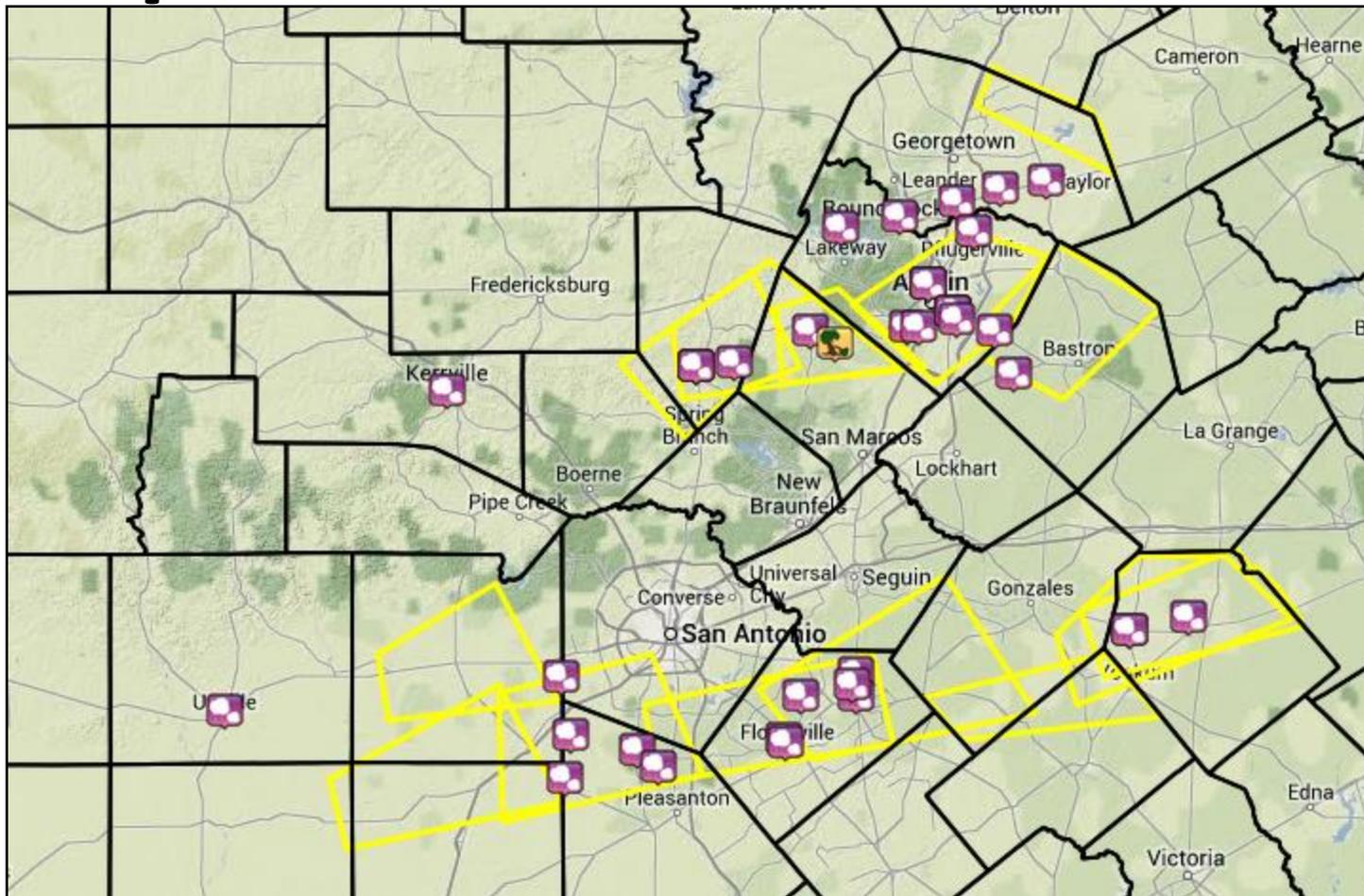


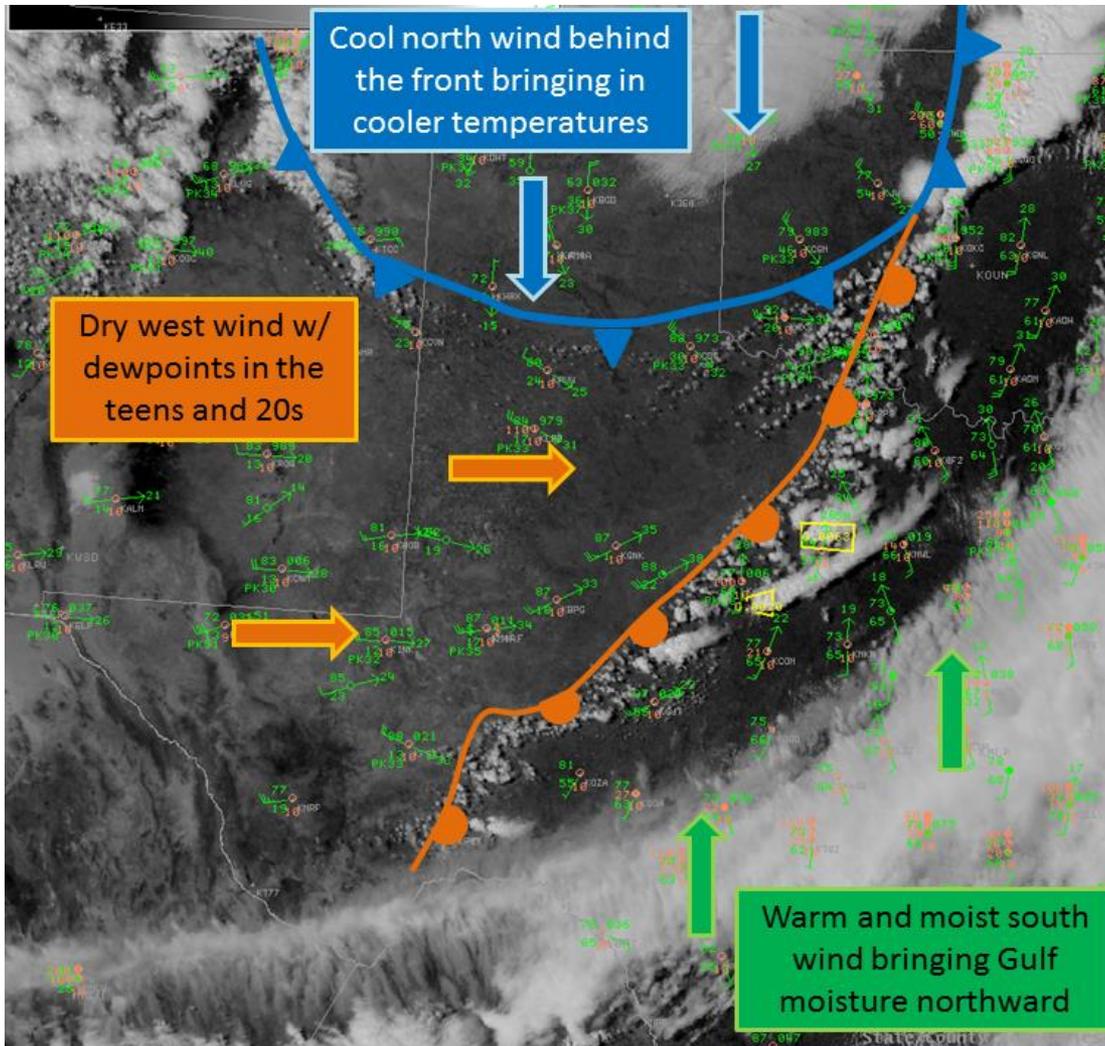
April 13th & 14th – Severe Storms



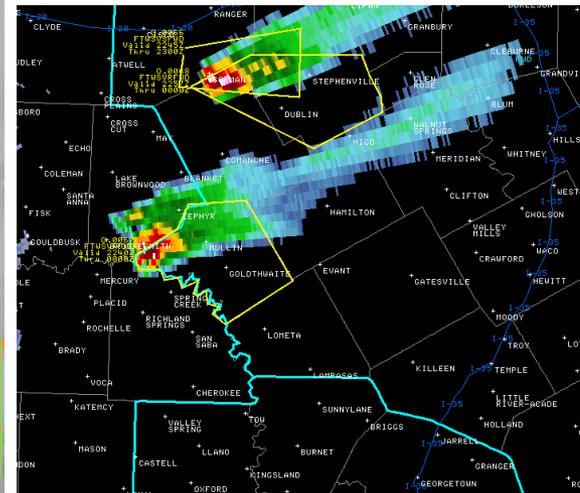
**Austin - San Antonio
Weather Forecast Office**

