EMERGENCY MANAGEMENT

SKYWARN

POLICY AND PROCEDURES

Pinellas SKYWARN
Operational Guidelines
Policy and Procedures
November 17, 2017

I. Mission Statement

A. The sole purpose of the SKYWARN program in Pinellas County, Florida is to provide the National Weather Service Forecast Office at Tampa Bay with timely and accurate reports of severe weather phenomena so that a timely warning can be issued to the public of impending dangerous weather including tornadoes, hail, and damaging thunderstorm winds.

II. Operational Guidelines

A. Specific guidelines will be established for SKYWARN activation, method of data transmission, tornado touchdowns, tropical cyclone development, and coastal flood watches/warnings.
B. SKYWARN operational guidelines shall augment existing ARES and ACS activation plans.
C. Guidelines will be used to augment the established staffing at the Tampa Bay WSFO during long term weather events.

III. Chain of Command

A. The WCM at the National Weather Service is in charge of all SKYWARN Spotter programs in the fifteen county warning area of responsibility for that office.
B. The Director of Pinellas County Emergency management is responsible for all SKYWARN operations within the county and has delegated the responsibility for SKYWARN operations to the ACS Radio Officer who appoints and trains the SKYWARN Net Control Stations.

Pinellas SKYWARN
Activation Guidelines

Pinellas SKYWARN will activate under the following conditions:

1. A severe thunderstorm warning or tornado warning has been issued for Pinellas County.
2. Severe weather has been reported by a trained spotter.
3. The WCM at Tampa Bay Weather has requested activation.
4. A Tropical Storm Warning has been issued for Pinellas County.
5. The annual tornado drill held in April each year.
6. Other drills and exercises in cooperation with ACS, ARES as needed.

Activation of the SKYWARN Net is divided into Four operational conditions, as follows:

1. Condition Black---If a tornado or funnel cloud is reported, the net will be in Condition Black, and ONLY REPORTS OF TORNADOES OR FUNNEL CLOUDS WILL BE ACCEPTED; do not report any other severe weather conditions during this time

2. Condition Red—Severe weather warning is in effect or severe weather has been reported by a trained spotter. This is a formal net for the reporting of severe weather only.

3. Condition Yellow—Potential severe weather is approaching or has entered the county area but no warning has been issued and no severe weather has yet been reported. This is an informal net. Check-ins are normally accepted during this period.

4. Condition Green---No threats of Severe WX and Putting the frequency is back in Normal Operations..

Pinellas SKYWARN

Net Control Guidelines

The Net Control Station (NCS) is responsible for maintaining an orderly and disciplined radio network during a SKYWARN activation. The minimum requirements to be NCS during a SKYWARN activation are the following:

1. Licensed amateur radio operator trained as a SKYWARN spotter.
2. Capable of operating on both two meter and 70 cm band with a clear signal.
3. Able to receive bulletins from the National Weather Service (i.e.: Weather Radio, EMWIN receiver, etc.)
4. Operating from a fixed location with access to a working telephone.
5. Capable of quickly switching to emergency power (battery or generator).
6. Experienced in operating amateur radio nets. Preferably trained as a SKYWARN Net Control Station.

The Net Control Station operator is responsible for the following:

A. If no one is available to man NWSChat, then the Net control operator will call the NWS 1-800-282-1228 number to let them know the Net is up and so they can call him to discuss high risk storms if they develop.

B.

1. Notification of ham radio operators of the existence of severe weather and the current activation condition.
2. Logging all net check ins and weather conditions reported.
3. Relaying all severe weather reports to Tampa Bay Weather.
4. Notifying the ACS Radio Officer and the ARES EC in the event of significant weather related damage which may require additional amateur resources.
5. Relaying all emergency traffic to the appropriate agency.
6. Releasing the frequency as soon as is practical when the severe weather ends.
7. Collecting after-action damage reports and forwarding them to the NWS in a timely fashion.

Operational Guidelines for Net Activation

In the event of a funnel cloud or tornado sighting, the net will be placed in

BLACK

ALL OTHER STATIONS SHALL REMAIN SILENT. Net Control will ask for confirmation. NO OTHER SEVERE WEATHER other than additional tornadoes and funnel clouds shall be reported during a tornado event.

