding or flash flooding



Alberto 013.

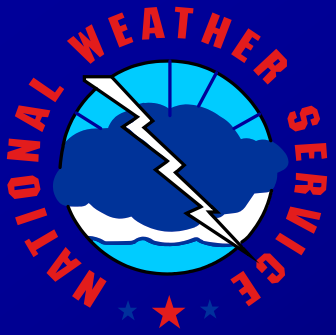


Photo NWS Photo Gallery

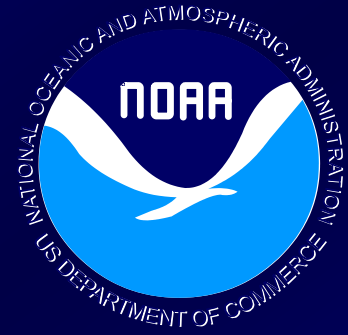
Photo courtesy Bill Burns

6/14/2006





# Severe Weather Criteria Includes:



➤ Storm damage such as:



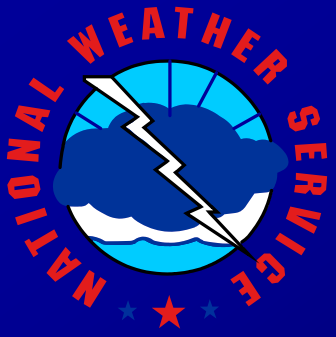
Photo courtesy Virginia Enzor

Downed limbs or trees and their approximate diameter

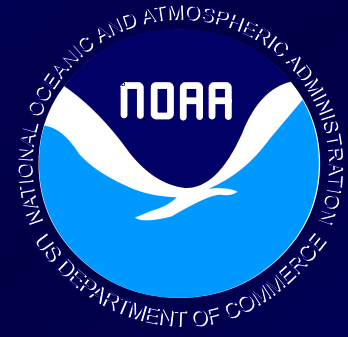
Building or roof damage



Photo courtesy NWS



# Severe Weather Criteria Includes:

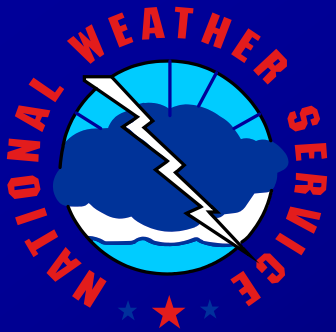


- Hail – any size

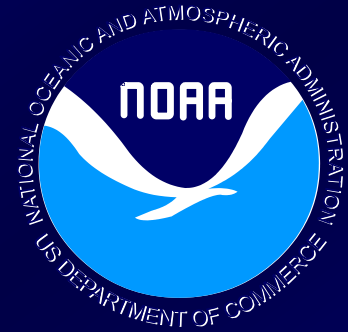


Photo courtesy Melinda Banks Ball





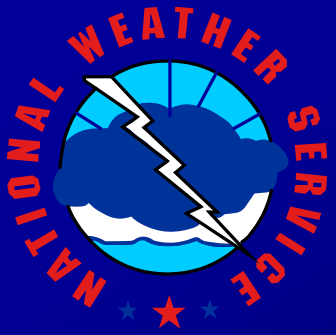
# Winter Weather



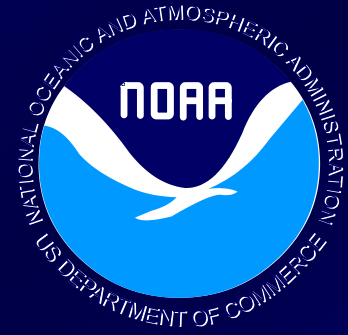
- Precipitation type – snow, sleet, freezing rain, rain
- Intensity – light, moderate, heavy
- Change in type of precipitation – ex. sleet changed to freezing rain
- Snowfall accumulation or ice accretion
- Temperature
- Power outages



Photo courtesy of Barbara Settlemyre

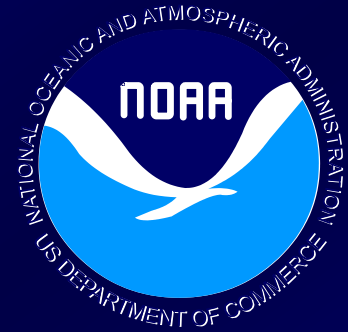
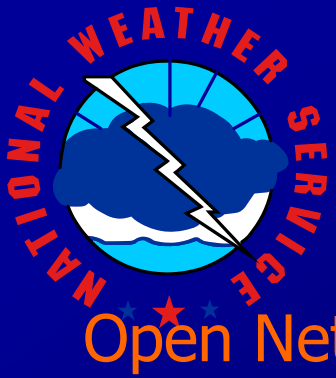


# Overview of a N E T



A net of amateur radio service operators is one of the most effective methods of providing primary or supplementary communications support for a variety of public service or emergency activities or events.

A **Declared Net** is a net started with a statement of purpose.



# Types of NETS

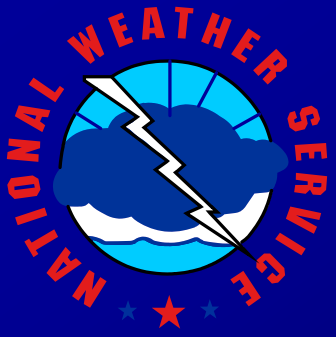
## Open Net

- Net is declared, not much happening
- Generally normal repeater use
  - NCS is there but not in tight control of the frequency

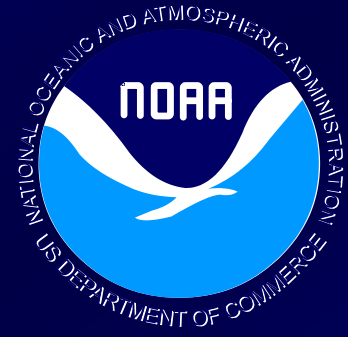
## Directed Net

- NCS declares the net active
- NCS controls the frequency
- Normal use of the frequency stops
- Specific net topic, conditions, and/or instructions for check-in is given

**SKYWARN Activations are Directed Nets established at the request of the National Weather Service**



# NET Control



NCS operators are perceived as *leaders*

- Expected to assume responsibility
- **Take Control of Your Frequency**

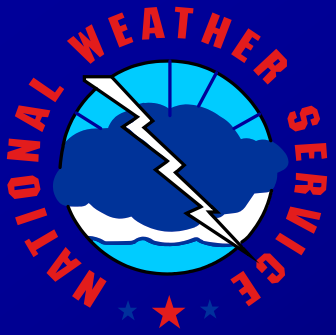
NCS operators must use authority wisely

- Build Trust
- Assume Responsibility

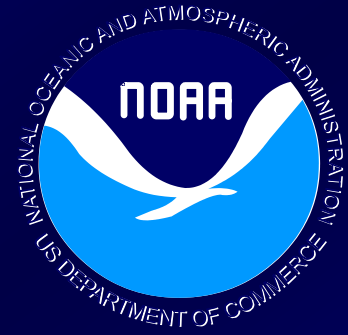
Positive NCS Operations Results => **RESPECT**

- More **Respect** => More **Authority**, more **Responsibility**





# NET Discipline



## NCS sets level of discipline

- Decide how tightly rules will be followed

Enforce them consistently!

If someone does not follow the rules, repeat the rules:

“I’m only taking criteria reports at this time”

- Your tone will set pace for the net

If relaxed, then others will be relaxed

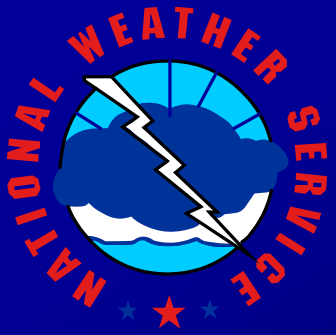
If tense or terse, other will be tense or terse

## FCC Rules Still Apply!

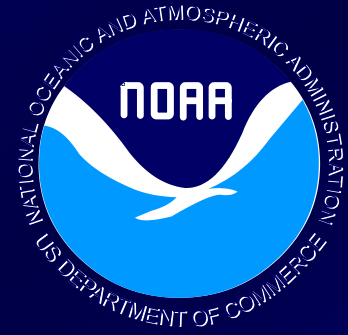
- Proper ID at 10 minute intervals, best way=sign every time

If done, roll call or round table check in satisfies rules

- No Profanity, etc.



# NET Instructions



Any informal or formal directed net should be preceded by **Net Instructions**

- Purpose, content, and method of operation of the net

What information is passed

How information is passed

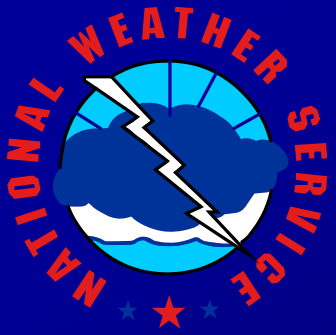
- May change due to duration or intensity of the net

Only criteria reports, or

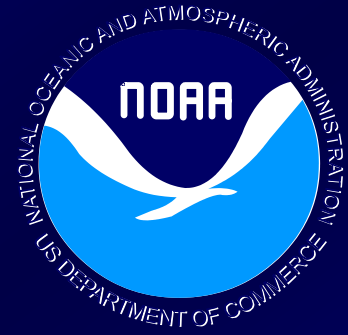
General reports or check-ins

- ✓ Our net scripts are designed to collect reports, not build a roster.