Updated: 4/15/14 3:10 pm

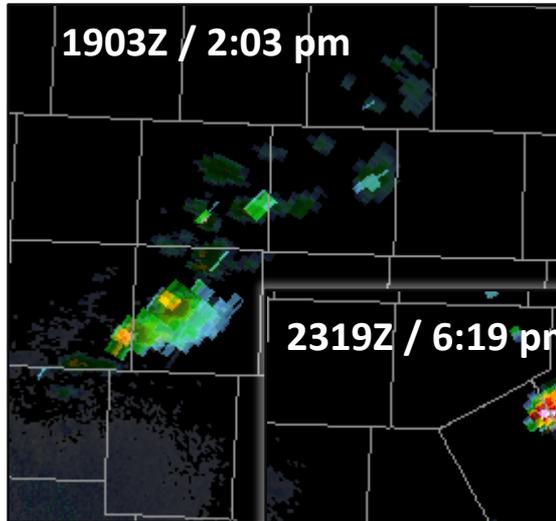
Synoptic Set Up – April 13th



Storms fired off of the dry line in West Central Texas – around San Angelo. One or two storms fired to the west of Val Verde and Maverick counties along the Mexican Mountains but these storms quickly died out. However, two storms maintained strength as they moved east.



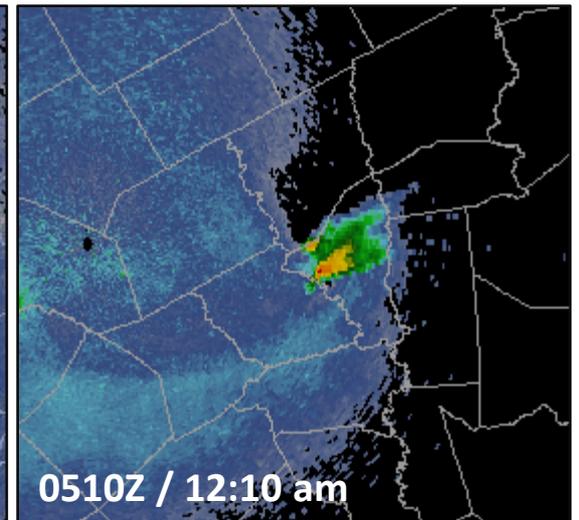
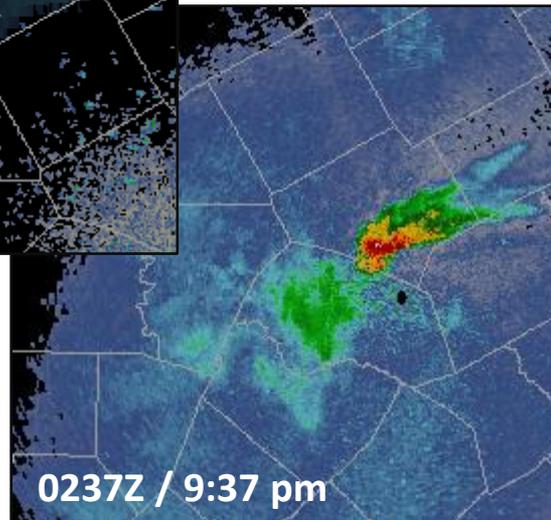
The Little Supercell That Could



The storm formed at 1:56pm in Sterling County. It moved east before turning more southeast as a supercell along the Colorado River around 6:30pm. It continued southeast through Lampasas and Bell counties, producing quarter-size hail and 40-50mph winds. The storm then moved along the Bell/Williamson County line, prompting a Severe Thunderstorm Warning (9:44pm -10:30pm). The storm finally dissipated in Brazos County at 12:10 am.

By the Numbers:

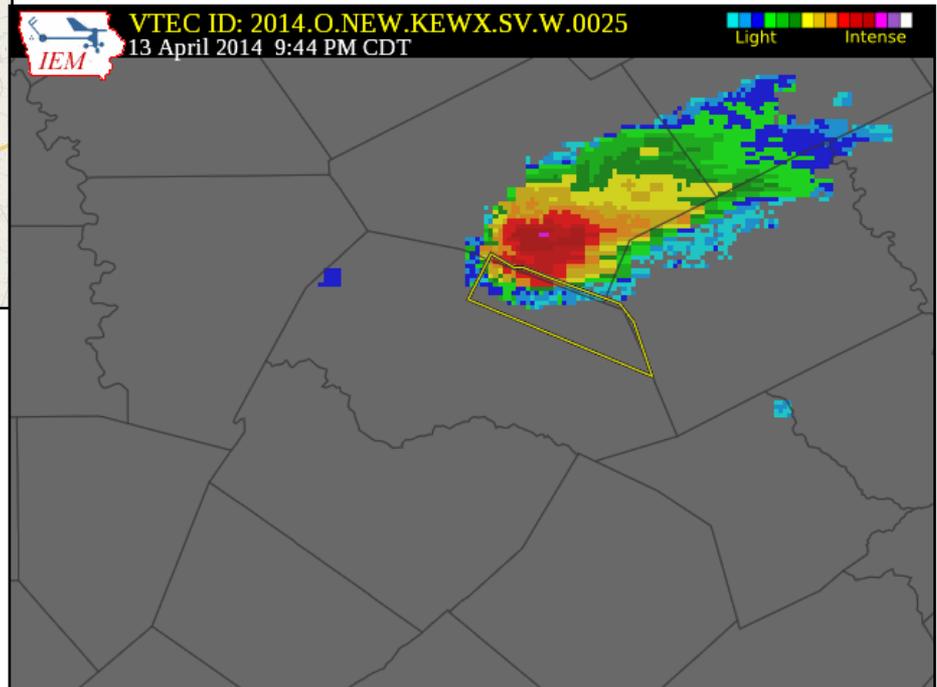
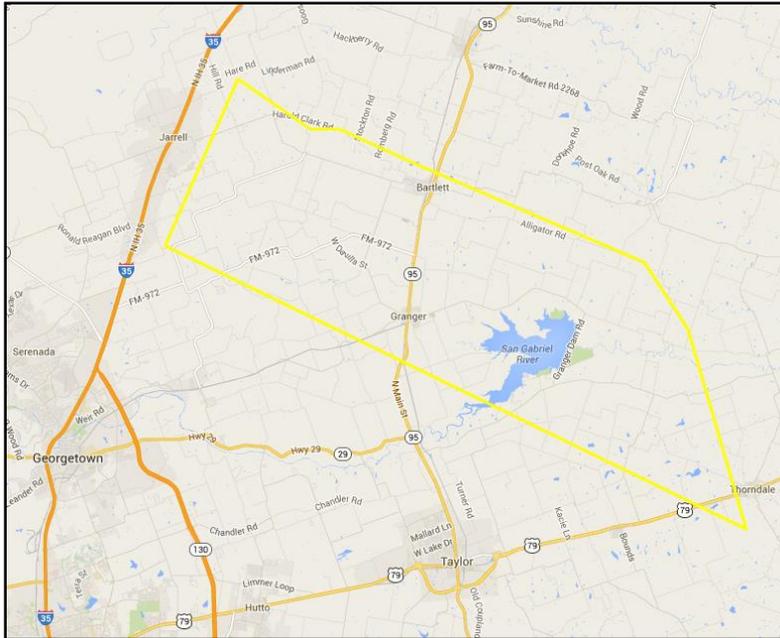
- Lasted over 10 Hours
- Traveled approx. 260 miles
- Impacted 4 County Warning Areas (SJT, FWD, EWX, HGX)
- Crossed though 12 Counties.



