



TRAVIS COUNTY WX NET

SEPTEMBER 22, 2015





PRESIDENTIAL DISASTER DECLARATIONS IN TEXAS SINCE 1953



- **50 Floods**
- **26 Tornadoes**
- **21 Hurricanes/Tropical Storms**
- **4 Wildfires**
- **2 Winter Storms**
- **2 Explosions**
- **1 Space Scuttle Debris Field**

106 TOTAL

In the past 62 years 94% of disasters were due to the weather

ARRL/NWS MOU

UPDATED JUNE 2011

ARRL/ARES

ARRL agrees to encourage its volunteers, **especially the ARES**, to contact and cooperate with the NWS Warning Coordination Meteorologists to establish organized Skywarn networks with radio amateurs serving as communicators and spotters

NWS

The NWS agrees to work with ARRL/ARES volunteers to establish Skywarn networks and other weather emergency alert and relief systems



WHY WEATHER NETS?



- **NWS Radar Beam 0.5 to 19.5 degrees above horizon**
- **Curvature of Earth hides storms below the radar straight beam**
- **Austin is 70 miles from the NWS radar in New Braunfels**
- **Radar does not show weather below 4,000 ft. in Austin**



GOALS



- **Have a network of trained weather spotters in place to report severe weather**
- **Activate the WX when needed**
- **Coordinate reports from spotters in accordance with Skywarn manuals**
- **Encourage accurate reporting and limit low priority traffic when necessary**
- **Relay accurate and coordinated reports to the NWS, CTECC, and the public through the media**



ACTIVATION TRIGGERS



- **Request by the NWS**
- **NOAA weather radio broadcasts the activation of the spotter network**
- **The county is placed under a severe thunderstorm, flash flood, or tornado warning**
- **CTECC is activated for a weather related event**
- **At the direction of the TCARES Emergency Coordinator**
- **Frequency 146.94 (PL 107.2)**
- **Secondary 147.36 (PL 131.8)**



NET ACTIVATION LEVEL



Level One

- A severe thunderstorm watch is in effect, but no severe weather is in the area
- The net operates in informal mode
- Net Control may take check-ins and record location of participating stations
- Net Control appoints
 - ✓ Back-up Net Control
 - ✓ Liaisons with the NWS, participating TV stations, & other area nets
 - ✓ Net Control for an alternative net, if required
- Reports follow the TCARES WX Reporting Template



TCARES WX REPORT TEMPLATE



Travis County WX Net Report

___/___/___

Location (use streets/highways/or known landmarks): _____

Reporting Station Call Sign: _____

Receiving Station: _____

Information Passed To: _____ **at:** _____

Time of Reported Event: _____

(Circle any of the following observed)

Tornado Funnel Cloud Rotating Wall Cloud

Hail (state size in terms of U.S. coin): _____

Wind gusts in excess of 50 mph: _____

_____ Measured by anemometer _____ Estimated via Beaufort Scale

Creeks or streams flooding out of their banks

Water over a road or street

Rain accumulation in excess of 1" _____ Time period measured _____

Wind damage: _____

Lightning damage: _____

Downed trees Downed large branches Downed power lines

Additional Information:



NET ACTIVATION LEVEL



Level Two

- A severe thunderstorm warning has been issued
 - The net operates in formal mode
 - Priority is placed on severe weather reports
 - Check-ins are secondary and taken as time allows
 - Identification in reports includes call sign and location using streets, roads or known landmarks
 - Reports limited to Skywarn manual items
- (See following slides)



FUNNEL CLOUDS/ TORNADOES



- **Time of first sighting**
- **Still visible?**
- **On the ground or aloft**
- **Direction of movement**
- **Damage or injuries**





FLOODING



- **Rainfall Total**
- **Rainfall intensity**
- **Length of heaviest rainfall**
- **Flooding of low water crossings**
underpasses or overflowing banks
- **Evacuations or likely**
evacuations