- ✓ Our net scripts include instructions to repeat periodically



# NET Traffic Priority



## *Emergency* or *Priority*

- Everything **STOPS** immediately

NCS gives undivided attention to the call

NCS allows no other traffic on frequency until call is resolved and frequency released

- “Please hold all traffic until emergency or priority traffic is cleared”

- **Emergency**

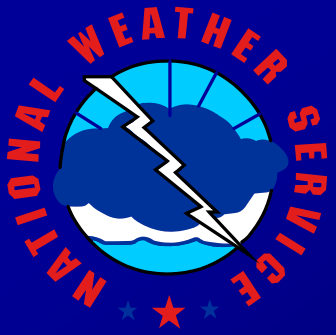
Danger of death or serious injury if message is not heard immediately

- **Priority**

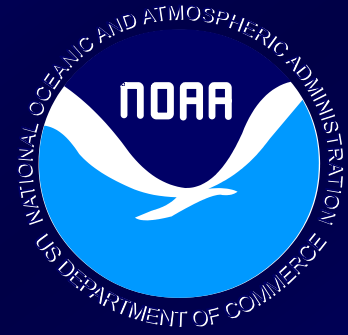
Immediate safety issue regarding human life or injury, or impending property damage

- **Multiple priority calls?**

Triage



# NET Communication



## The Communication Process

**LISTENING**

**40%**

**TALKING**

**35%**

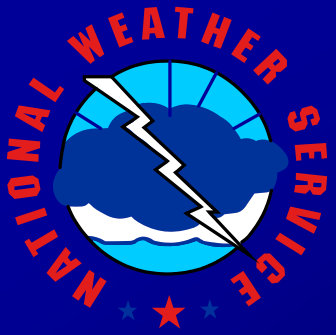
**READING**

**16%**

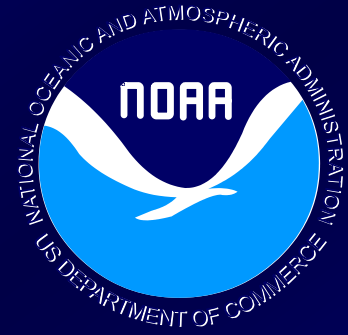
**WRITING**

**9%**

Source: "Listening: The Forgotten Skill", Madelyn Burley-Allen



# Effective N E T Control



...Requires Effective Communication Skills

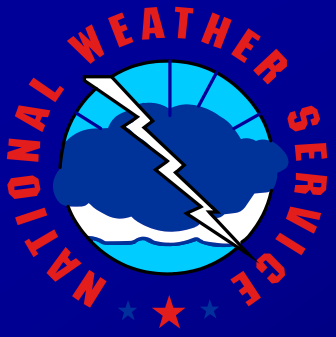
We are typically good at “**talking**”, but most people are typically only 25% effective at “**listening**”

- We all hear, but don't always listen effectively

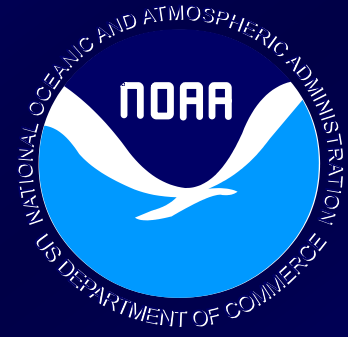
Listening can promote better quality information, especially as an NCS

- Being in charge of the situation
- Influence the outcome

As an effective listener, you have the power to ask clarifying questions...



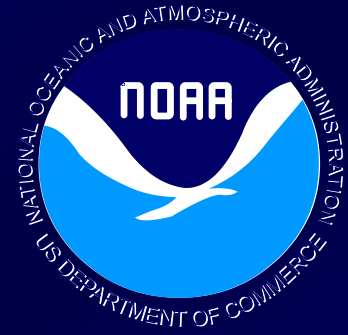
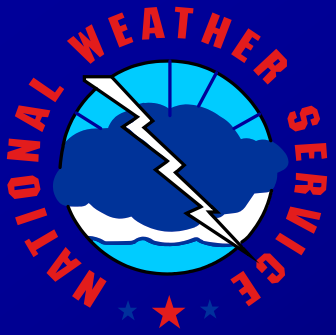
# NWS SKYWARN NET



Trained NCS operators must be able to:

- Conduct an activated net
  - \* Primarily from home, but...  
also from the NWS office  
if required under the circumstances
- Demonstrate ability to utilize the radios and computer resources available
  - \* NWS CHAT a MUST!
- Have spotter knowledge, and the ability to follow along with the weather events
  - \* NWS internet products (radar, etc.)
- Be “another set of eyes” to the overall weather picture





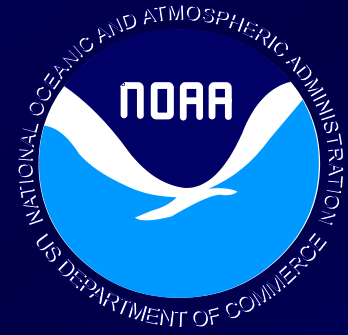
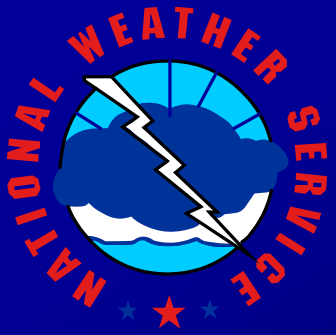
# SKYWARN

## Activation Procedures

**Currently** -- National Weather Service can make the decision to activate SKYWARN

- Preferred Method: Chain of Command Notification
- Wait for the NWS to contact a NET Controller
  - A Net Control Operator Personnel List is maintained by NWS
- The contacted NCS will then activate the NET on the assigned frequency and poll for participants

Never assume a NET will be activated at the first sign of bad weather



# SKYWARN

## Activation Procedures

**Proposed: Area Managers** make the decision to activate SKYWARN in their area BASED on risk assessment criteria, issuance of a WATCH or WARNING

– NWS CHAT or phone consultation with Lead Forecaster

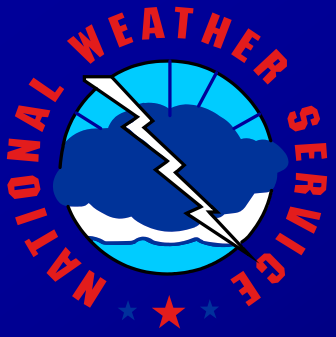
--OR--

**Call from NWS Lead Forecaster**

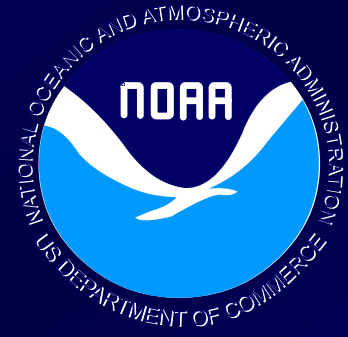
Self-activation can be abused or confusing, but we miss nets and your reports because...

NWS Forecasters focus isn't activating SKYWARN

*LESS STAFF, WE NEED YOUR HELP MORE THAN EVER!!!*



# Behavioral Rules



Professionalism is #1

Focus on the NCS job!

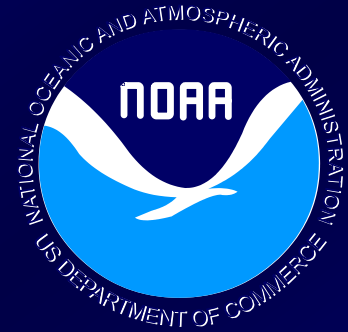
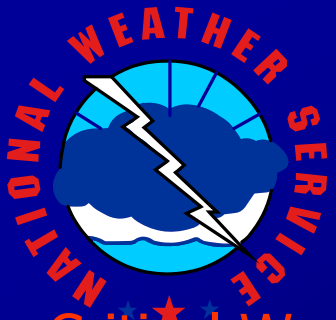
– If you have distractions or other commitments, don't take the job!

\* You are a volunteer. It's OK to say "I can't do this now"

If you need help or relief – ask for it!

Comply with reasonable requests from the NWS, the served agency

At the NWS office, only use the equipment you are authorized and trained to operate



# Behavioral Rules

**Critical Weather Mode** => High Tension

- Professional Attitude
- Leave the ego at the door!

