



Travis County ARES Weather Nets Refresher

May 2023

Portions Adapted from September 2015 Presentation



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

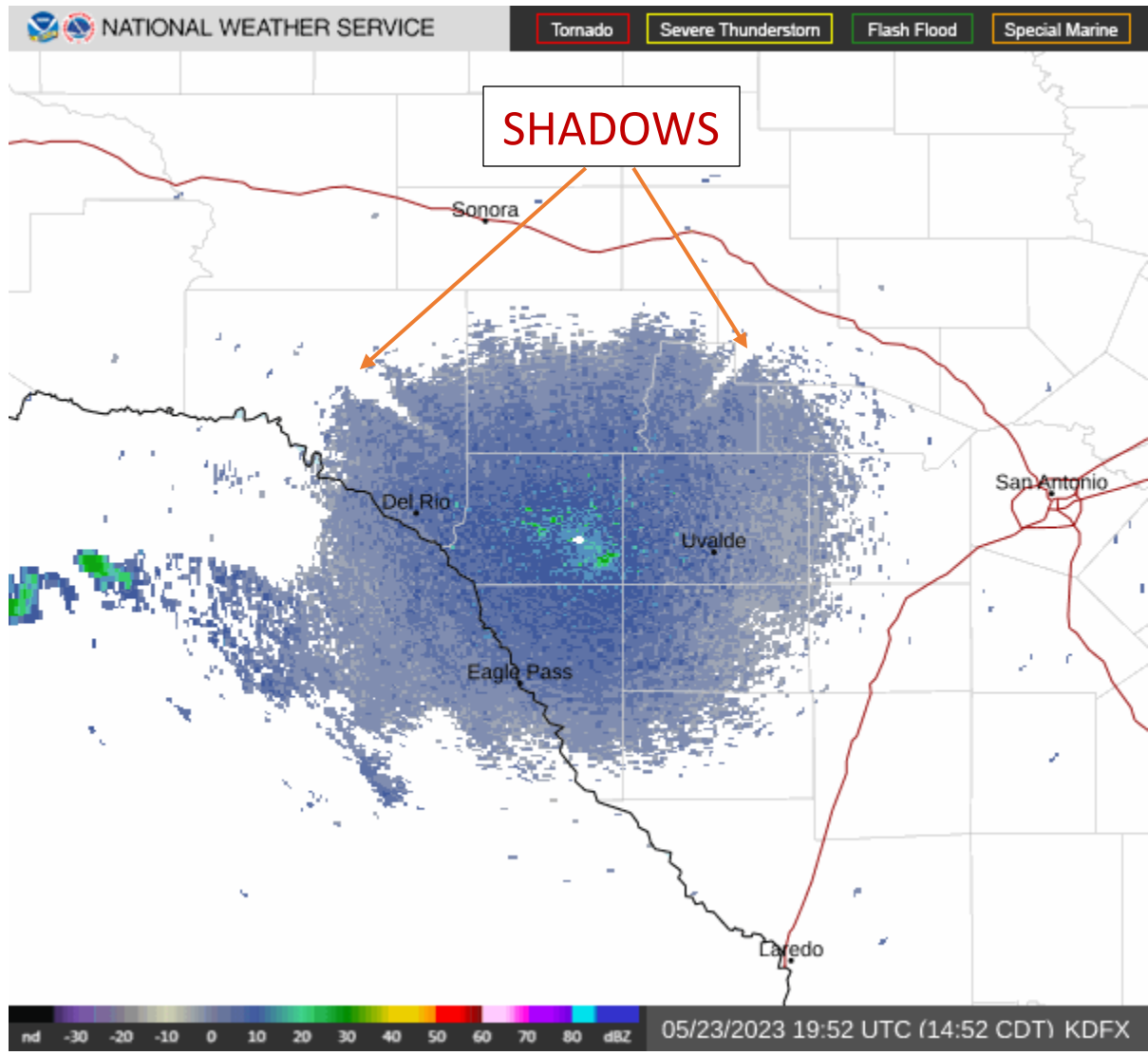
The NWS agrees to work with ARRL/ARES volunteers to establish Skywarn networks and other weather emergency alert and relief systems



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**

DOWNLOAD THIS NOW

Troy Kimmel's Weather Spotter Guide

<http://www.la.utexas.edu/users/kimmel/skywarnbook.pdf>

HELPFUL NWS LINKS

Point Forecast Matrix

[https://forecast.weather.gov/product.php?site=NWS
&product=PFM&issuedby=EWX](https://forecast.weather.gov/product.php?site=NWS&product=PFM&issuedby=EWX)



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)**

HELPFUL NWS LINKS

WATCHES, WARNINGS, AND ADVISORIES

For TC:

<https://alerts.weather.gov/cap/wwaatmget.php?x=TXC453&y=1>

For all TX:

<https://alerts.weather.gov/cap/tx.php?x=1>

IEMBOT MONITOR

(<https://weather.im/iembot/>)

IEMBot Anonymous Monitor | [IEMBot Project Homepage](#) | [IEM Homepage](#) | [weather.IM Homepage](#)