Severe Thunderstorm Warning #25

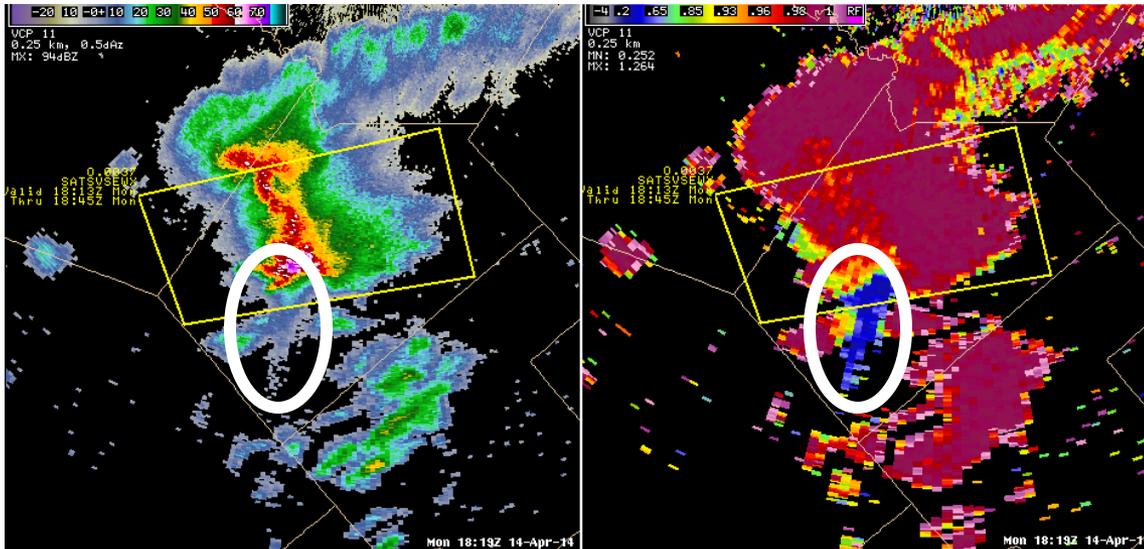
Northeastern Williamson County

9:44 pm – 10:30 pm on 4/13/2014



Reports:

Three Body Scatter Spike



Three Body Scatter Spikes (TBSS) are one way we identify storms that could be producing hail.

The TBSS is caused by the radar pulse being bent down to the ground by the hail. Because of the extra time it takes for the pulse to travel back to the storm the result is a spike out of the storm with low reflectivity and low Correlation Coefficient.

The spike does not indicate anything about the size of hail present in the storm, just that hail of some size exists.

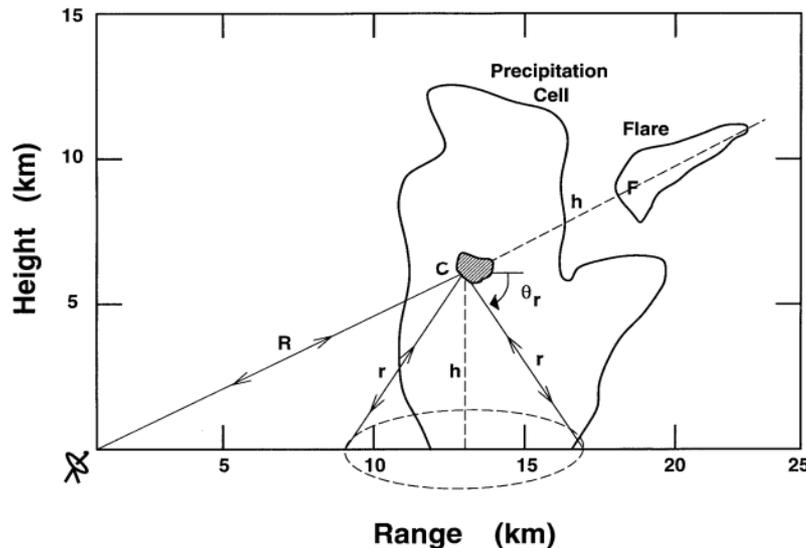
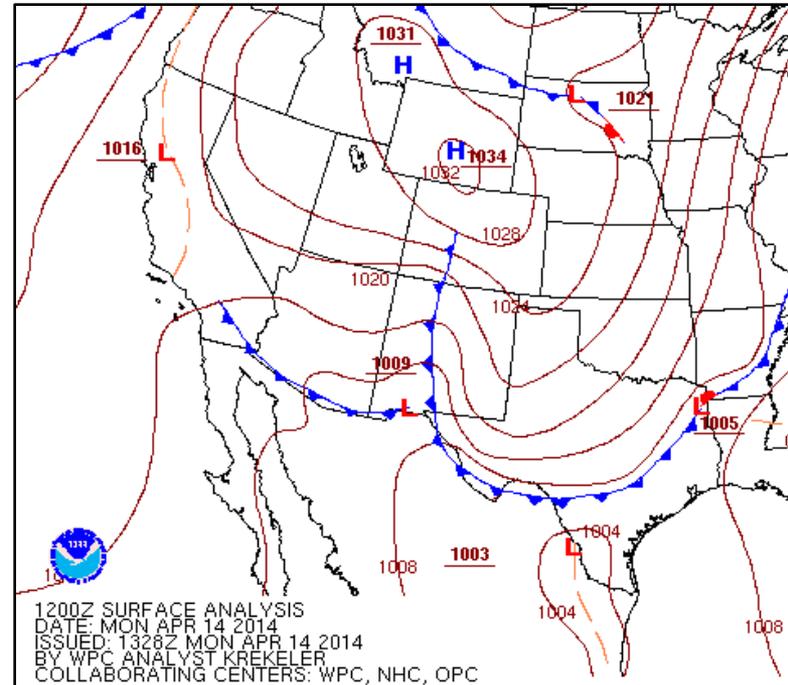
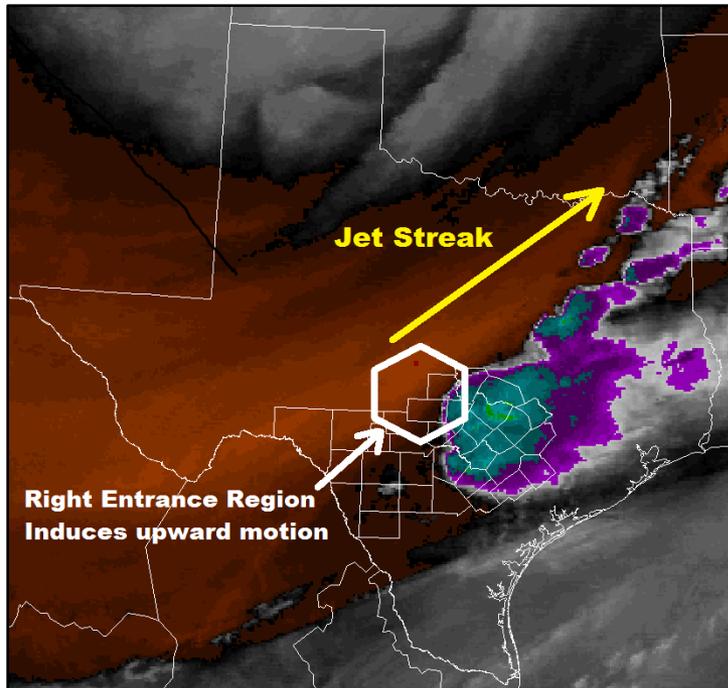


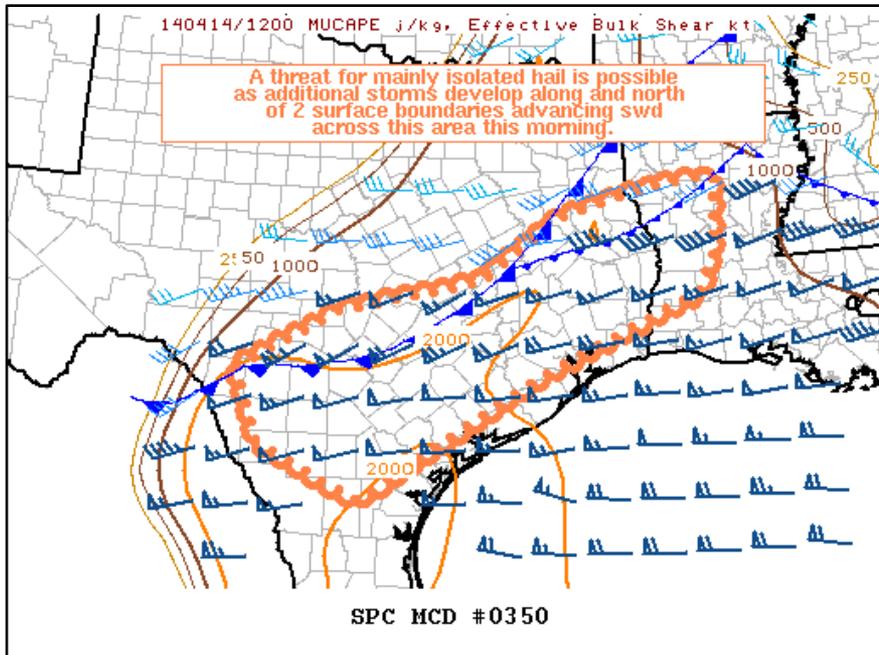
Image to the right from Wilson and Reum (1988) "The flare echo: Reflectivity and velocity signature"