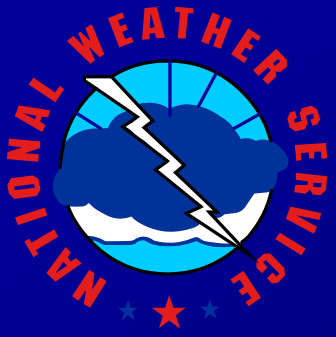
Distractions or interruptions of NWS or SKYWARN could mean loss of life or property

Be sensitive to any information passed

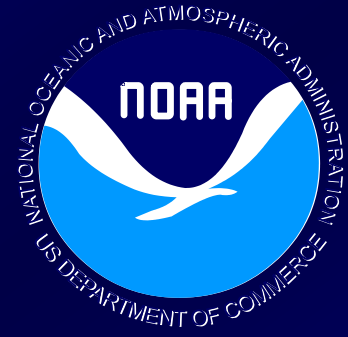
- Privacy -> Don't discuss loss of life or property outside the NET

If at the office, and media are present, refer any questions to the NWS Lead Forecaster or Manager In Charge

- If pressed, you're there to support the NWS as an amateur radio operator.
- Don't say "No Comment", it may be perceived that you have something to hide



# What Should I Bring to the NWS Office?



Generally, everything is there...but

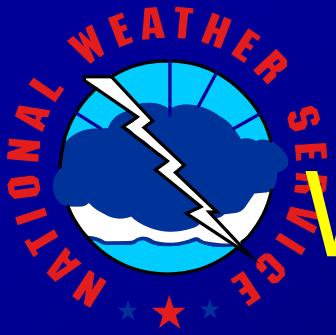
- A Spare Radio may be handy
- Tablet, Laptop or Wi-Fi enabled device for internet access

Items to help you in your NCS job:

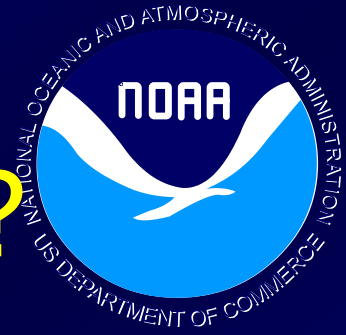
- Post-it Notes
- Extra pencils, paper

Things you may need

- Medications
- Snacks
- Cell phone



# What Call Sign Do I Use?

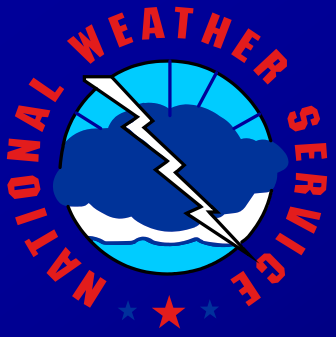


If operating as Net Control from home: **YOUR CALL SIGN**

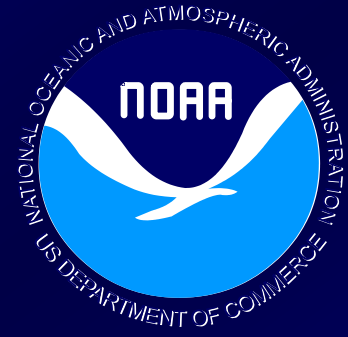
If operating at the NWS Office: **WX4CAE**

- Operating privileges (HF) = highest class of control operator present.





# Interaction with Forecasters

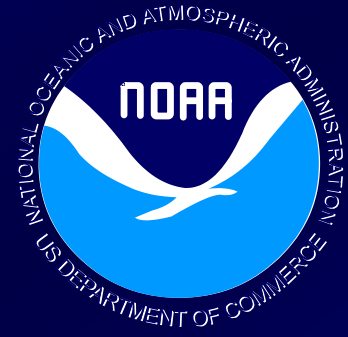
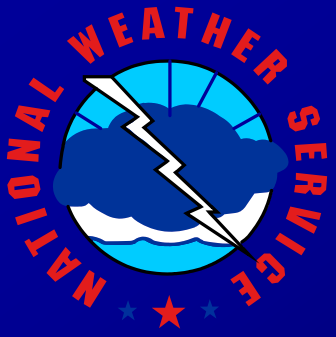


- If requested (NCS operating @ home), or upon arrival and prior to assuming net control,
- Forecasters will brief NCS with current weather status
  - Remember during severe weather they are busy, so be respectful and wait until they acknowledge you

Always use discretion, tact and diplomacy when delivering information

In office: Periodically you'll be updated with the latest information from the forecasters and warnings

At home: ALL WATCHES/WARNINGS, etc. via NWSCHAT



# Initial Briefing

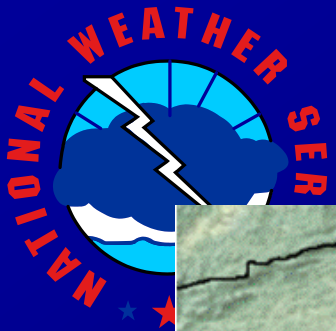
Where the current storms are located, direction of travel

## Characteristics of the storms

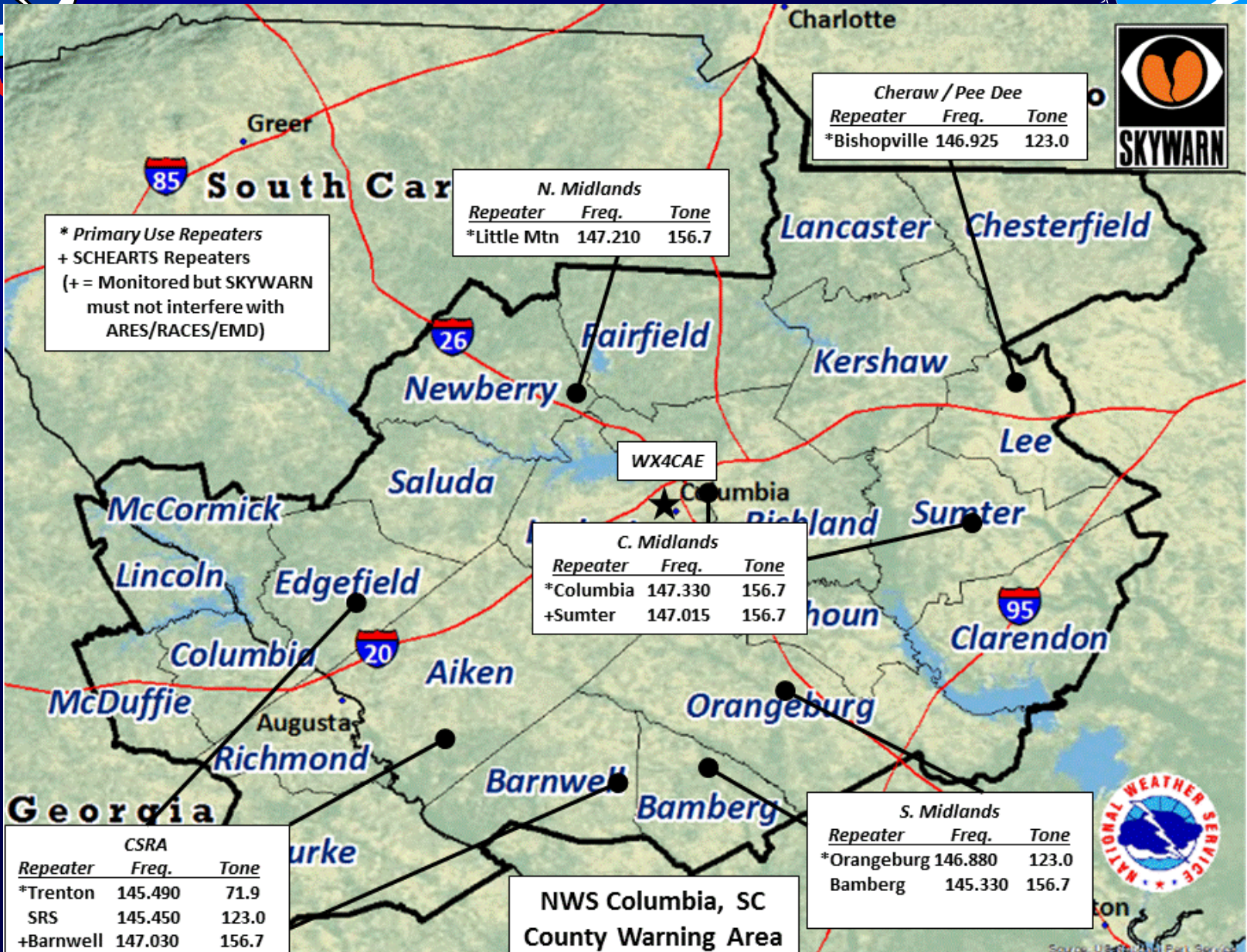
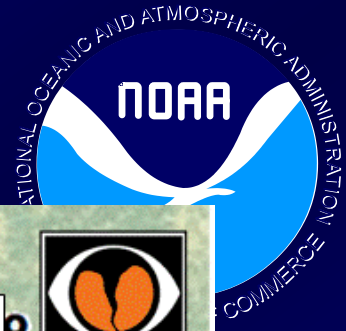
- Hail
- Damaging Winds
- Tornado

Geographic locations of primary concern for the forecaster

Latest severe or special weather statements to be read over the net



# The Columbia NWS CWA

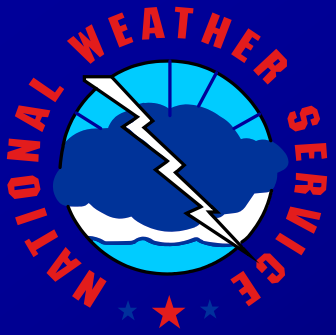


\* Primary Use Repeaters  
 + SCHEARTS Repeaters  
 (+ = Monitored but SKYWARN must not interfere with ARES/RACES/EMD)

