

# SKYWARN OPERATING PROCEDURES 2016

## WELCOME

- Years past, we have held this meeting AFTER the NWS severe weather training.
- We are trying something different for 2016
- Many ham operators are “new” hams and have never been exposed to Skywarn Activation.

# Skywarn Operating procedures 2016

We are starting into Severe Weather Season.

A. We need everyone's participation.

B. If you can't go out in the field to spot, do it from home.

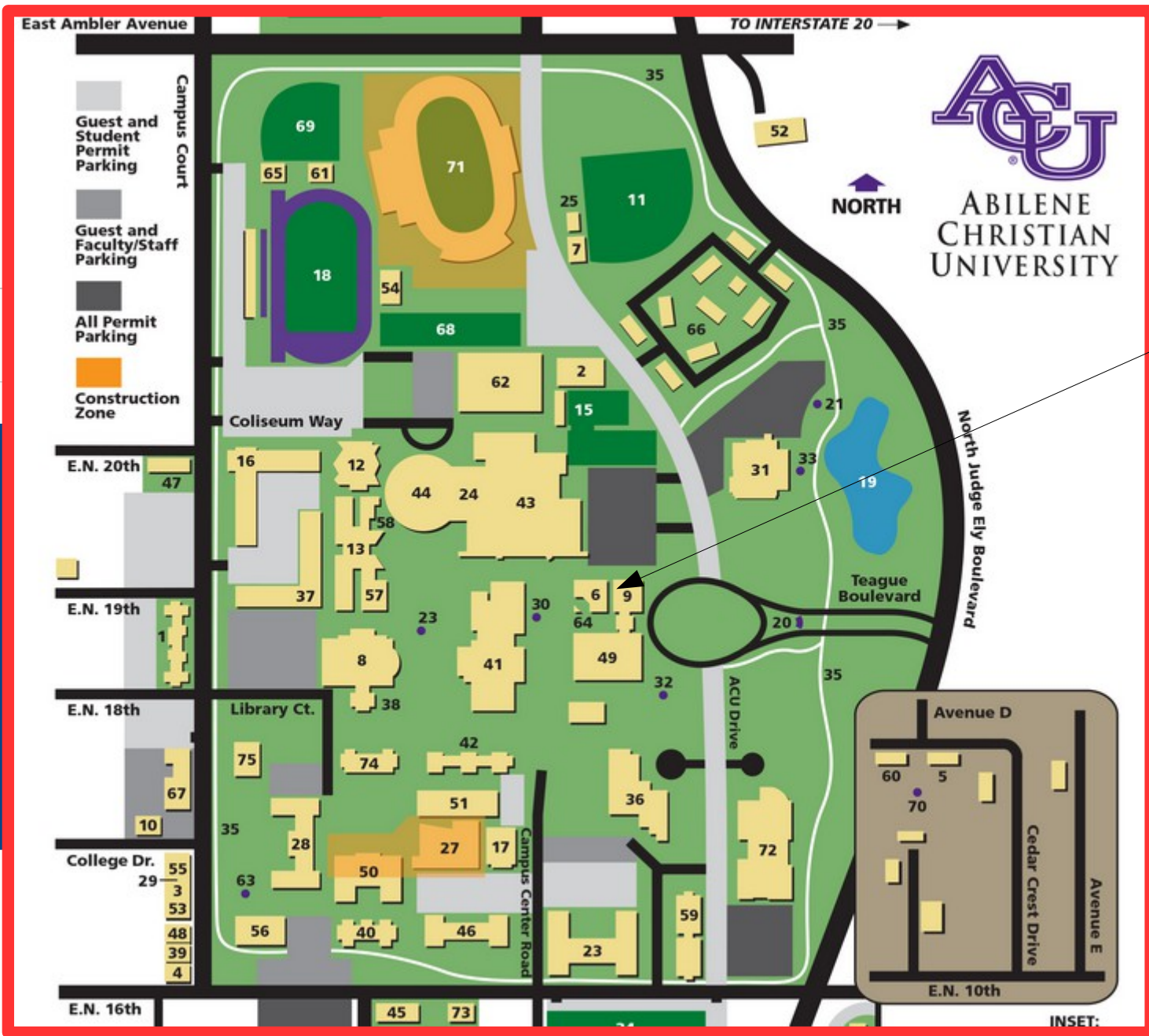
C. If possible, inexperienced spotters should team up either with an experienced spotter, or at least two inexperienced spotters should work together.