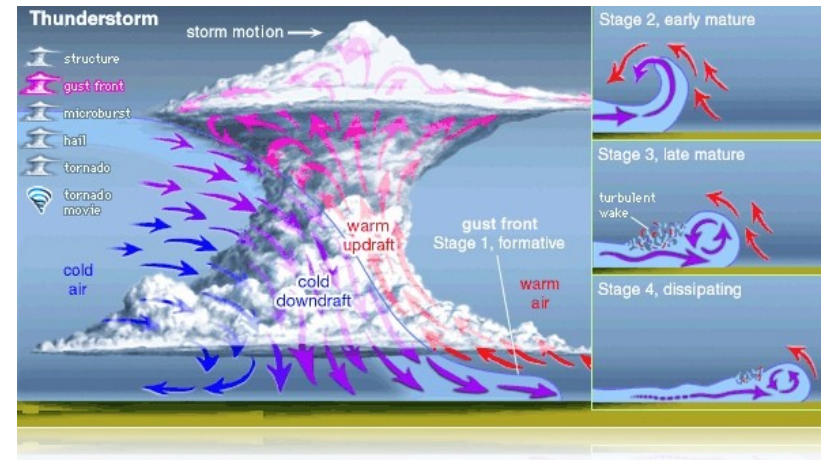


WINDS

(58 MPH OR MORE)



- Time gust front hit
- Wind speed
 - ✓ Beaufort scale
 - ✓ Anemometer reading
- Wind direction
- Duration of high wind
- Damage





HAIL



- **Size (1 inch or larger)**
- **Duration of hail storm**
- **Damage**





NET ACTIVATION LEVEL



Level Three

- **A Tornado Warning has been issued for Travis County or an actual tornado has been spotted by trained spotter**
- **Priority is placed on communicating these reports to the NWS, CTECC, and media outlets**
- **An alternative net is activated on the 147.36 repeater to handle Level one & two reports**

HOW MANY TORNADOES DO YOU SEE?



TORNADO ON THE GROUND WITH ROTATING DEBRIS



FUNNEL CLOUD

(ROTATING, BUT NOT ON THE GROUND)



SCUD CLOUD

(Associated with a gust front flowing out of the precipitation core at right)



No Rotation

TAIL CLOUD

(LOW HANGING, TAPERING CLOUD)



No Rotation



ROLES



- **Base Station Spotters** reporting weather at their location
- **Mobile Station Spotters** volunteer to go to specific area of the county without a participating station (we are spotters, not storm chasers)
- **Net Control Station**
 - ✓ Monitors informal nets and decides when to move to Level 2 formal net
 - ✓ Takes check-ins and records active locations
 - ✓ Logs reports
 - ✓ Maintains WX protocol according to Activation Level
 - ✓ Appoints Liaisons to the NWS and TV stations
 - ✓ Completes After Action Reports
 - ✓ Determines when Activation Level Three is necessary



ROLES



- **Back-up Net Control**
 - ✓ Assists Net Control with recording check-ins/check-outs
 - ✓ Assists with logging reports
 - ✓ Switches roles with Net Control each hour or as needed
- **Alternative Net Control** (When Activation Level Three is needed)
 - ✓ Performs Net Control Functions on the 147.36 Back-up frequency
 - ✓ Takes Severe Weather reports while Tornado reports remain on the 146.94 net
- **Liaisons**
 - ✓ NWS Liaison – shares reports with the NWS in New Braunfels
 - ✓ CTECC Liaisons – shares reports between EOC and the WX net
 - ✓ TV Station Liaisons – shares report with their assigned TV station



LIAISONS WITH OTHER NETS



Williamson County

- **146.64 (PL 162.2) Primary**
- **146.700 (PL 110.9) Back-up**
- **147.080 (PL 100.0) Back-up**

Bastrop County

- **Bastrop 442.725 (PL 114.8)**
- **Elgin 442.800 (PL 114.8)**
- **Flag Hill 443.000 (PL 114.8)**

Burnet County

- **Burnet 147.020 (PL 88.5)**

Hays/Caldwell Counties

- **Hays/Caldwell 444.150 (PL 114.8)**
- **San Marcos 147.100 (No Tone) Back-up**

Saltgrass Link System (Gulf Coast & East Texas)

- **Austin node 442.450 (PL114.8)**



SKYWARN TRAINING



- **Annual Skywarn Training – January 16 @ ACC Eastview Campus**
 - **8:00 to Noon – Basic**
 - **Noon to 4:00 - Advanced**
- **Online at meted.ucar.edu/training_course.php?id=23**
- **SpotterNetwork.org**
 - **Includes series of 60 sec. videos of various cloud formations and storms**
 - **Online test – Certification with 85% score**

WEATHER



**Sun and Rain,
and Wind and Storm,
and Thunder go
together,**



**There has to be some of
each to bring us our
Weather**

- Myra Cohen Livingston



DISCUSSION