Synoptic Set Up – April 14th



The combination of the right entrance region of a jet streak, and a strong cold front, provided deep lift for fast moving severe thunderstorms to develop and move across South Central Texas. The front quickly lifted moist air such that the storms were elevated (based on top of cold air near the surface), which greatly reduces the threat of damaging winds and tornadoes, but helps maintain large hail due to reduced melting in the cold air.

SPC Mesoscale Discussions (MCDs)



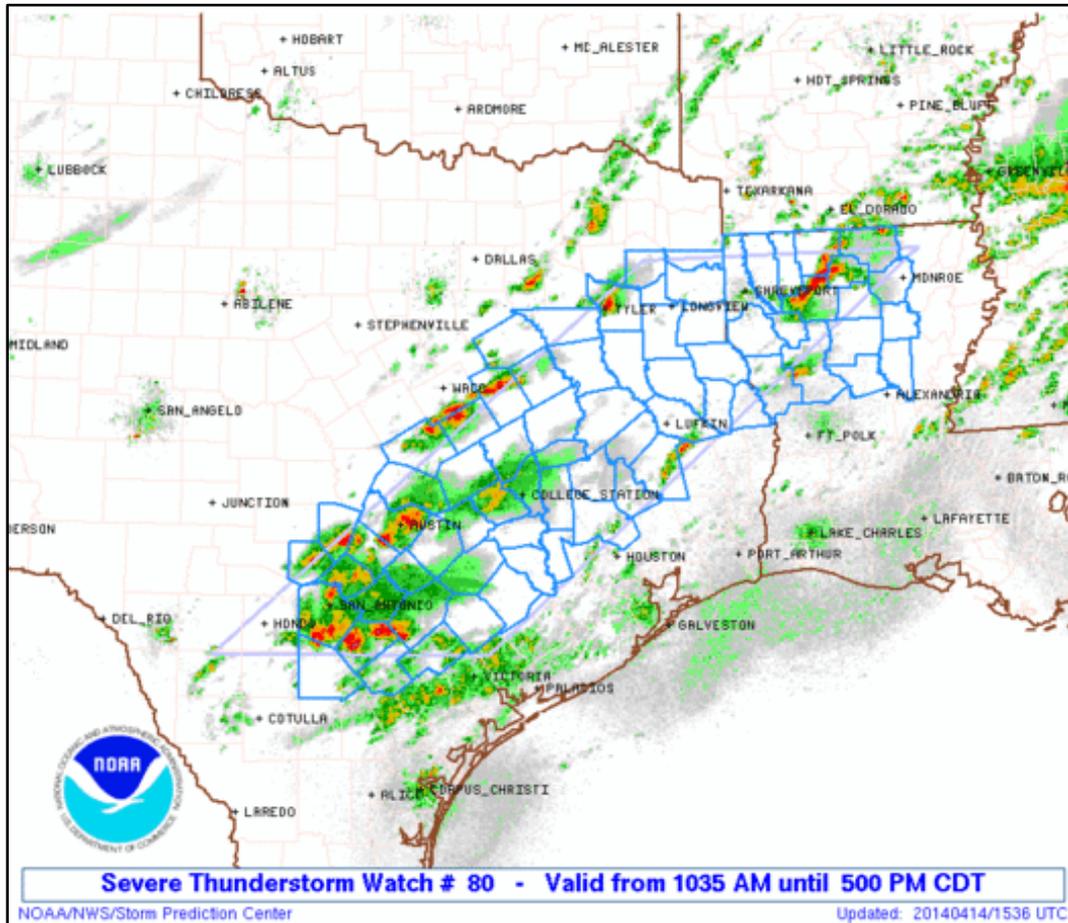
Issued by Storm Prediction Center in Norman, OK

Typically issued prior to Watches or to update Watches

MCD #350 – 7:42 am 4/14/14

Highlighted the possibility of isolated hail along the cold front. It mentioned the moderate instability (Convective Available Potential Energy) and how the wind structure of the atmosphere would support organize storms .

Severe Thunderstorm Watch #80



Issued by Storm Prediction Center in Norman, OK

From 10:35 pm to 5:00 pm
4/14/14 (canceled at 3:30 pm)

Issued for counties along and east of I-35.

Primary Threats Included:

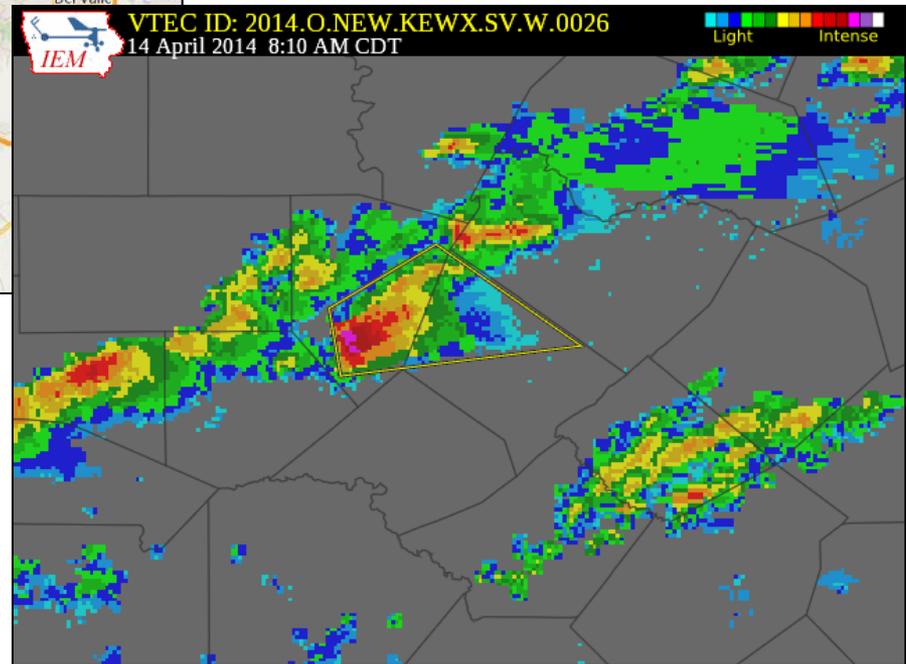
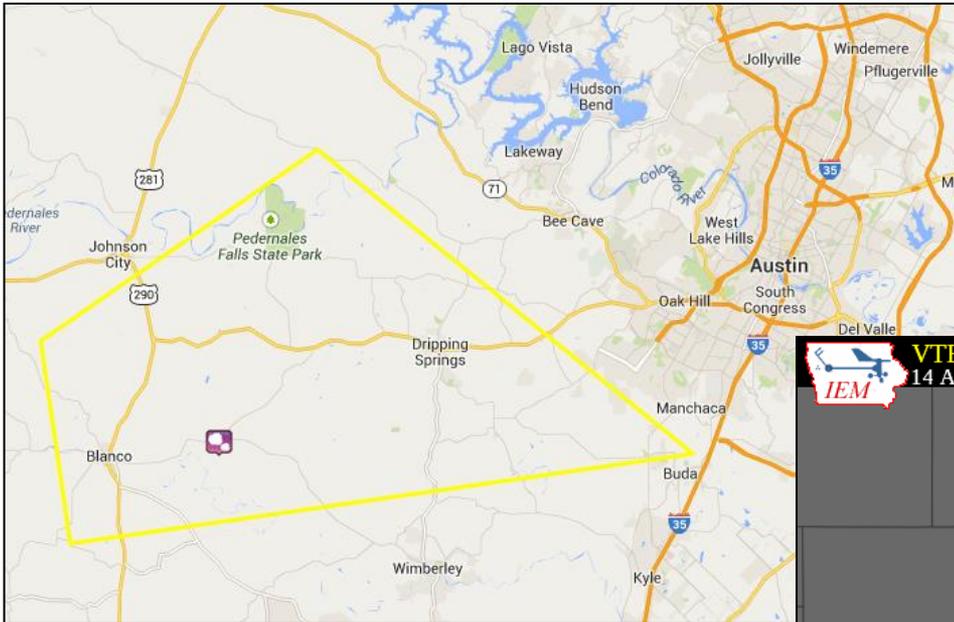
- Scattered Large Hail and Isolated Very Large Hail to 2" in diameter
- Damaging wind gusts to 70 mph