D. **SAFETY** is the top priority.

# Skywarn Operating procedures 2016

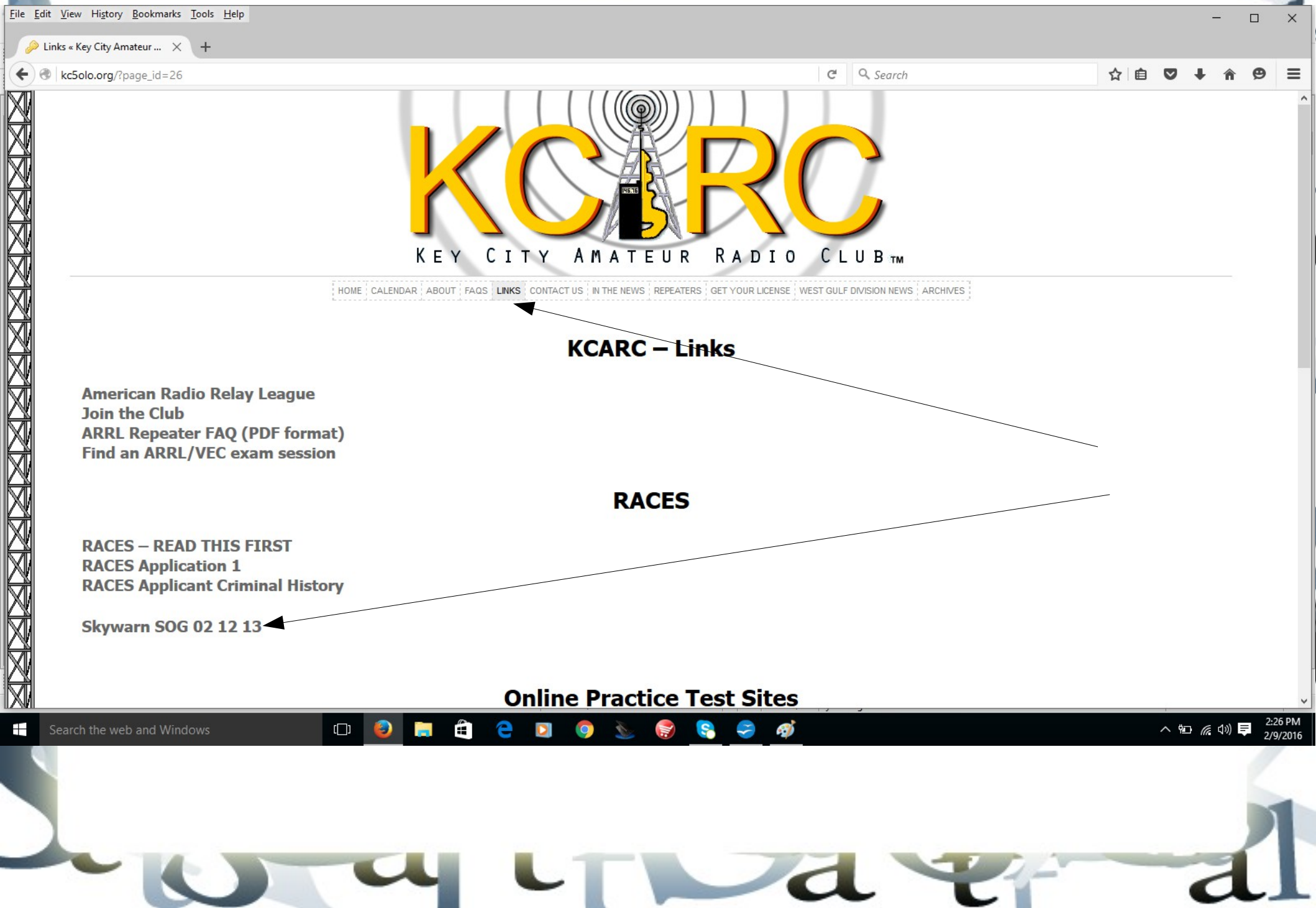
## Requirements:

- A. Attend a spotter course (Feb 27, 2016 9:00 a.m. ACU Hart Auditorium)
- B. Area spotter training:
- C. Reliable means of communications – Ham Radio



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10  
8  
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Column 1  
Column 2  
Column 3



- HOME
- CALENDAR
- ABOUT
- FAQS
- LINKS**
- CONTACT US
- IN THE NEWS
- REPEATERS
- GET YOUR LICENSE
- WEST GULF DIVISION NEWS
- ARCHIVES

## KCARC – Links

- American Radio Relay League
- Join the Club
- ARRL Repeater FAQ (PDF format)
- Find an ARRL/VEC exam session

## RACES

- RACES – READ THIS FIRST
- RACES Application 1
- RACES Applicant Criminal History
- Skywarn SOG 02 12 13

## Online Practice Test Sites

# Skywarn Operating procedures 2016

There is a Standard Operating Guide

- A. All Skywarn nets are **DIRECTED** nets
- B. The 146.760 courtesy tone will change to a short beep if we are in weather mode.