RED

Condition Red Activation
NWS 1-800-282-1228

In the event a severe weather warning has been issued or severe weather has been reported, the following activation sequence is followed:

Determine the primary repeater is active and available for use.

Clear the frequency for SKYWARN operations.

Change the Repeater Controller State to use the Piano Tail Beep Tones indicating A SKYWARN Net is in Operation.

Make the following announcement:

CQ CQ CQ all radio amateurs this is _____ Pinellas SKYWARN.

The National Weather Service has issued a _____ warning effective until _____ EDT for Pinellas County.

The net is in Condition Red. Condition Red means that severe weather is effecting Pinellas County. This is a formal net.

All SKYWARN Spotters are requested to activate and report all severe weather to net control.

Do I have a Radio Operator on NWS CHAT? Name & Call Sign please

We are accepting reports of severe weather and severe weather only at this time. Severe weather consists of tornadoes, wall clouds, funnel clouds, waterspouts, hail, damaging winds in excess of 50 knots, severe continuous lightning, and unusual street flooding.

**** Pause for severe weather reports****

Repeat Condition Red announcement at 5 minute intervals as operations permit

Do not take check-ins or non-severe weather reports when in condition Red Net Operations.

Once the net is established, log all reports received via paper or computer. Relay all severe reports to the Tampa Bay WSFO using the following:

1.) Use the NWS Chat program to be in Real-Time contact with the NWS to:
   a.) Report a Pinellas Skywarn Net in Progress:
      Spotter ID, First Name, Phone Number
      And to make ACTUAL Spotter Reports
2.) OR CALL Via the Phone using one of these Telephone numbers:
   1. 1-800-282-1228
   2. (813) 641-9520
   3. (813) 641-4441

Net Control Station should monitor NOAA Weather Radio or assign a station to monitor so that weather updates can be received.

If weather conditions permit, assign a station to notify the following repeaters of SKYWARN Activation:

1. CARS Club ----------146.970 PL 103.5 Hz
2. METRO Club ---------147.360 PL 123..7 Hz
3. SPARC Club ----------146.060 No PL
4. WORMHOLE Club --146.850 PL 146.2 Hz
5. UPARC----------147.200 PL 100 Hz

When the weather clears, the warning expires, or no significant weather reports have been received for a period of time, reduce the condition of the net from red to yellow. If all significant weather has left the county, clear the frequency for normal amateur use.

Net Control Procedures

Condition Yellow
NWS 1-800-282-1228

If significant weather is approaching or entering the county, as detected on radar or from ground observation, activate the net in condition yellow. This is an informal net in which other amateur traffic may be passed and is generally considered a "watch" mode.

Net Control Announcement:

CQ CQ CQ This is _____ Pinellas SKYWARN.

- **Possible severe weather is approaching Pinellas County from the _____.**

  OR

- **A _____watch has been issued until _____EDT for Pinellas County.**

Pinellas SKYWARN is in Condition Yellow. This is an informal net. All SKYWARN spotters are requested to activate and monitor the frequency for possible severe thunderstorm development. Check in with your callsign, location, spotter number, and a brief weather report.

The NCS should then log all check in reports and stand by for possible severe weather reports. Should a report be received and verified matching severe criteria, the net is taken into condition red. Additionally, if a warning is issued by NWS, the net is taken into condition red.

When the severe weather threat ends, return the frequency to normal amateur use.

Operational Guidelines

Spotter Check-in Procedure

Unlike some other amateur radio networks, the Pinellas SKYWARN net does not take check ins from a roll call list, nor does it solicit check-ins except during a long term event.

The standard procedure for checking into the SKYWARN net is as follows:

1. Listen to the frequency and determine that it is clear.
2. Call NCS with your callsign.
3. Upon acknowledgment, give your callsign again, followed by your geographical location as relative to known major streets, your spotter number, and a brief weather report, i.e.: "This is KD4UYR, located at 131 St. N and 86 Ave. N, Spotter number 11, moderate rain with winds from the SE at 10 to 15 mph."
4. Other stations should wait for the proceeding station to be acknowledged before checking in.