Options << Help Saved Items **Austin/San Antonio**

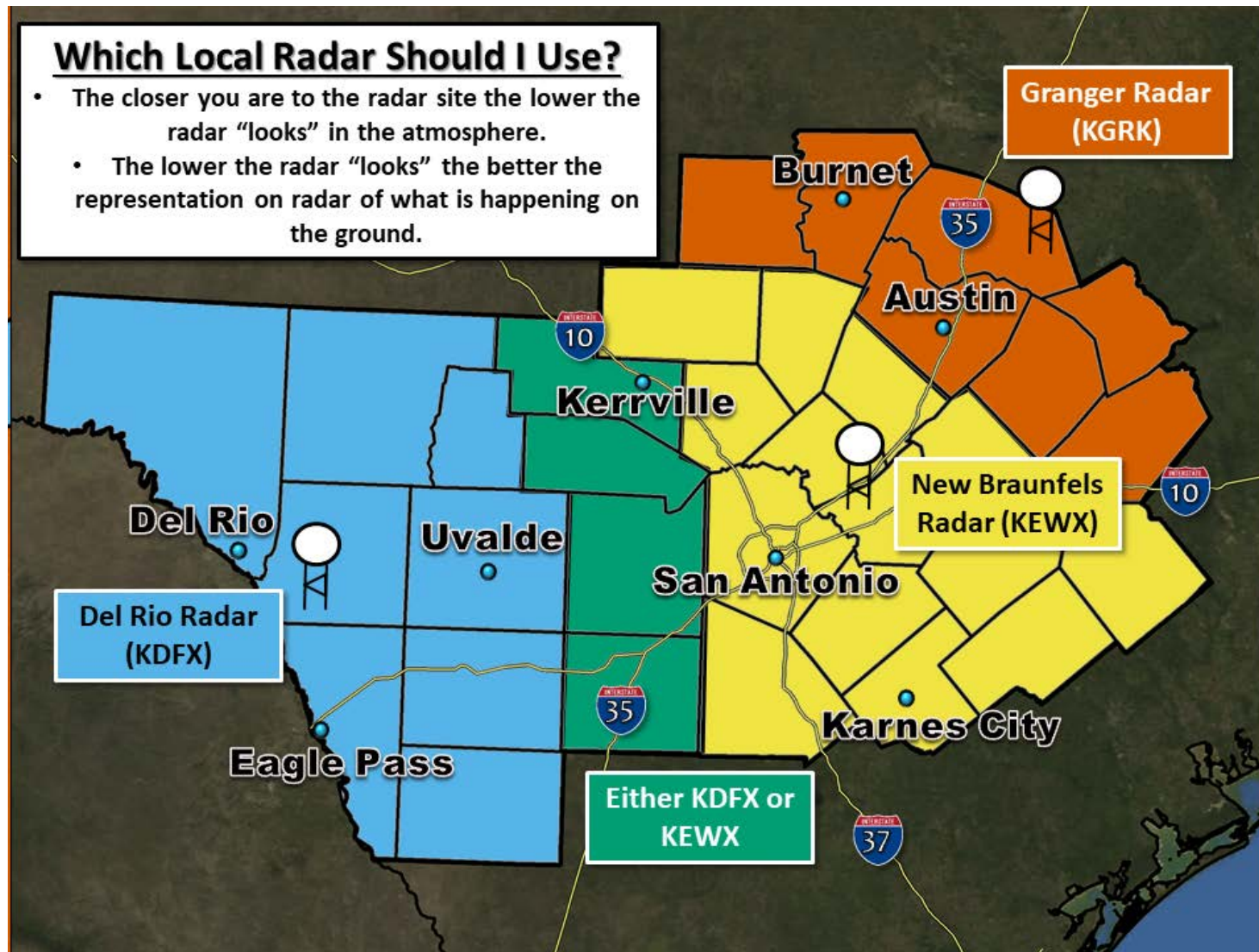
Available Rooms:
Austin/San Antonio

☒ Enable Audio Alerts
Play Test Sound
Sound Volume:

Clear Room Log Export to HTML Print Log Save Selected View As HTML

Timestamp	Author	Message
05/23 3:59 PM	iembot	Carrizo Springs TX (CZT) ASOS reports gust of 94 knots (108.2 mph) from SSW @ 2055Z KCZT 232055Z AUTO 21085G94KT 10SM SCT065 35/18 A2984 RMK AO2
05/23 3:44 PM	iembot	The Weather Prediction Center issues Day 5 Marginal Risk Excessive Rainfall Outlook at May 23, 19:58z for portions of EWX's area
05/23 3:39 PM	iembot	The Weather Prediction Center issues Day 3 Marginal Risk Excessive Rainfall Outlook at May 23, 19:55z for portions of EWX's area
05/23 3:39 PM	iembot	Carrizo Springs TX (CZT) ASOS reports gust of 101 knots (116.2 mph) from SSW @ 2035Z KCZT 232035Z AUTO 21095G101KT 10SM CLR 35/18 A2985 RMK AO2
05/23 3:36 PM	iembot	The Weather Prediction Center issues Day 2 Marginal Risk Excessive Rainfall Outlook at May 23, 19:55z for portions of EWX's area
05/23 3:19 PM	iembot	Carrizo Springs TX (CZT) ASOS reports gust of 97 knots (111.6 mph) from SSW @ 2015Z KCZT 232015Z AUTO 21094G97KT 10SM SCT065 34/18 A2986 RMK AO2
05/23 2:51 PM	iembot	EWX issues Area Forecast Discussion (AFD) at May 23, 2:51 PM CDT
05/23 2:50 PM	iembot	The Storm Prediction Center issues Day 1 Slight Convective Risk at May 23, 19:47z for portions of EWX's area
05/23 2:31 PM	iembot	EWX issues Public Information Statement (PNS) at May 23, 2:31 PM CDT
05/23 12:33 PM	iembot	The Storm Prediction Center issues Day 2 Marginal Convective Risk at May 23, 17:31z for portions of EWX's area
05/23 12:22 PM	iembot	EWX issues Area Forecast Discussion (AFD) at May 23, 12:22 PM CDT
05/23 11:36 AM	iembot	The Weather Prediction Center issues Day 1 Marginal Risk Excessive Rainfall Outlook at May 23, 15:55z for portions of EWX's area
05/23 11:31 AM	iembot	The Storm Prediction Center issues Day 1 Slight Convective Risk at May 23, 16:29z for portions of EWX's area
05/23 11:16 AM	iembot	EWX issues Public Information Statement (PNS) at May 23, 11:15 AM CDT
05/23 7:50 AM	iembot	AUSTIN CAMP MABRY May 23 Climate Report : High: 73 Low: 67 Precip: 0.0" Snow: Missing
05/23 7:50 AM	iembot	SAN ANTONIO May 23 Climate Report : High: 73 Low: 69 Precip: 0.0" Snow: Missing
05/23 7:50 AM	iembot	AUSTIN BERGSTROM May 23 Climate Report : High: 68 Low: 63 Precip: 0.0" Snow: Missing
05/23 7:50 AM	iembot	DEL RIO May 23 Climate Report : High: 77 Low: 72 Precip: 0.0" Snow: Missing
05/23 7:43 AM	iembot	The Storm Prediction Center issues Day 1 Slight Convective Risk at May 23, 12:41z for portions of EWX's area
05/23 6:31 AM	iembot	EWX issues Area Forecast Discussion (AFD) at May 23, 6:31 AM CDT
05/23 4:39 AM	iembot	The Weather Prediction Center issues Day 3 Marginal Risk Excessive Rainfall Outlook at May 23, 8:22z for portions of EWX's area
05/23 4:36 AM	iembot	The Weather Prediction Center issues Day 2 Marginal Risk Excessive Rainfall Outlook at May 23, 8:21z for portions of EWX's area

HELPFUL NWS LINKS



Source: weather.gov/ewx/radar

HELPFUL NWS LINKS

RADAR

Enhanced:

<https://radar.weather.gov/>

Standard South Plains (Regional)

https://radar.weather.gov/ridge/standard/SOUTHPLAINS_loop.gif

Standard EWX (New Braunfels):

https://radar.weather.gov/ridge/standard/KEWX_loop.gif

EWX WFO

Web Site: www.weather.gov/ewx

Our Facebook page:

<https://www.facebook.com/NWSSanAntonio>

Our Twitter feed...

<https://twitter.com/NWSSanAntonio>



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:



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



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)

REPORTING TO EWX WFO

1. NWSChat login
2. Severe Weather Reports ONLY
(Unlisted Number/Do Not Release)
3. Report severe weather via Twitter using
#eWXspotter

REPORTING TO EWX WFO

TEL Method

Time – When did it happen?

Event – What did you observe?

Location – Where did this occur?



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



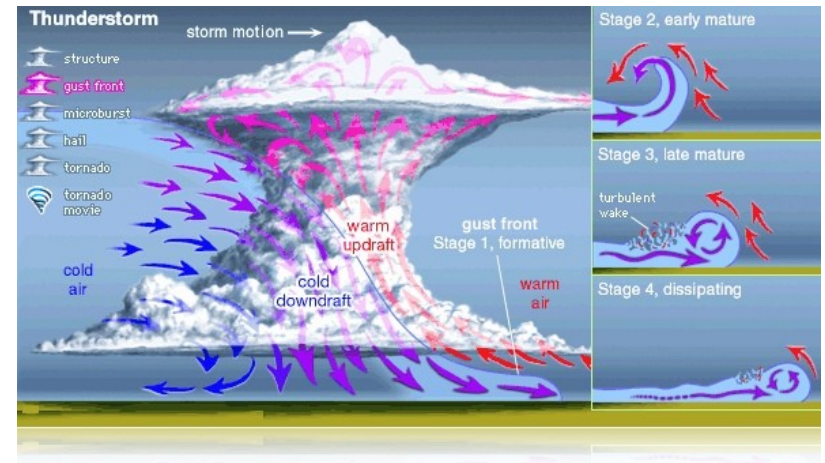


WINDS

(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



DISCUSSION