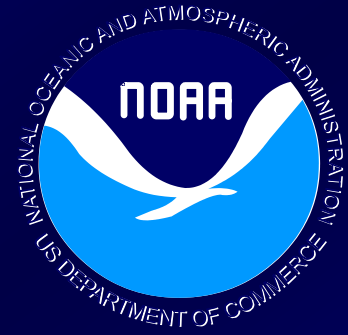


Source: USGS National Park Service





# Net Control Ops (WX4CAE)



The **NWS SKYWARN** Net Control operations center consists of

- Three 2 meter radios
  - \* Two with beams
  - \* One omni

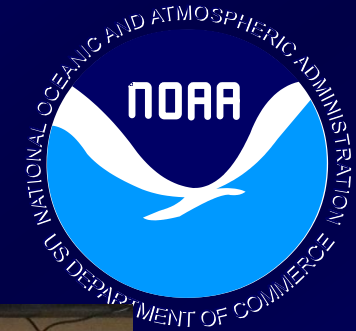
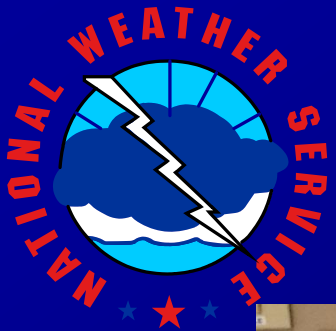
One Kenwood TM-D700 dual band with APRS capability

- \* Omni antenna

One Kenwood TS-570D HF Transceiver

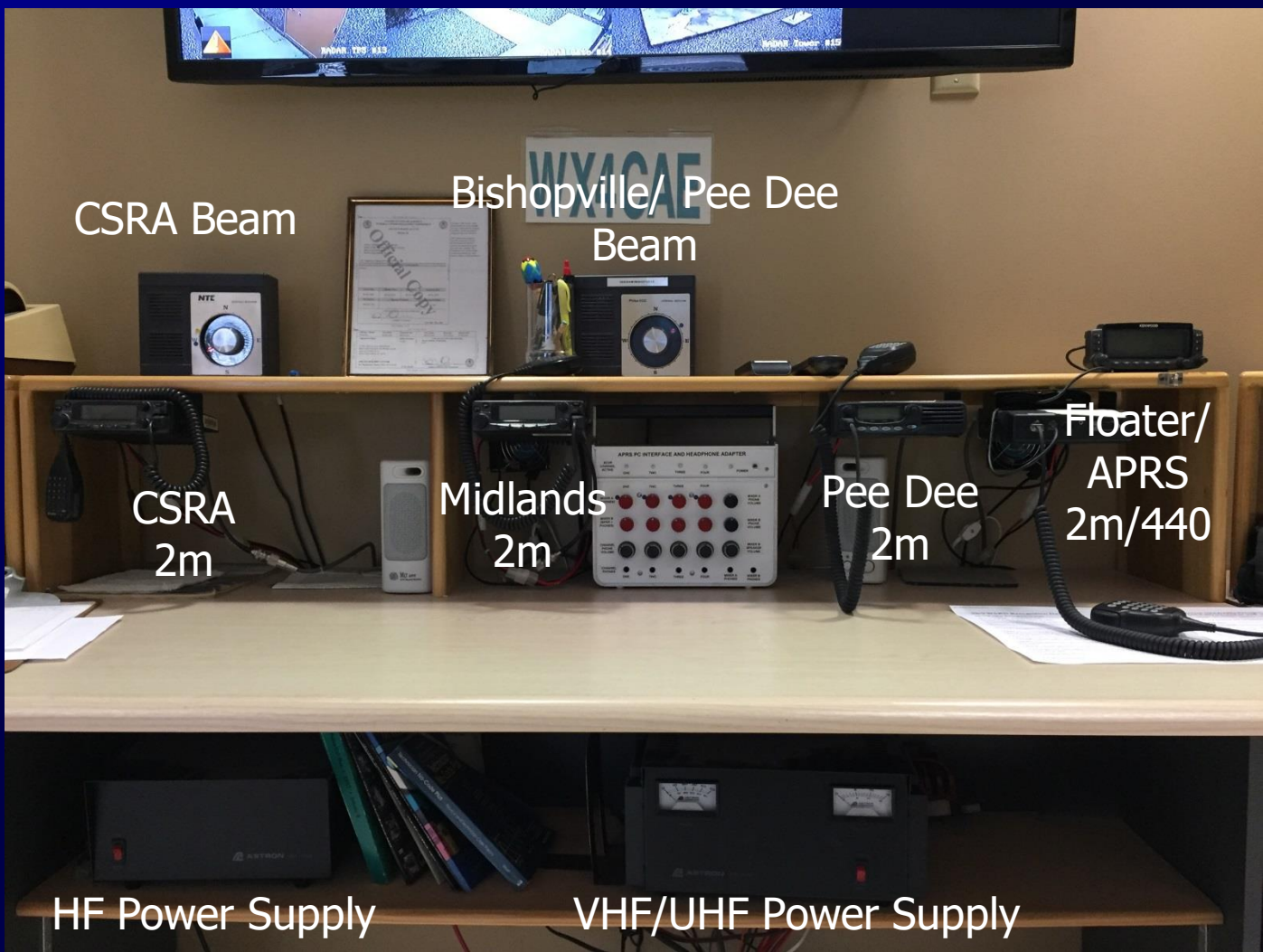
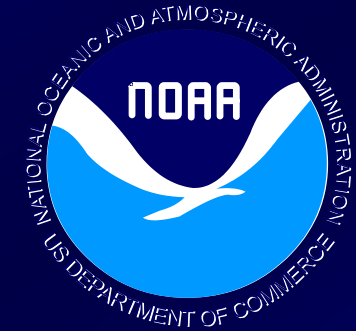
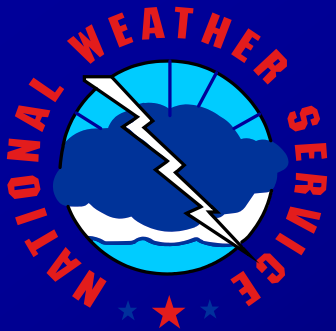
- \* Loop on the roof





HF Rig

HF Power Supply



CSRA Beam

Bishopville/ Pee Dee Beam

CSRA 2m

Midlands 2m

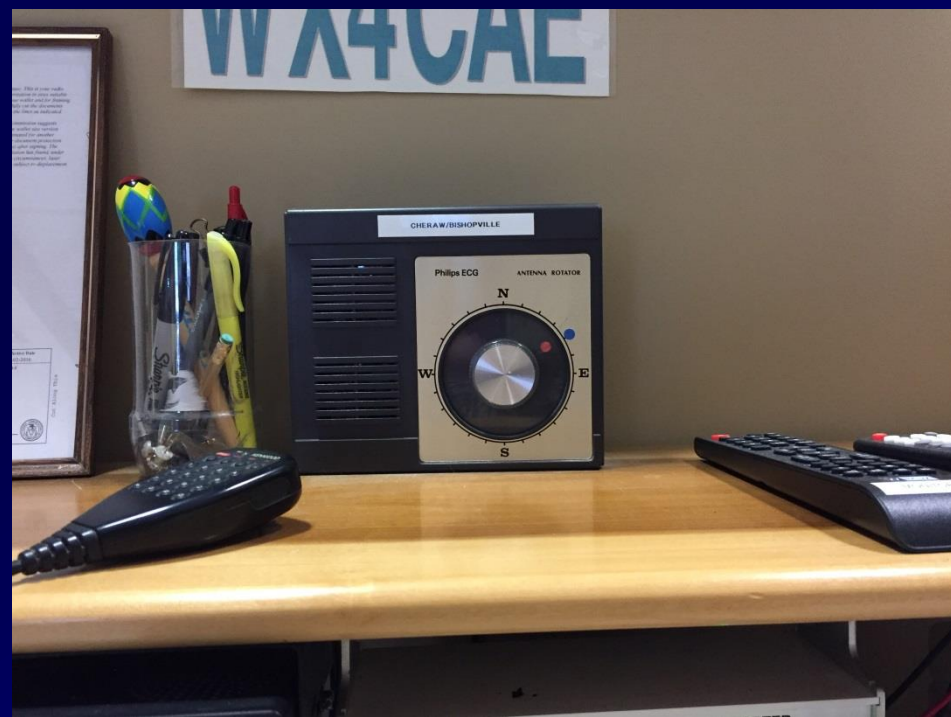
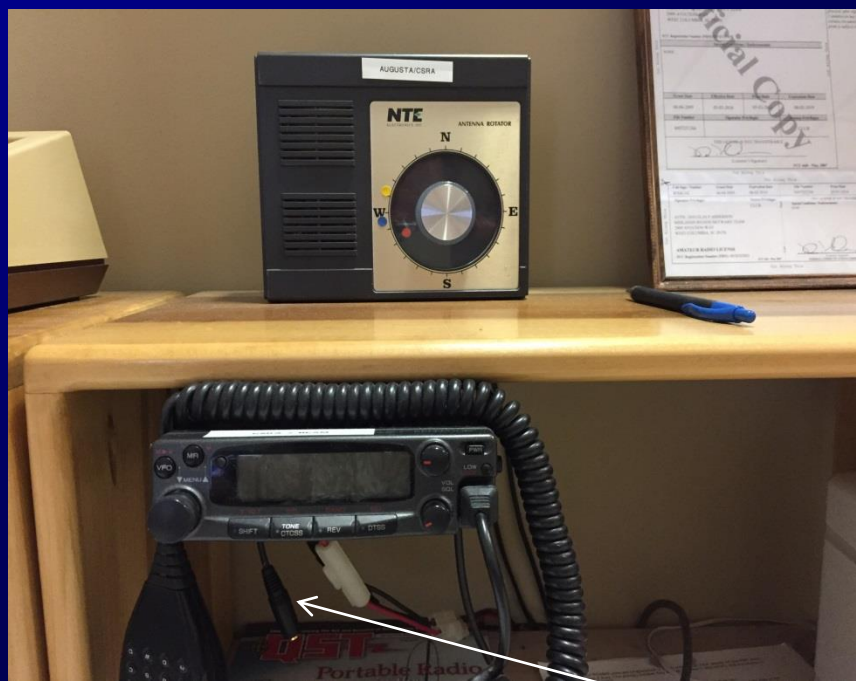
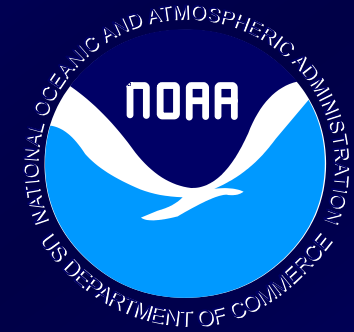
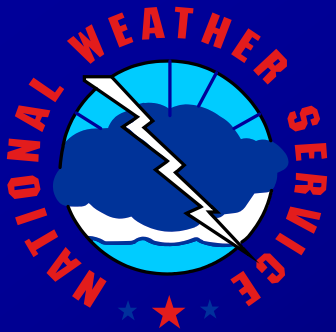
Pee Dee 2m