Hazard	Tornadoes	EF2+ Tornadoes	Severe Wind	65 kt+ Wind	Severe Hail	2"+ Hail
Likelihood	Very Low	Very Low	Low	Very Low	Moderate	Moderate

Severe Thunderstorm Warning #26

Southeastern Blanco and
Northern Hays Counties

8:10 am – 9:00 am

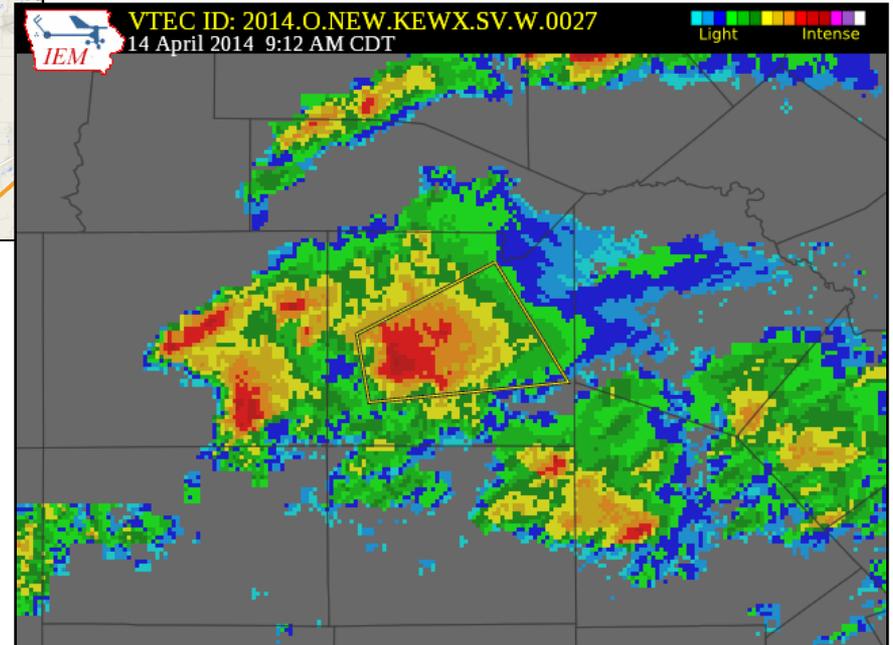
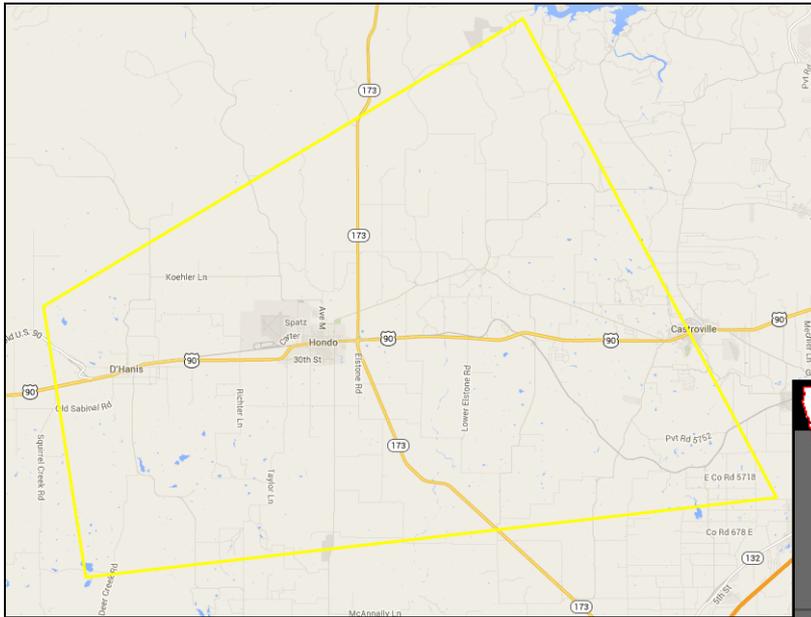


Reports:
8:26 am...1.50" Hail...7 E Blanco

Severe Thunderstorm Warning #27

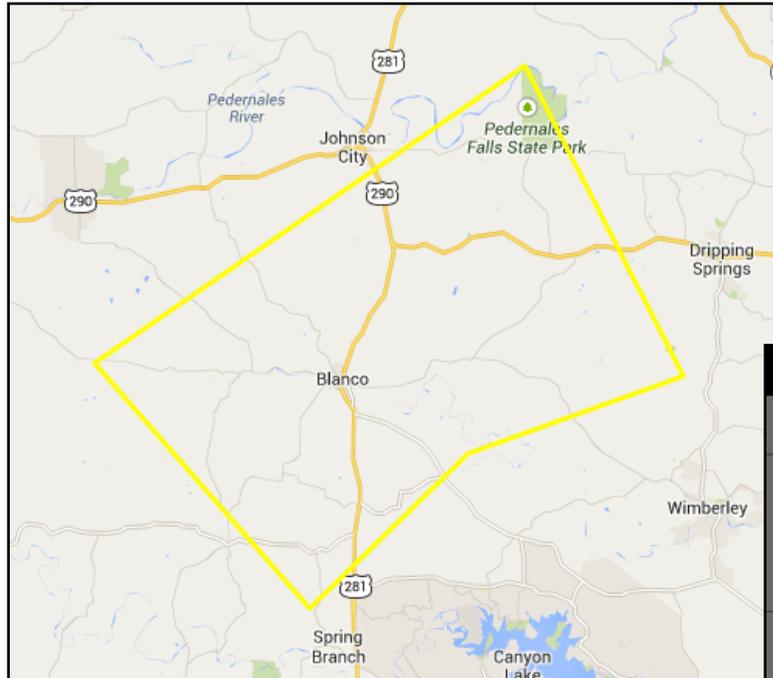
Central Medina County

9:12 am – 10:00 am



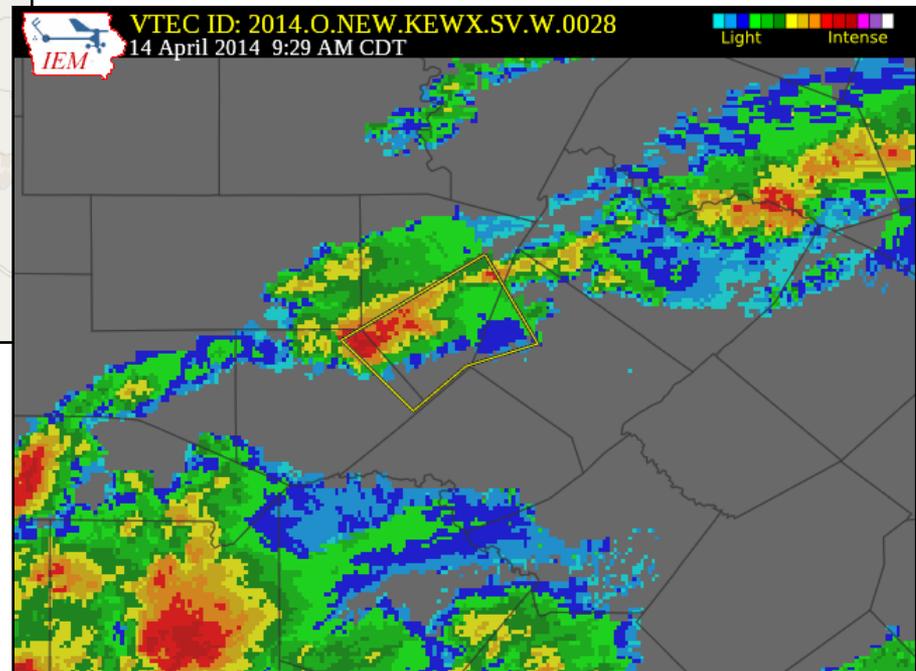
Reports:

Severe Thunderstorm Warning #28



Southern Blanco, West Central
Hays, and Northeastern Kendall
Counties

9:29 am – 10:15 am



Reports:

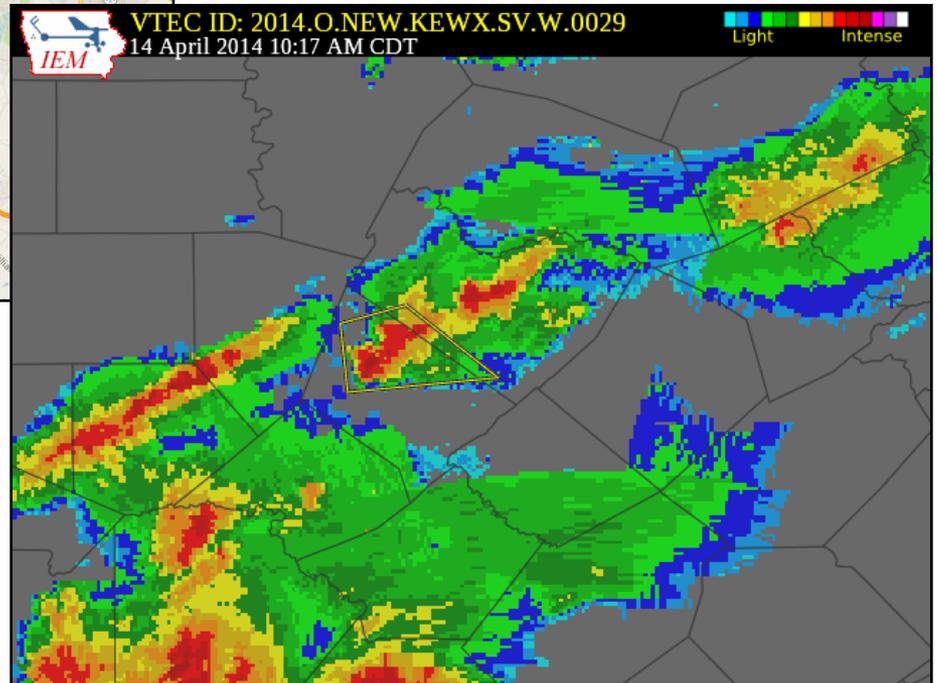
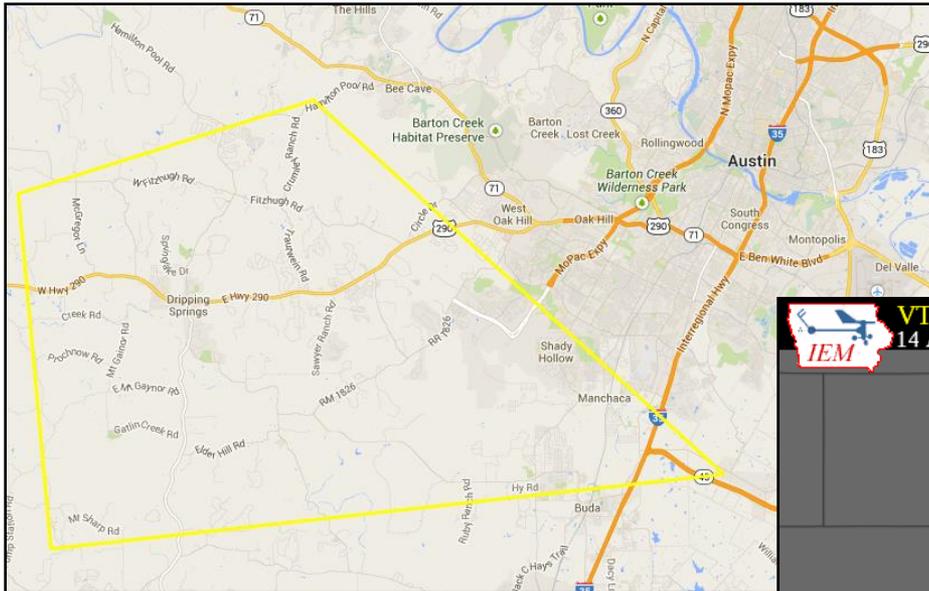
9:38 am...1.75" Hail...Blanco

9:48 am...0.25" Hail...Blanco

Severe Thunderstorm Warning #29

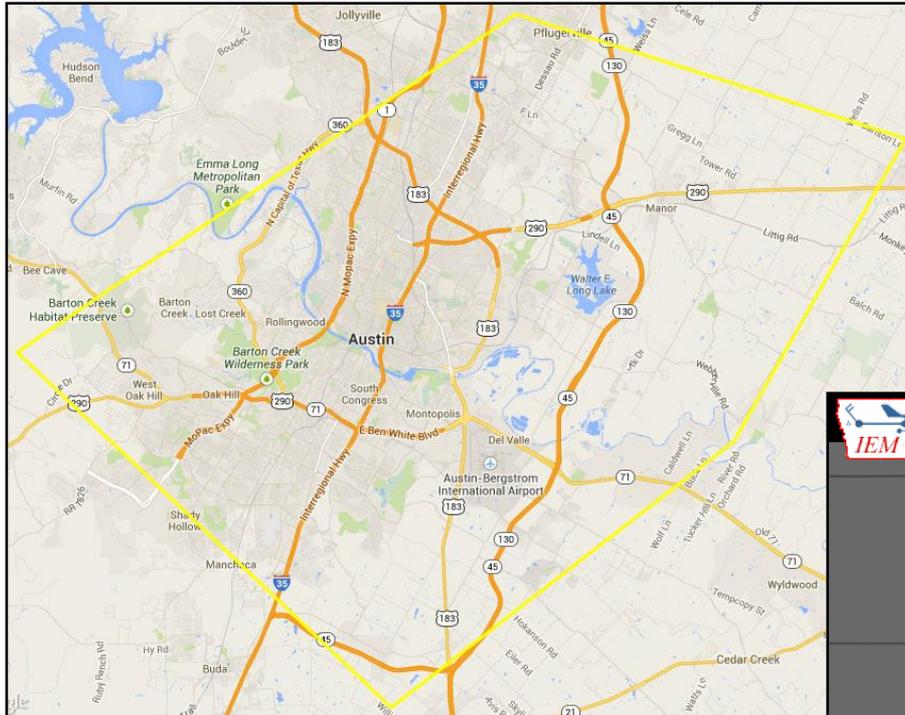
Northern Hays and South Central Travis Counties

10:17 am – 11:00 am



Reports:
10:21 am...Thunderstorm Wind
Damage...3 NNE Driftwood

Severe Thunderstorm Warning #30



Southern Travis County

10:35 am – 11:15 am

Select Reports:

10:41am...0.25" Hail...Pflugerville

10:44am...1.00" Hail...2 SSE Sunset Valley

Select Reports:

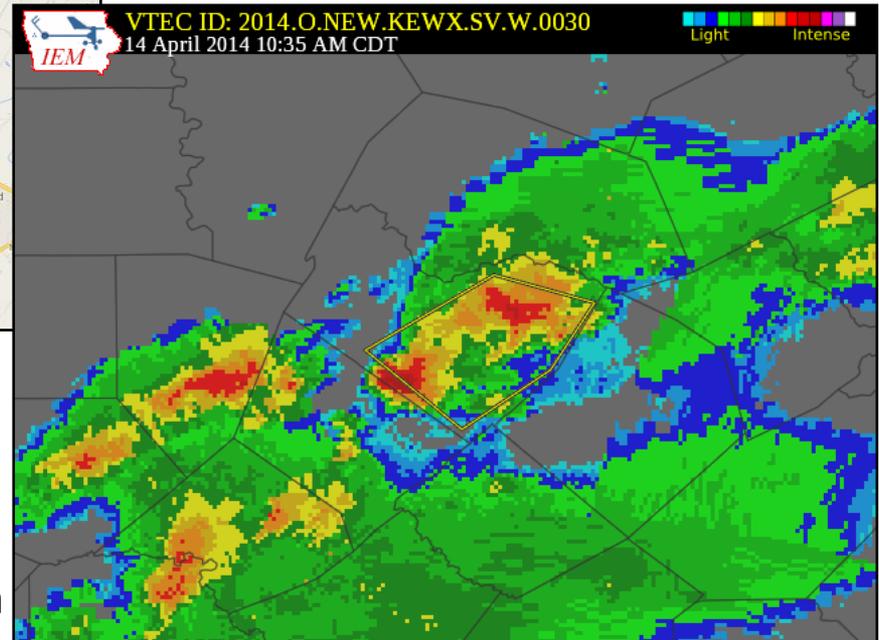
10:51 am...1.75" Hail...Austin

10:54 am...1.00" Hail...6 SE Austin

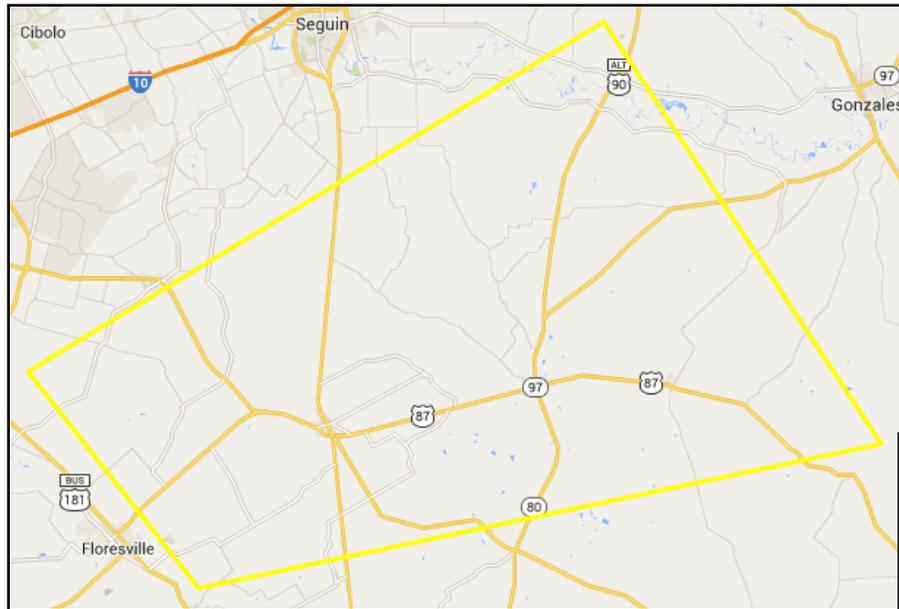
10:58 am...1.00" Hail...3 SE Sunset Valley

11:00 am...1.25" Hail...1 E Austin Bergstrom

11:05 am...1.25" Hail...Garfield



Severe Thunderstorm Warning #31



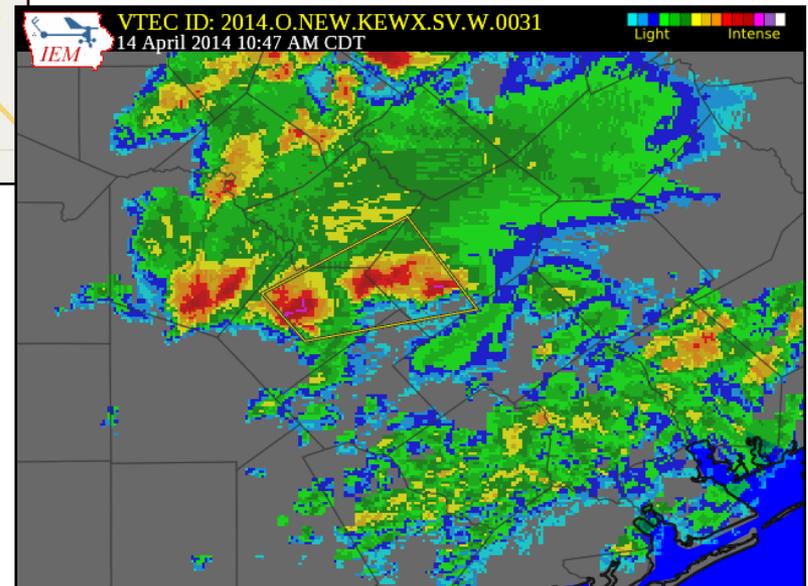
North Central DeWitt, Southwestern Gonzales, Southeastern Guadalupe, Extreme Northeastern Karnes, and northern Wilson Counties

10:47 am – 11:45 am

Reports:

10:56 am...1.75" Hail...2 N Stockdale

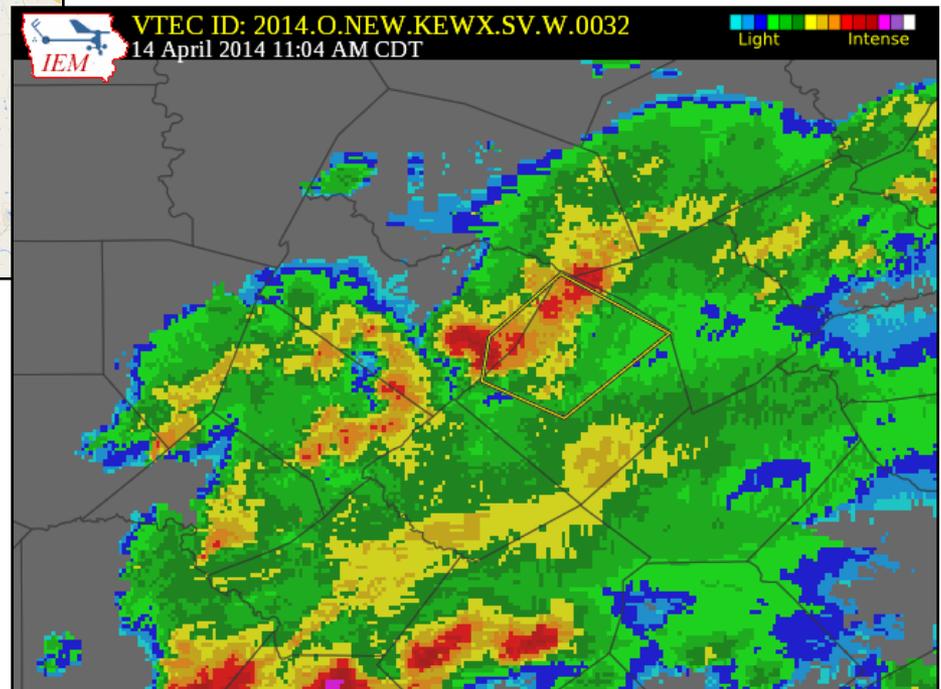
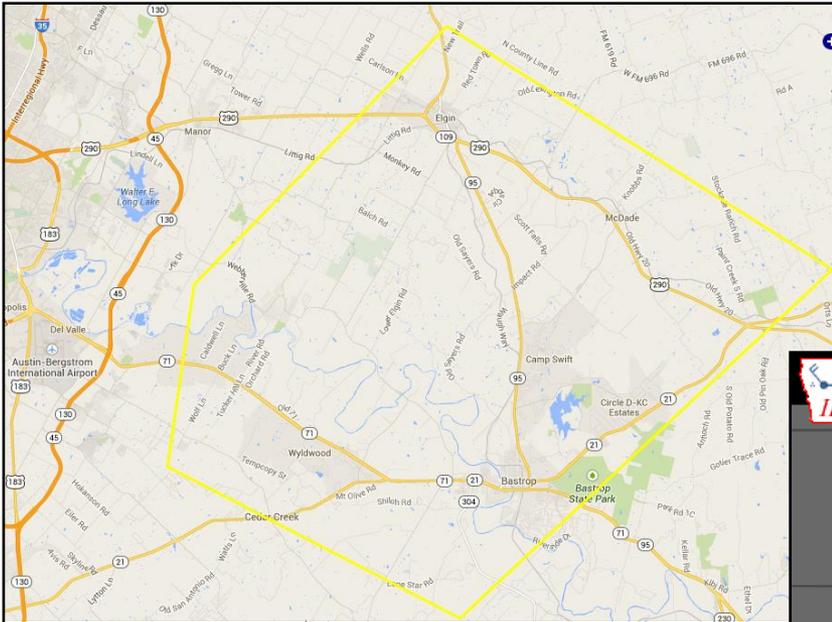
11:11 am...1.75" Hail...4 N Stockdale