Operational Guidelines

Making a Severe Weather Report

The reliability of reporting severe weather from Pinellas SKYWARN to the National Weather Service depends solely on the spotters within the network. Net Control can only relay what information has been provided by the spotter on the ground.

Severe weather which should be reported consists of the following:

1. Any and all tornadoes on the ground.
2. All wall clouds, funnel clouds, and waterspouts.
3. Winds in excess of 50 knots, or winds causing significant damage.
4. All hail, including the size of the hail.
5. Severe, continuous lightning for more than one minute.
6. Unusual and severe street flooding.
7. Unusual or severe coastal flooding.

These are the ONLY things to be reported during a condition Red net. Other significant weather features may be reported during Condition Yellow nets, as follows:

1. Visible roll cloud or shelf cloud.
2. Well defined rain free base with inflow boundary.
3. Cloud striations or hail corona aloft.
4. Non severe but unusual wind gusts.
5. Visible microbursts seen from a distance.
6. Sudden rapid rise or fall of barometric pressure.

The key to proper reporting is to first identify the feature you are observing, as well as its apparent location and movement relative to the ground. All of this should be determined prior to calling net control.

Once the phenomena has been identified and determined to match severe criteria, the spotter should call net control indicating a severe weather report, i.e.: "This is KD4UYR with a hail report."

Wait for acknowledgment, then continue with your location, spotter number, then a precise description of the severe weather observed, including its movement and location.

USE the T.E.L. Method of reporting.

T = TIME
E = EVENT
L = LOCATION

Example: "This is KD4UYR, PIN 011, located at 131 St. N and 86 Ave. N. It is 1:30 PM and I am watching a funnel cloud form at that base of a thunderstorm approximately 3 miles east of my location. The cloud appears to be moving to the west. No debris is evident at this time."

The reporting station should then remain on frequency to answer any questions relayed from the WSFO.

Operational Guidelines
NWS 1-800-282-1228

Tornado Touchdown

In the event of a tornado touchdown, If available, the NCS will immediately change the Repeater Controller State to use the Piano Tones indicating a SKYWARN Net is in progress.
An announcement of the tornado location and movement SHALL be made. ALL OTHER STATIONS ON FREQUENCY SHALL REMAIN SILENT. The spotter reporting the tornado will be given clear air to update location and movement. Net Control will immediately notify the Tampa Bay Weather Service Forecast Office via the severe weather line and make the tornado report.

When the answering machine answers the severe weather line, the NCS should say:

"This is Spotter #___, Pinellas SKYWARN. We have a report of tornado on the ground in _____.

The NWS meteorologist on duty will pick up the phone and establish contact. If no answer is received, continue with the report. The speaker of the severe weather line is always turned on. The NWS employees may be receiving other reports of the same phenomena and be unable to answer your call. If no personal contact is made, leave your telephone number on the recording so they can return your call.

The NWS will want to know the following:

Exact location of tornado, including city block and city name.

Direction of travel.

Speed of travel.

Damage caused if known.

Any station that knowingly makes a false report of a tornado touchdown will be subject to violation of FCC regulations regarding the false reporting of an emergency and WILL be reported to the FCC Field Engineer in Charge for possible legal action.

Once the tornado threat has been reported to NWS, the NCS will notify the County Emergency Management via 911 to report the location of the tornado touchdown and any damage or injuries as may be known at the time of the report.

After notifying DEM, the NCS will designate a station to notify the ACS Radio Officer / ARES EC of the incident and possibility of activation for shelter/government operations.

Operational Guidelines

Coastal Flood Watch/Warning

A Coastal Flood Watch is issued when weather conditions are such that sea water is expected to rise above flood stage as a result of wind driven water or storm surge. At the discretion of the WCM at Tampa Bay Weather, SKYWARN Spotters may be assigned on a voluntary basis to monitor specific points along Tampa Bay and the Gulf of Mexico for rising water.

Volunteers would then be asked to report to specific locations along the coast to monitor the water level as compared to normal limits. Reports would generally be taken each hour for an extended period, with particular concern at the time of normal high tide.