C. At the EOC, we monitor 5 radios:

146.760 – Primary

444.250 – San Angelo/Abilene Link

146.960 – Secondary

443.100 – Link to Brownwood

Fire Department Big Country Repeater

We may also monitor the 444.775 repeater in Sweetwater.



# Skywarn Operating procedures 2016

- Some of the information in the following slides will be repeated several times.
- This is done on purpose.
- If you see it more than once, pay close attention, as the repeated point is important!

# Skywarn Operating procedures 2016

- a. **146.760** is used for local spotters. Until a directed net is called, this repeater can be used for casual contacts. Once a directed net is called transmissions should be directed to the net control station **ONLY**.
- b. **146.960** is used for “off directed” net information, such as discussion between two amateur stations, but conversations should be kept short.
- c. If there is an emergency is declared on 146.760, and you need to get information unrelated to the emergency, into the EOC, you may do so on 146.960.
- d. **PLEASE AVOID** any conversation on 444.250 except for the NCS and San Angelo NWS unless the NCS instructions you to use that frequency.



# Skywarn Operating procedures 2016

e. If you must leave the 146.760 primary Skywarn frequency to talk to another station, please inform the NCS.

f. Once a net is winding down, please **check out of the net** before going home. This allows for us to account for you.

*Understand that because we do monitor so many radios, we may not be able to acknowledge your transmission, but we will as time allows.*

If you have an **true emergency**, preface your first transmission with the words BREAK BREAK and the suffix of your call sign.

# Skywarn Operating procedures 2016

## Levels of Activation

### LEVEL 4

**Trigger:** The NWS has asked for a Skywarn Activation

A *watch* has been issued

**Our response:**

Make ready your vehicle, yourself, and your radios.

Casual reports of rain, wind, small hail.

# Skywarn Operating procedures 2016

## LEVEL 3

**Trigger:** NWS has issued a thunderstorm warning for our area

Our Response:

Only Severe weather reports are taken at this time

Hail => 1 inch

Wind > 58 MPH

Heavy Rain 1 inch per hour or greater

# Skywarn Operating procedures 2016

## LEVEL 2

Trigger: High Readiness – a situation with a significant probability/potential for causing loss of life or property damage

Examples:

Tornado Warning

Flash Flood Warning

Funnel Cloud or rotating wall cloud

# Skywarn Operating procedures 2016

- Level 2 (continued)
- Our Response
  - This is an “is an emergency” situation. When we reach this level, lower level events take a back seat to these.
  - Report ONLY these events.
  - Emergencies are always priority traffic.
  -

# Skywarn Operating procedures 2016

## LEVEL 1

Triggers: Tornado Touchdown

Experiencing Flash Flooding

Very Large hail

Very high winds

Our Response:

Report any of these situations and/or:

Any Emergency Traffic

These are emergencies. **SHORT** transmissions!

# Skywarn Operating procedures 2016

Once a net is winding down, please check out of the net before going home. This allows for us to account for you.

Understand that because we do monitor so many radios, we may not be able to immediately acknowledge your transmission, but we will as time allows.

If you have an true emergency, preface your first transmission with the words BREAK BREAK and the suffix of your call sign.

# Skywarn Operating procedures 2016

All communications will be in PLAIN TEXT – absolutely no 10 codes or other “codes”.

Simply say what you mean.

**BE CALM.** Shouting into the microphone only causes unnecessary radio traffic.

## **Access to the EOC**

We have an agreement with the City of Abilene and we have to limit access to the EOC.



# Skywarn Operating procedures 2016

- Call Out Procedures

- During severe weather season, pay attention to weather resources EARLY in the day.
- Places to check:
  - Storm Prediction Center  
<http://www.spc.noaa.gov/>
  - Local TV Weather
  - San Angelo NWS <http://www.srh.noaa.gov/sjt/>
  - NWS **may** hold a conference call around 2:00 p.m.

# Skywarn Operating procedures 2016

- NWS sends TXT & Email notification
- 146.760 repeater courtesy tone will change to “Expect Severe Weather”
  - NOTE: This is NOT a Skywarn Activation at this point
  - This is **your trigger** to get yourself, your vehicle, your radios, maps and snacks ready.
- If Skywarn is activated, a net control operator will make an announcement that we are activating a Skywarn at \_\_\_\_\_ local time.