Floater/ APRS 2m/440

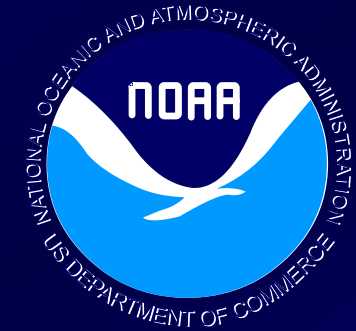
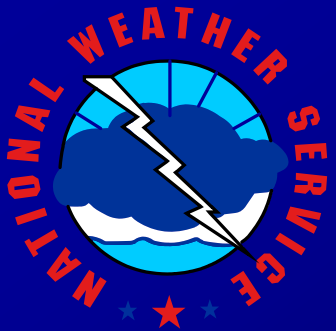
HF Power Supply

VHF/UHF Power Supply



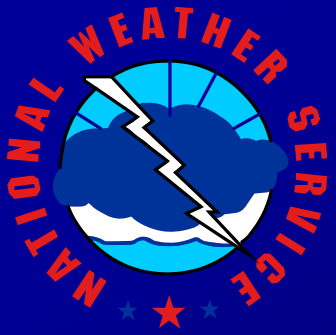


Headphone connection

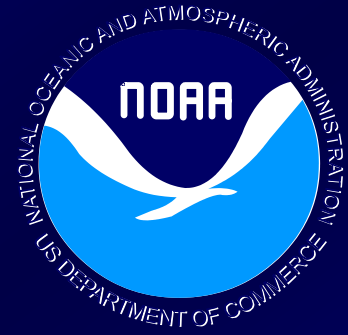


Cooling Fan  
Switch

Audio Patch Panel (turn ON, and speaker ON)

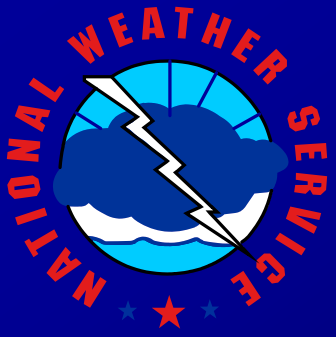


# Future?

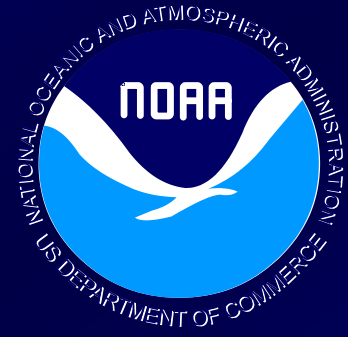


- DMR?
- DSTAR, Echolink?
- APRS
- Your Ideas?





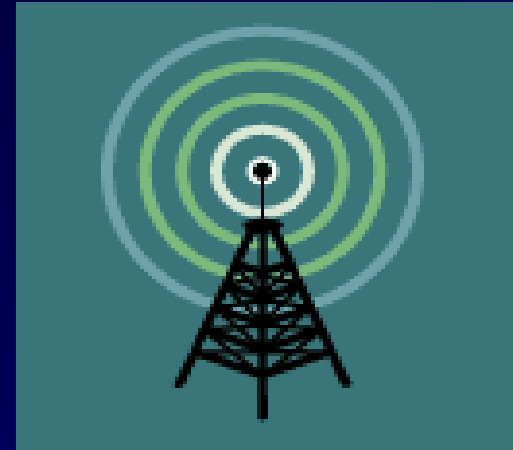
# Repeaters Used



Northeast Portion of CWA

Bishopville

146.925



Central Portion of CWA

Little Mountain

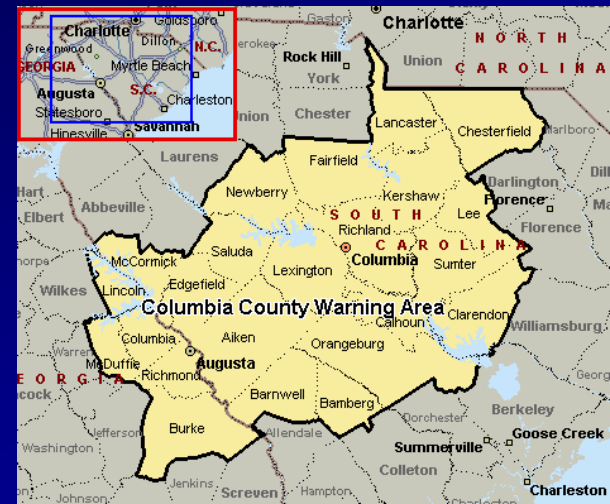
147.21 / 147.330

& Columbia

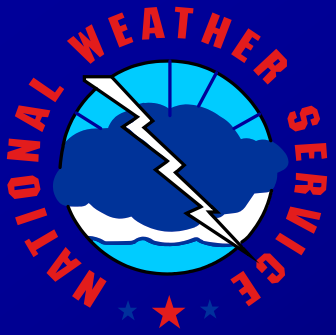
Southern Portion of CWA

Trenton

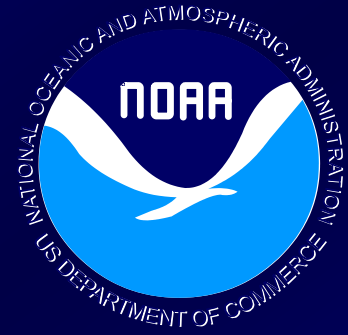
145.49



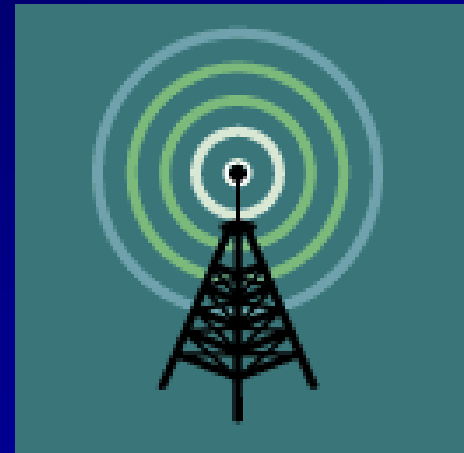


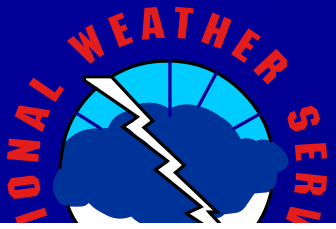


# Other Repeaters for Sub-Nets

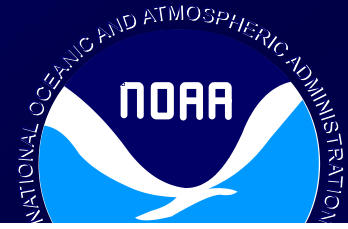


Batesburg/Leesville	147.255
Sumter	147.015
Orangeburg	146.880
Santee	147.225
Barnwell	147.030
Aiken	145.350
Evans	146.985
N. AGS	146.730
Wrens	147.120
SRS	145.450





# Launching the NET



THE NWS COLUMBIA SKYWARN NET is activated. “This is \_\_\_\_\_ (call sign) Net Control for SKYWARN in contact with the National Weather Service in Columbia, SC. All SKYWARN spotters are requested to check their systems and backup systems at this time.”

## **(IF in WATCH mode READ EVERY 30 MINUTES)**

“The National Weather Service has indicated that there is a THREAT for SEVERE WEATHER within the listening area of this repeater. (Read the list of watches if possible) SKYWARN is in Standby mode, and amateurs may use the repeater. Please keep transmissions short with breaks to permit severe weather reports to reach SKYWARN.”

## **(IF in WARNING mode READ EVERY 15 MINUTES, BREAKING INTERMITTENTLY FOR WARNINGS AND REPORTS)**

“The National Weather Service has indicated that SEVERE WEATHER IS OCCURRING within the listening area of this repeater. (Read the list of warnings if possible) SKYWARN is currently activated as a directed net.”

“All amateurs are encouraged to call SKYWARN with reports of severe weather. When calling COLUMBIASKYWARN Net Control please give your callsign, and indicate the exact location where severe weather is occurring. This includes city AND state, nearest town, road, or intersection. Please do not use landmarks. Major roadways are OK.”