In the event such a request is made, amateur radio volunteers would be assigned at the following locations known to be vulnerable to coastal flooding:

1. Tierra Verde
2. St. Petersburg Beach (Pass-a-grille)
3. Treasure Island (Sunset Beach)
4. Madeira Beach (John's Pass area)
5. Indian Shores/Indian Rocks Beach
6. Sand Key
7. Clearwater Beach
8. Edgewater Drive, Dunedin
9. Tarpon Springs west of Alternate 19
10. Shore Acres, St. Petersburg
11. Safety Harbor along the Tampa Bay Shoreline.
12. Oldsmar along Shore Drive.

In the event water should crest above the sea wall and endanger evacuation of the spotter, the spotter will immediately evacuate the area to higher ground.

Operational Guidelines

Policy Statement Regarding Storm Chasing

The SKYWARN Spotter network is a network of fixed stations spread logistically throughout the county warning area for timely reporting of severe weather information. Under no circumstances shall any SKYWARN Net Control Station direct or instruct any spotter to intentionally chase any storm cell or enter an evacuated area solely for the purpose of reporting weather conditions.

As a policy, storm chasing is inherently dangerous and not permitted under these guidelines. Any spotter who chooses to operate in a motor vehicle or move from place to place during severe weather does so at his or her own risk. Neither the National Weather Service nor the Pinellas County Emergency Management shall accept liability for any injury which may result from failing to follow this procedure.

SKYWARN Spotters may enter evacuated areas only under the direction and specific instruction of the Department of Emergency Management as may be communicated by the ACS Radio Officer or his designee during times of actual emergency when ACS has been officially activated by the Department of Emergency Management.

Operational Guidelines

Frequency Allocation and Usage

I. Primary SKYWARN Operations Repeater - W4ACS Repeaters 145.170 linked with 443.400. Both have a PL of 156.7 Hz

II. Secondary SKYWARN Operations Repeater— Select the proper CTCSS TONE to access the closest receiver.

1. The Tarpon receiver is 100.0.
2. The North receiver is 103.5.
3. The Central receiver is 156.7.
4. The East receiver is 82.5.
5. The South receiver is 192.8.
6. The West receiver is 146.2.

The Transmitter is located at
Barbee Towers, 166 ASL, 60 Watts.

III. Simplex Operation—In the event of total repeater failure, simplex operations will be conducted on the output of the 145.170 repeater unless otherwise directed by the SKYWARN NCS. The suggested Simplex Frequencies which could be utilized are 146.43 North County and 146.47 South County.

IV. Intercounty Coordination—Intercounty Coordination will take place on the 147.150 (PL 141.3 Hz) Repeater located in Holiday, Florida for Pasco County and the 147.105 Repeater (PL 146.2 Hz) located at the Hillsborough EOC in Hillsborough Co.

Operational Guidelines

Hurricane/Tropical Cyclone Guidelines

In the event a hurricane warning is issued for the Pinellas County area, ACS and ARES operations shall take precedence over SKYWARN operation with regard to repeater usage and manpower allocation. Those stations with actual weather measuring equipment such as anemometers and digital or calibrated barometers may make timely reports of weather observed via the APRS gateway to the National Weather Service or direct to W4EHW in Miami. Other weather observations will not be taken as the warnings have already been issued and the danger to spotters is too great during the actual storm.

However, in the event of a near miss, Tropical Storm, or Tropical Depression, SKYWARN operations may commence upon the onset of severe weather depending upon availability of resources. This may include Coastal Flood Watch or rainfall flooding as well as severe thunderstorm development and tornado development. The frequency to be used shall be determined at that time and announced on the primary ASC repeater system.

Reporting procedures in these situations will remain the same as outlined in the Operational Guidelines.

Operational Guidelines

Inter-County Coordination

The frequency of 147.150 (PL 142.6) has been preliminarily designated as the Inter-county operations frequency for SKYWARN operations during extensive or long term events affecting multiple counties in the CWA. This frequency is for net control station use only and should be used to relay significant weather events moving from county to county or along county borders.

If the 147.150 is unavailable, then the 147.105 PL 142.3 Hz wide area Repeater can be used as the Pasco County Inter-county frequency.