# Skywarn Operating procedures 2016

- At this point a lot of “WHEELS” start turning.
  - A NCS will activate a net & take check ins.
  - NCS will turn the repeater macro to “WEATHER NET” with short courtesy tone
  - NCS, when practical, will get enroute to the Abilene EOC.
  - Once there, 2 computers and 3 radios (5 frequencies) will be turned on along with 4 TV sets.
  - Roll call will be made with local spotters and logged.

# Skywarn Operating procedures 2016

- Normally a 2<sup>nd</sup> NCS will arrive at Abilene EOC
- *THINGS ARE VERY HECTIC AT THIS POINT. PLEASE BE PATIENT.*
- Contact will be made with San Angelo NCS for an update.
- Update will be communicated via 146.760 repeater
- NOTE: should we “loose” the repeater, stay on 146.760 and await instructions from NCS.

# Skywarn Operating procedures 2016

- It is important to remember as weather conditions worsen, please hold radio traffic to a minimum:
  - Short transmissions
  - NO idle chit chat
  - Use words “Break Break” if you have an emergency
  - Listen as much as possible
  - Transmit if you have to

# Skywarn Operating procedures 2016

## NET OPERATIONS

A. If there is a chance of severe weather:

Monitor the 146.760 repeater.

Look at the San Angelo NWS website

<http://www.srh.noaa.gov/sjt/>

# Skywarn Operating procedures 2016

If there is an activation,

Be ready to take an assignment before checking into the net.

This includes gas in the vehicle

Radios and charged batteries

First Aid Kit

Reflective Vest

Snacks (includes drinks and high protein food bars

The NCS will communicate important information needed in the field

# Skywarn Operating procedures 2016

Know the difference between a WATCH and a WARNING

A WATCH means that conditions are right for severe weather.

A WARNING means that severe weather is imminent (is or about to occur)



# Skywarn Operating procedures 2016

Severity: Low priority

Rain

Wind

Small hail

# Skywarn Operating procedures 2016

- Severity: Medium priority

Heavy Rain

High Winds

Larger hail

# Skywarn Operating procedures 2016

- Severity: High Priority  
Funnel Cloud  
Tornado  
Flash Flood  
Very Large Hail  
**AND ANY EMERGENCY**

# Skywarn Operating procedures 2016

## HOW TO REPORT

Report WHAT you see

Report WHERE you saw it

Report WHEN you saw it

Attempt to use correct terminology

# Skywarn Operating procedures 2016

Skywarn and other Emergency “nets” will be operated as “Directed Nets” and under a modified Incident Command System.

**LIABILITY:** All amateur radio operators are VOLUNTEERS and it is understood that their participation in Skywarn and/or Emergency Communications activities **ARE DONE AT THEIR OWN RISK** and no liability is intended or implied. By participation in these activities, you agree to **HOLD HARMLESS** the Skywarn amateur radio group, the City of Abilene and/or Taylor County.

# Skywarn Operating procedures 2016

## Net Operations-SKYWARN

Net control operators will, when practical, operate the radios from the Abilene EOC. A written log will be kept at the NCS of check-ins, significant events, and other pertinent information as necessary.

Potential spotters should be ready to take an assignment before checking into a net. This means that cars should already be gassed up, and radios in good working order.

Each entity will keep a record of spotters under their respective jurisdictions who have checked into their nets. Spotters should **not leave** their assignment without checking out of the network. This is done by: Hams contacting the Net Control operator; VFD personnel by contacting their appropriate officer in charge.

# Skywarn Operating procedures 2016

The Skywarn Desk will communicate all pertinent information received from the National Weather Service on both the Ham Radio network and VFD network (BCFFA repeater). They will also be responsible for communication of pertinent information from these agencies to the National Weather Service office.

The National Weather Service office will provide Ham Radio operators at their office as necessary for communication between the San Angelo NWS office and the Abilene Skywarn Desk. Volunteer Ham Radio operators from the San Angelo Amateur Radio Club generally provide the necessary communication between the San Angelo NWS office and the Abilene Skywarn Desk.

# Skywarn Operating procedures 2016

- Calling procedures:
  - NCS can be called using “Abilene Weather” or “K5ABI”
  - When YOU call NCS, be sure use your call sign so we know who you are.
  - NCS will call you using your call sign when practical.
  - Listen for general instructions or information about the weather situation.



# Skywarn Operating procedures 2016

The National Weather Service office will make every attempt to keep Abilene Net Controllers notified of upcoming severe weather, but there may be times when workload and loss of communications due to unforeseen severe weather prevents the NWS from communicating with Abilene SKYWARN. Therefore, it is important for Abilene SKYWARN to monitor the weather when severe weather threatens in case operators in San Angelo can't get through to Abilene.