“The National Weather Service is looking specifically for reports of the following:

1. Tornadoes, funnel clouds, or rotating wall clouds
2. Hail (please give the size as compared to US coins)
3. Wind gusts in excess of 50 miles per hour or more, estimated or measured.
4. Flooding of streams, creeks, or rivers out of their banks
5. Roads, or streets made impassable due to water
6. An inch or more of rain accumulation measured in rain gauge
7. Any structural damage by wind, hail or lightning
8. Downed trees, large branches, or power lines

“Please do not call SKYWARN if there are none of these severe weather events is occurring in your area. Any station experiencing one of these severe weather events call COLUMBIA SKYWARN Net Control at this time.”





# Launching the NET

## WINTER SCRIPT

THE NWS COLUMBIA SKYWARN NET is activated. “This is \_\_\_\_\_ (call sign) Net Control for SKYWARN in contact with the National Weather Service in Columbia, SC. All SKYWARN spotters are requested to check their systems and backup systems at this time.”

### **(In WATCH mode: READ EVERY 30 MINUTES)**

“The National Weather Service has indicated that there is a THREAT for SEVERE WINTER WEATHER within the listening area of this repeater. (Read the list of watches if possible) SKYWARN is in Standby mode, and amateurs may use the repeater. Please keep transmissions short with breaks to permit severe weather reports to reach SKYWARN.”

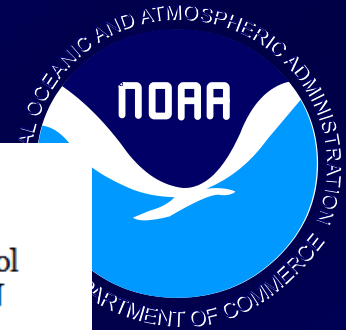
### **(In WARNING mode: READ EVERY 15 MINUTES, BREAKING INTERMITTENTLY FOR WARNINGS AND REPORTS)**

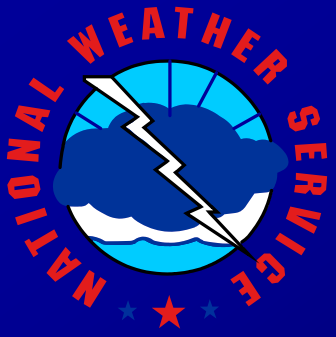
“The National Weather Service has indicated that SEVERE WINTER WEATHER IS OCCURRING within the listening area of this repeater. (Read the list of warnings if possible) SKYWARN is currently activated as a directed net.”

“All amateurs are encouraged to call SKYWARN with reports of severe weather. When calling SKYWARN Net Control please give your callsign, and indicate the exact location where severe weather is occurring. This includes city AND state, nearest town, road, or intersection. Please do not use landmarks. Major roadways are ok.”

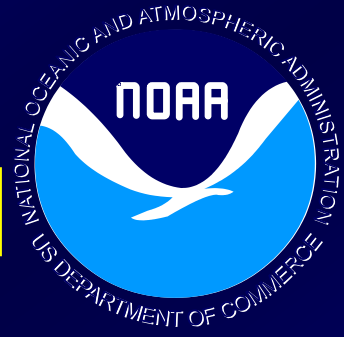
“The National Weather Service is looking for reports of the following:

1. Snow accumulation in inches
2. Any ice accumulation on trees, streets, or power lines
3. Sleet or freezing rain
4. Wind gusts in excess of 35 miles per hour measured using an anemometer.
5. Impassable or closed roads”
6. Downed trees, large branches, or power lines.
7. Any other storm-related damage, or power outages.





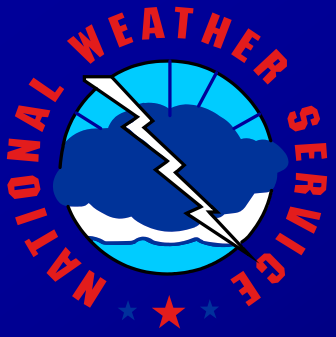
# Keep Spotters Informed



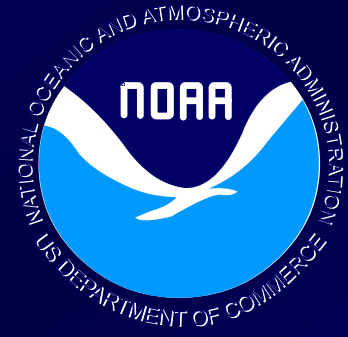
Immediately when net is activated..

- Inform stations of the current weather situation
  - \* "The NWS has issued a severe thunderstorm warning for Northern portion of Columbia County. The storm is moving to the east at 30 mph."
- Keep updating as additional information comes in from the NWS forecasters , NWS CHAT or your radar observations..
  - \* "The severe thunderstorm is over Pollards Corner and will be crossing the river into McCormick County."

Remind spotters of criteria



# SKYWARN Net Rules



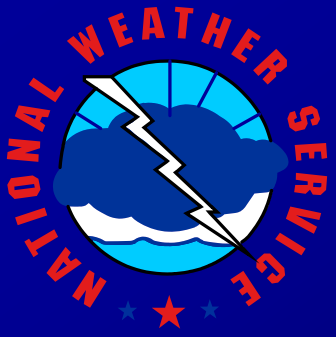
An NCS may ask for:

- Criteria Reports Only, any location
- Criteria Reports from a Specific Location

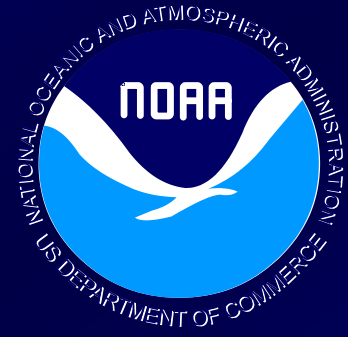
If NWS specifies a specific target area

- General Reports when activity is low are appropriate

Criteria Reports Take Precedence over Routine Reports



# Show Appreciation

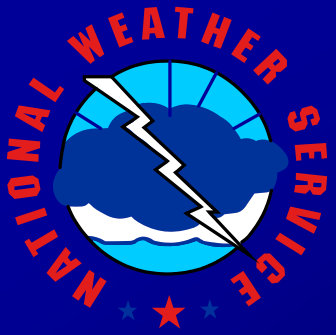


## Always...

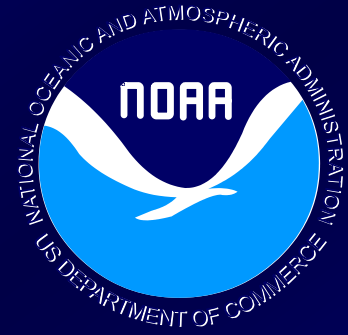
- Show interest in the report no matter if criteria or trivial
- Encourage participation on the net
- Thank the operator for the report

## Never...

- Turn down a report even if it's non-criteria during a "criteria only" reporting portion
  - “Thank you for that report. Are there any stations with criteria weather to report at this time?”
- Tell an operator their report is “useless” or “not needed”



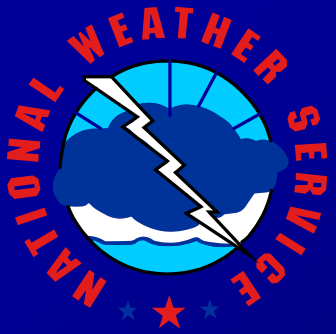
# Log Reports



Log sheet contains:

- **CALL SIGN** who they are
- **WHAT** they saw or are seeing
- **WHERE** they are or where they were when it occurred
- **WHEN** it occurred

All traffic, even if it does not contain criteria weather, is to be logged



# Report Form



NWS CAE SKYWARN Severe Weather Report Date: \_\_\_\_\_

Reported by: \_\_\_\_\_ Time of Report: \_\_\_\_\_ Time of Event: \_\_\_\_\_

**Event Reported:**

Tornado:

Funnel Cloud/Wall Cloud:

• Do you see it now? \_\_\_\_\_ • Is it spinning? \_\_\_\_\_ • Is it touching the ground? \_\_\_\_\_

• Damage?: \_\_\_\_\_

Hail:

• Size (pea, penny, nickel, etc) \_\_\_\_\_

• Is it still occurring? \_\_\_\_\_ • Do you know when it began/ended? \_\_\_\_\_

Wind Damage:

• Describe (limbs, whole trees, size and number of trees, structural damage, etc): \_\_\_\_\_

Flooding:

• Street Flooding? \_\_\_\_\_ • Depth of water? \_\_\_\_\_ • Roads closed or impassable? \_\_\_\_\_

• Structures flooded? \_\_\_\_\_

**Event Location (city, county, names of roads, etc):**

Direct Observation or second-hand report? (circle)