Operational Guidelines

Automatic Packet Reporting System
WXSVR

The Automatic Position Reporting System is a packet radio system designed to graphically locate and identify transmitting amateur radio stations. Within the graphical interface is a system of automatic weather stations and the ability to communicate with multiple stations.

The operational frequency for APRS in Pinellas County is 144.390 MHz (24/7)

APRS should not be used as a primary method of reporting severe weather unless other methods have been tried and failed.

During SKYWARN operations, APRS can be used to communicate between Net Control Stations and to monitor weather information. Weather stations should be set to one minute transmission times during periods of severe weather. Icons representing severe weather cells, hail, tornadoes, and tropical cyclones can be placed on the map. The NCS can do this himself or designate another station to enter this information.

The WXSVR software program is set to retransmit severe weather bulletins received from Tampa and Miami, including tropical cyclone bulletins. When a severe weather bulletin is received, a warning icon is placed over the county on the APRS map and the text is retransmitted in both straight packet and APRS bulletin format.

All of the Weather Service Offices, the State EOC, the Pinellas County EOC and the Hillsborough County EOC and provide a Packet link to most of the state of Florida.
III. Definitions

IV. DEFINITIONS

A. Meteorologist In Charge (MIC)—Director of the local National Weather Service Forecast Office.
B. Warning Coordination Meteorologist (WCM)--Meteorologist responsible for the issuance and follow up of weather warnings issued by the local National Weather Service Forecast Office and who trains and coordinates the SKYWARN Spotter program.
C. Weather Service Forecast Office (WSFO)—National Weather Service office responsible for local forecasts, radar interpretation, and warning issuance.
D. Tampa Bay Weather (TBW)—The name of the local Weather Service Forecast Office.
E. Severe Thunderstorm Warning—A bulletin issued by the WSFO indicating a local area which is expected to receive winds in excess of 55 knots, hail, extreme lightening, and potential tornadic development.
F. Tornado Warning—A bulletin issued by the WFSO indicating a tornado or funnel cloud has been spotted in a specific area either by spotters on the ground or by radar interpretation.
G. Special Marine Warning—A bulletin issued by the WFSO indicating weather conditions producing rough seas, frequent lightening, and winds in excess of 34 knots to be expected in the warned area.
H. Flash Flood Warning—A bulletin issued by the WFSO indicating sudden and unexpected rising water caused by heavy rainfall.
I. Coastal Flood Warning—A bulletin issued by the WFSO indicating sudden and unexpected rising tides above normal mean high water.
J. Tornado Watch—A bulletin issued by the Storm Prediction Center in Norman, Oklahoma indicating conditions are favorable for tornado and supercell thunderstorm development in the watch area.
K. Severe Thunderstorm Watch—A bulletin issued by the Storm Prediction Center in Norman, Oklahoma indicating conditions are favorable for the development of severe thunderstorms with hail and winds in excess of 55 knots.
L. Tropical Storm Watch—A bulletin issued by the Tropical Prediction Center indicating Tropical Storm force winds in excess of 50 knots are anticipated within 24 to 36 hours.
M. Tropical Storm Warning—A bulletin issued by the Tropical Prediction Center indicating Tropical Storm force winds in excess of 50 knots will occur in the warned area within 12 to 24 hours.
N. Hurricane Watch—A bulletin issued by the Tropical Prediction Center indicating Hurricane force winds and associated storm surge are anticipated in the watch area within 24 to 36 hours.
O. Hurricane Warning—A bulletin issued by the Tropical Prediction Center indicating Hurricane force winds and associated storm surge will occur in the warned area within 12 to 24 hours.

P. Severe Weather Outlook (SWO)—A bulletin issued twice daily by the WSFO when conditions are favorable for severe thunderstorm development advising of specific weather conditions to be expected.
Q. SKYWARN Spotter—A volunteer trained by the NWS to recognize severe weather phenomena and report them to the WSFO via the SKYWARN Network.
R. SKYWARN Network—A system of amateur radio nets and dedicated telephone lines used to report severe weather to the WSFO.
S. SKYWARN Net Control—An amateur radio base station operator trained to record and relay severe weather information to the WSFO.