# Skywarn Operating procedures 2016

Unless otherwise noted, weather reports will be taken **in order of severity**. If no severe weather has been sighted, casual contacts and reports can be made via 2-way radio channels. Once severe weather is sighted, NO CASUAL CONTACTS should be made. Only severe weather reports that are equal to or greater than the most current report should be made. In other words, if  $\frac{3}{4}$  inch hail has been reported, pea size hail is insignificant and should not be reported. If a tornado or funnel cloud has been reported, heavy rain, and  $\frac{3}{4}$  inch hail is insignificant and should not be reported unless requested by the Incident Command station.

# Skywarn Operating procedures 2016

After a storm has passed, spotters checked into the various networks should check out with their appropriate NCS. It may also be necessary to compile damage reports. If requested by the NWS office, call these reports into the Skywarn Desk (NCS-Abilene Weather, K5ABI). Otherwise, compile these reports and e-mail them to the NWS office.

**ALL stations checked into a net must check out of the net when their respective assignments have been completed. DO NOT leave the net until you official check out of the net. DO NOT drive out of radio range.**

# Skywarn Operating procedures 2016

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:

If available, use APRS (Automatic Packet Reporting System) and Spotter Network. This allows NCS and NWS to see where you are in relation to the storm(s) that are in the area.

**PLEASE DO NOT TEXT OR CALL NCS** when a net is activated unless there is **NO OTHER WAY TO CONTACT THEM**. Their hands are full running the net. If you send a txt, do not expect an immediate reply.

# Skywarn Operating procedures 2016

## **TORNADO**

**Size, direction of movement, location**

## **FUNNEL CLOUD**

**Organized, persistent, sustained rotation, location**

## **WALL CLOUD**

**Organized, persistent, sustained rotation, location**

## **HAIL \**

**Dime size or larger**

**Report the largest size hailstone, location**

## **WIND GUSTS**

**58 mph or higher**

**Specify estimate or measurement, location**

# Skywarn Operating procedures 2016

## **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

# Skywarn Operating procedures 2016

**Pea .25 inch**

**Dime .75 inch**

**Quarter 1.00 inch**

**Ping Pong Ball 1.50 inch**

**Hen Egg 2.00 inch**

**Baseball 2.75 inch**

**Grapefruit 4.00 inch**

**Half-inch .50 inch**

**Nickel .88 inch**

**Half Dollar 1.25 inch**

**Golf Ball 1.75 inch**

**Tennis Ball 2.50 inch**

**Tea Cup 3.00 inch**

**Softball 4.50 inch**

# Skywarn Operating procedures 2016

## **30-44 mph (26-39 kt)**

Whole trees in motion. Inconvenient walking into the wind. Light-weight loose objects (e.g., lawn furniture) tossed or toppled.

## **45-57 mph (39-49 kt)**

Large trees bend; twigs, small limbs break and a few larger dead or weak branches may break. Old/weak structures (e.g., sheds, barns) may sustain minor damage (roof, doors). Buildings partially under construction may be damaged. A few loose shingles removed from houses.



# Skywarn Operating procedures 2016

## **58-74 mph (50-64 kt)**

Large limbs break; shallow rooted trees pushed over. Semi-trucks overturned. More significant damage to old/weak structures. Shingles, awnings removed from houses; damage to chimneys and antennas.

## **75-89 mph (65-77 kt)**

Widespread damage to trees with large limbs down or trees broken/uprooted. Mobile homes may be pushed off foundation or overturned. Roof may be partially peeled off industrial/commercial/ warehouse buildings. Some minor roof damage to homes. Weak structures (e.g., farm buildings, airplane hangars) may be severely damaged.

# Skywarn Operating procedures 2016

**90+ mph (78+ kt)**

Many large trees broken and uprooted. Mobile homes damaged. Roofs partially peeled off homes and buildings. Moving automobiles pushed off the road. Barns, sheds demolished.

# Skywarn Operating procedures 2016

## HOW TO REPORT

Your severe weather report should be detailed but concise, and should address the following questions:

**WHO** are you. Give your call sign

**WHAT** did you see?

**WHERE** did you see it? Report the location/approximate location of the event. Be sure to distinguish clearly between where you are and where the event is thought to be happening (“I’m 5 miles north of Mayberry. The tornado looks to be about 5 miles to my northwest”).

**WHEN** did you see it? Be sure that reports that are relayed through multiple sources carry the time of the event, NOT the report time.

Include any other details that are important - How long did it last? Direction of travel? Was there damage? etc.

# Skywarn Operating procedures 2016

- Questions?