SKYWARN Net Control \_\_\_\_\_

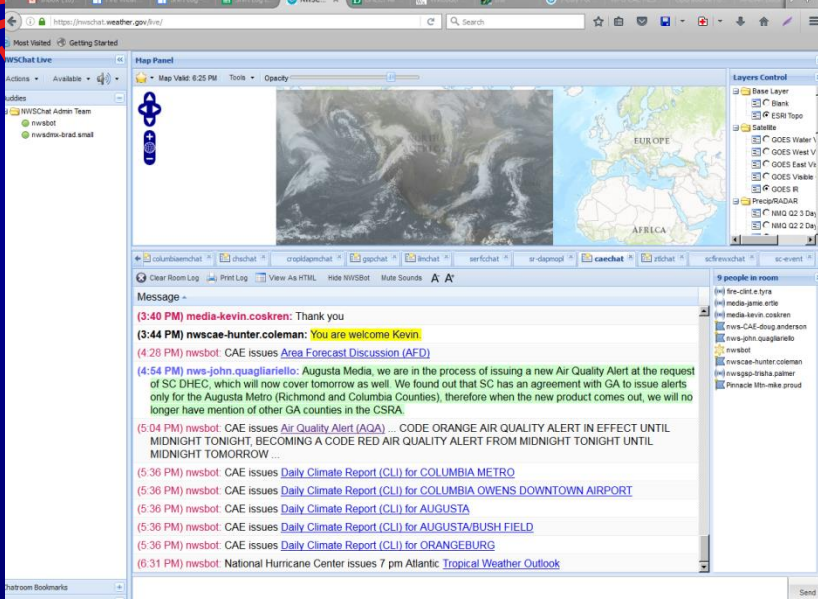
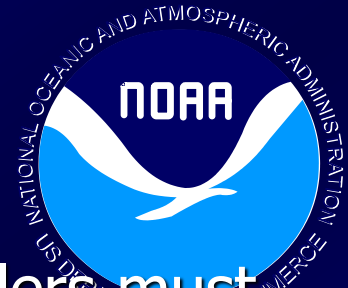
(Initials)

Under Revision

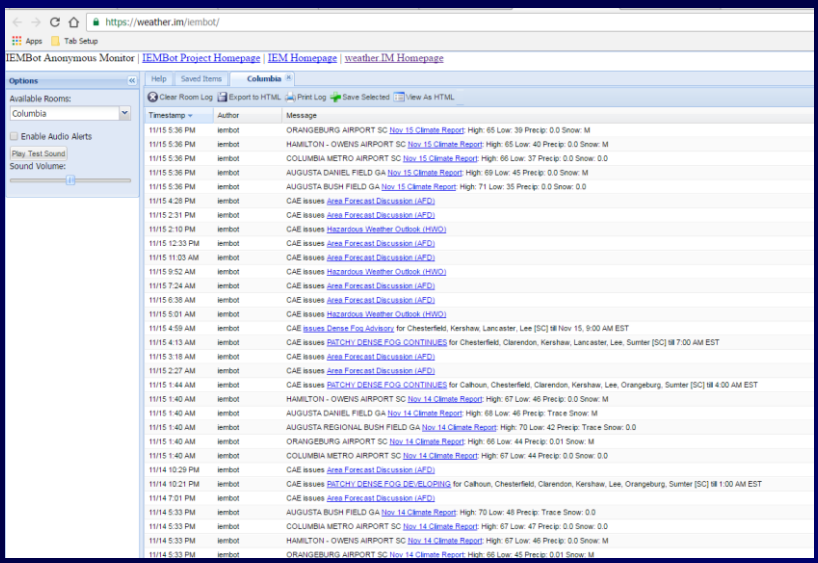




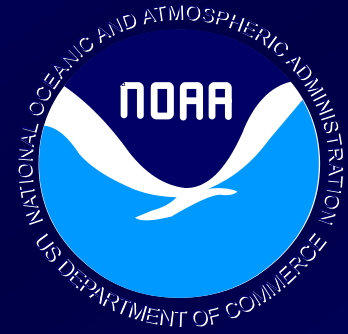
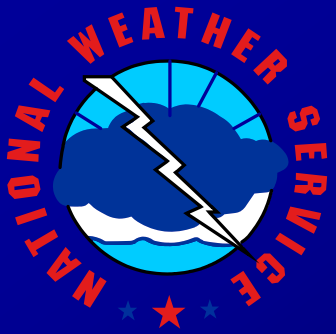
# NWSChat and IEMBot



- SKYWARN Net Controllers must have an NWS Chat account.
  - Best way to pass reports directly to the NWS Office if not there.
  - <https://nwschat.weather.gov/>
  - Our chat room is caechat

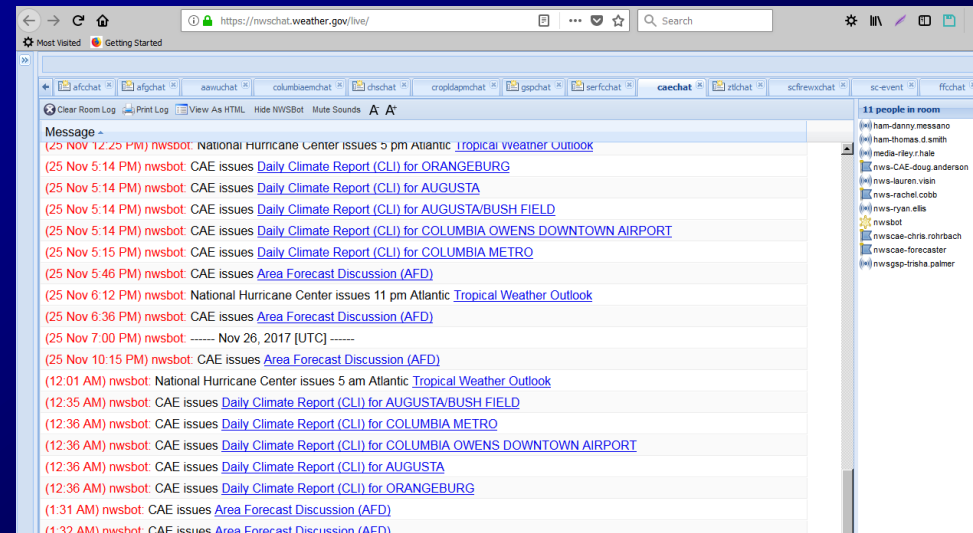


- IEMBot is a way for anyone to monitor any NWSChat forecast office chat room.
  - All watches/warnings/advisories along with many other products and notifications.
  - <https://weather.im/iembot/>

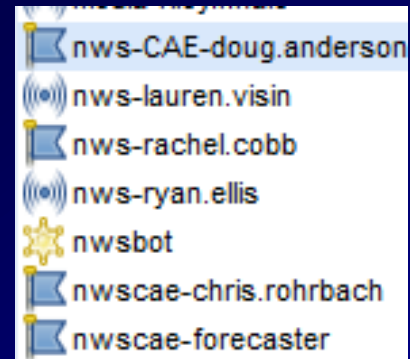


# Reporting to the Forecasters (Operating at Home)

**Best: Relay reports directly using NWSCHAT in CAECHAT room**



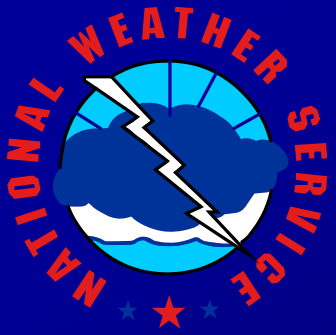
Type directly in, or open private room with a "flagged" user



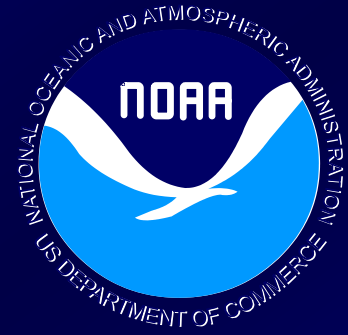
- Other paths:

- ✓ UNLISTED SPOTTER LINE: XXX-XXX-XXXX
- ✓ PUBLIC DESK DIRECT LINE: XXX-XXX-XXXX
- ✓ EMAIL [caewx@noaa.gov](mailto:caewx@noaa.gov)
- ✓ IF WX4CAE is on the air, direct to them

Question: Why do we prefer to get reports via CHAT, phone or email?



# Reporting to the Forecasters (Operating at Home)



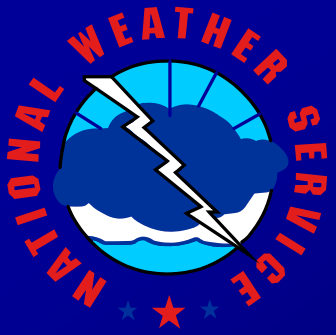
If, as NCS:

You feel a report is "critical" with information that:

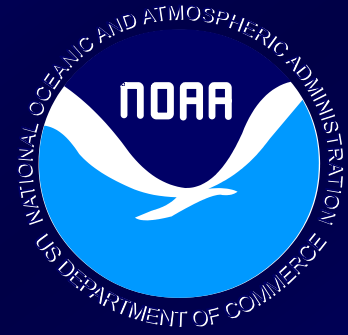
- Can save lives (life-threatening event occurring)
- Poses significant risk of property damage

**CALL THE OFFICE IMMEDIATELY**

Speed and accuracy are crucial



# Reporting to the Forecasters (At WFO CAE, WX4CAE)



Remember, the forecasters/NWS Net Control are generally very busy during severe storms

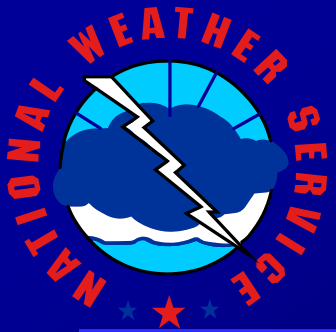
- Be patient and wait for them to acknowledge you

Report only criteria weather observations unless asked for additional information

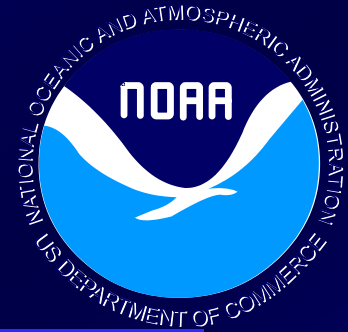
- NCS must determine if information is “critical” or “potentially life threatening to humans”, or potentially will result in severe damage to buildings/infrastructure
- **This information MUST be reported immediately**
- If unsure of severity, bring it to the forecasters attention

Make sure you have all information on the criteria weather observation prior to reporting to the forecaster

Ask if there is additional information they require



# What Would You Do?



**There is severe thunderstorm warning, and a station reports conditions that do not meet criteria. What would you do?**

**Response: Thank the station for the report. Mention the severe weather criteria that NWS is seeking, and invite the station to report again in the future should she observe those conditions.**

**There is winter storm warning, and a station would like to know the road conditions.**

**Response: Share any information from the NWS warning concerning road conditions. Check SCDOT. Advise the station to monitor SCDOT, local TV and radio stations and/or NOAA Weather Radio for further details and updates.**





**A station from Greenwood County calls into an SKYWARN net with a criteria severe weather report.**

**Response: Take the report and advise the station that there is a local SKYWARN group in his area to which he can report. Provide the appropriate frequency for future use – in this case, 145.470 (PL tone 91.5) for GSP SKYWARN.**

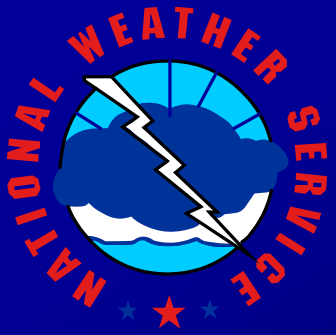
**(CAE NWS will relay to GSP, or you can put it in GSP's NWSChat room)**

**There is a station maliciously interfering with the net; he is making comments like "OH WOW" after reports and, of course, not identifying with call sign.**

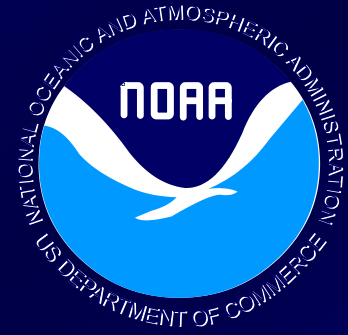
**Response: Do not acknowledge a jammer or interfering station at all. Say nothing about the interference. If the situation is impossible, announce a move to the backup frequency.**

**The 147.210 (Little Mtn) repeater fails.**

**Response: Go to the backup frequency immediately.**



# Closing the NET



## NET CLOSING SCRIPT

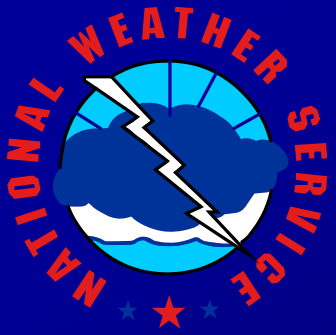
THIS IS \_\_\_\_\_ (call sign), NWS COLUMBIA SKYWARN NET CONTROL.

AT THIS TIME, WE ARE SECURING THE NWS COLUMBIA SKYWARN NET. THIS REPEATER WILL BE RETURNING TO NORMAL OPERATION.

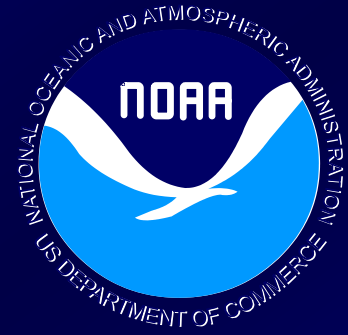
I AND THE NATIONAL WEATHER SERVICE FORECAST OFFICE IN COLUMBIA WISH TO THANK ALL STATIONS WHO PARTICIPATED IN THIS NET, AND THANK YOU TO THE OWNERS OF THIS REPEATER.

THANK YOU AGAIN AND 73.

THIS IS \_\_\_\_\_ (call sign), CLEAR.



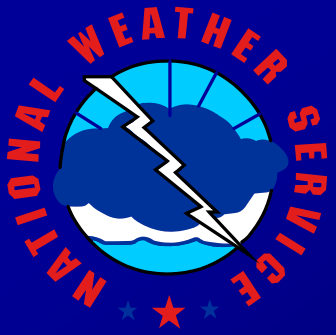
# What if SKYWARN is Not Activated?



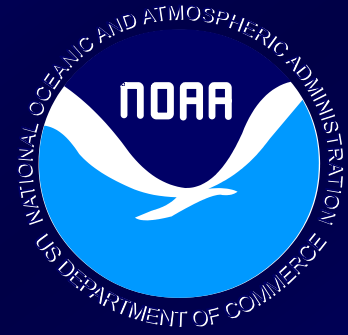
If the National Weather Service does not determine the need to activate **SKYWARN**, local amateur radio operators may conduct an “informal local weather net”

At any time, criteria reports may be phoned to the NWS

- Informal local weather net control may call in reports, or have a spotter call them in
- Let us know what frequency your weather net is on



# Handling Problems on the NET



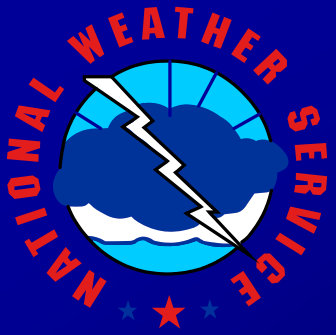
Amateurs may be angry or irate with:

- The NCS
- Another Operator
- Themselves

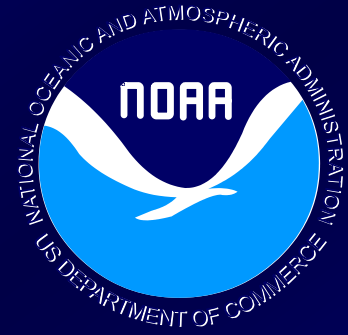
Handling problems ineffectively will result in..

- Participants to lose morale
- Lack of respect for NCS
- Participants "take sides"
- Hurt Feelings
- Looking bad to the served agency

**Results: Ineffective Net!**



# Handling Problems on the NET



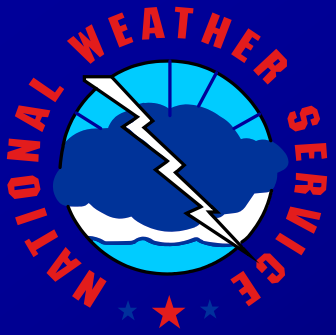
Someone comes on frequency with routine non-net traffic

- Politely inform them there is a formal directed net active on frequency and ask them to please move their traffic to another frequency

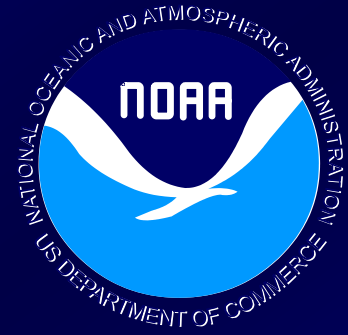
## Intentional Interference

- Ignore it!
- If too severe, report it to the FCC and consider moving to a back-up repeater





# Other NCS Problems

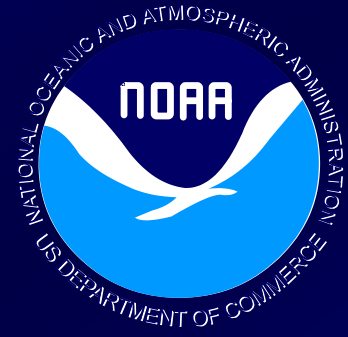
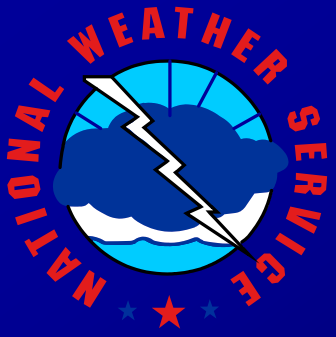


## Non Criteria Reports when NCS Asks for Criteria Reports Only

- Politely remind stations on frequency the rules that the net is currently operating under..
  - \* "Thank you for that report. A reminder to all stations that we are only taking criteria reports at this time."

## Incomplete Reports

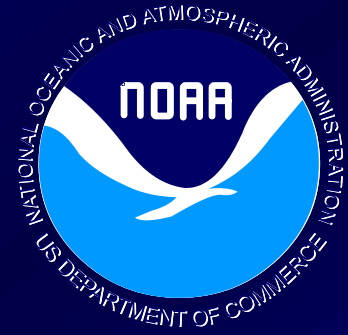
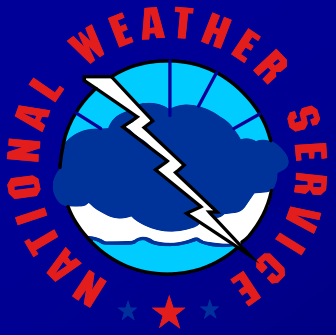
- Know what you need to have
  - \* "Copy your report of high winds and downed tree limbs. Do you have a measured or estimated wind speed and how big were the limbs. What was their size or diameter?"



Thank You Very Much!!!

Your Dedication Is

Appreciated!!



Questions or comments???

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803-822-8135

[www.weather.gov/cae](http://www.weather.gov/cae)

[www.weather.gov/cae/skywarn](http://www.weather.gov/cae/skywarn)