Severe Thunderstorm Warning #32

Northern Bastrop and East Central Travis Counties

11:04 am – 11:45 am

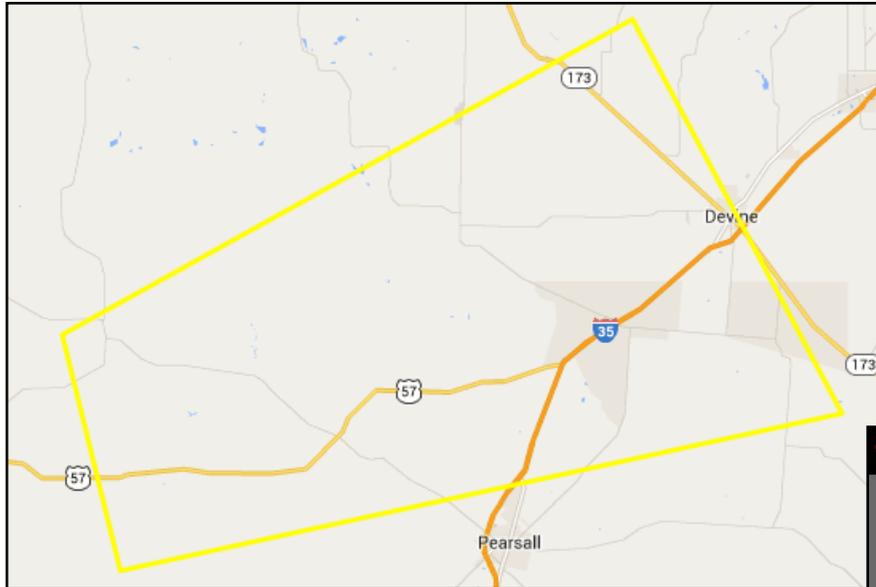


Reports:
11:06 am...1.25" Hail...Garfield

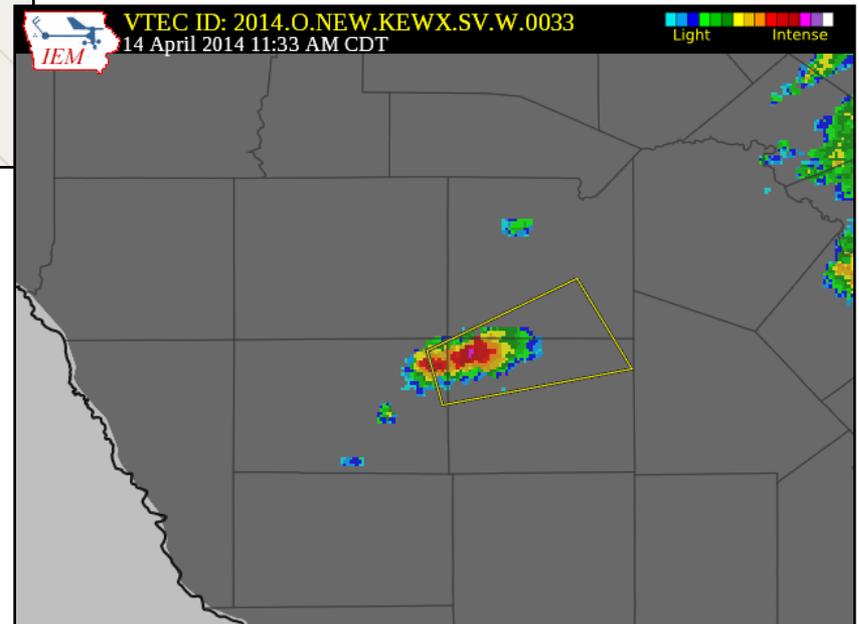
Severe Thunderstorm Warning #33

Northern Frio, South Central Medina,
and Northeastern Zavala Counties

11:33 am – 12:15 pm



Reports:

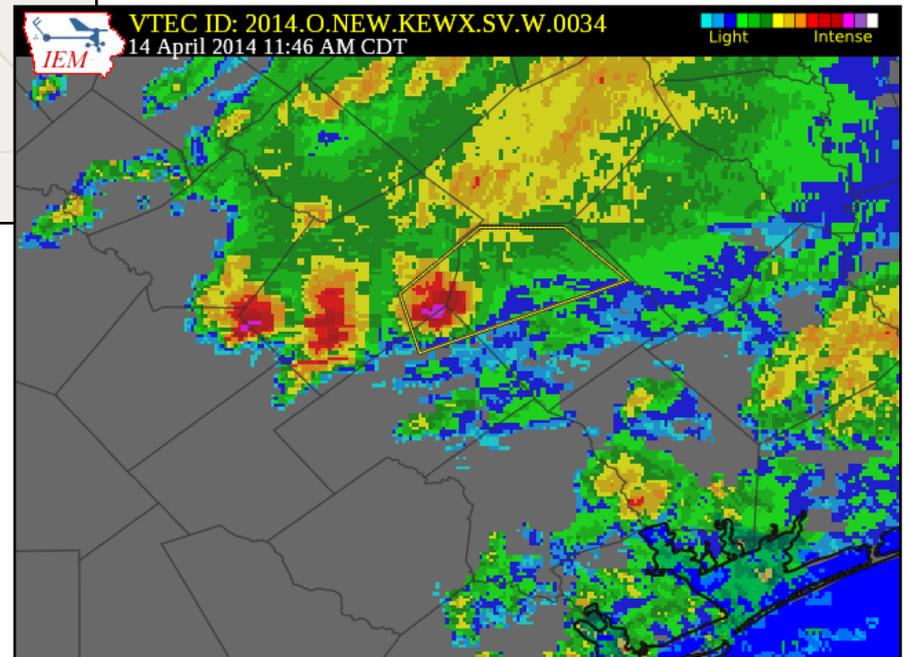


Severe Thunderstorm Warning #34



North Central DeWitt, East Central
Gonzales, and Northern Lavaca
Counties

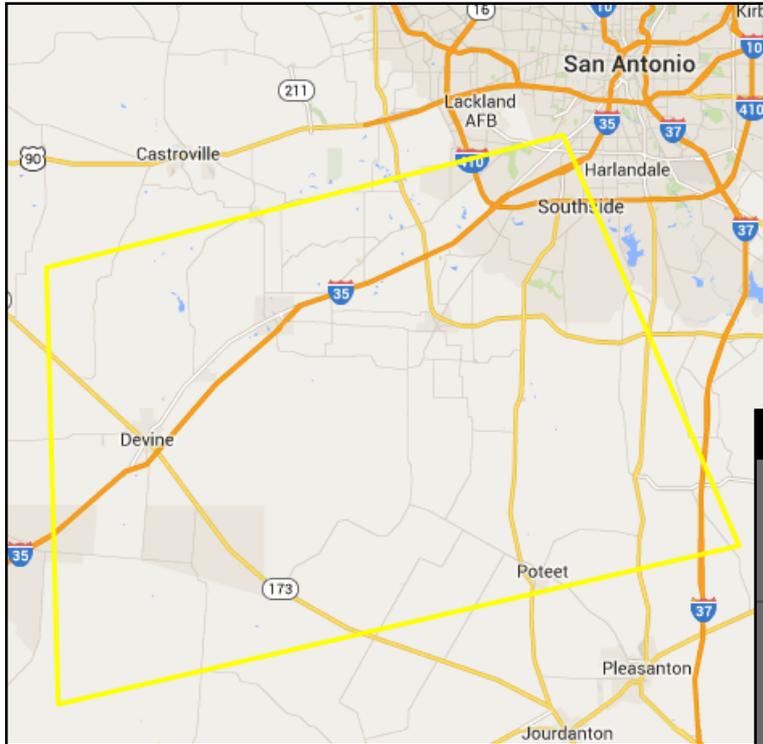
11:46 am – 12:30 pm



Reports:

11:55 am...1.00" Hail...Shiner
12:10 pm...1.25" Hail...4 WNW
Hallettsville
12:25 pm...1.00" Hail...Shiner

Severe Thunderstorm Warning #35

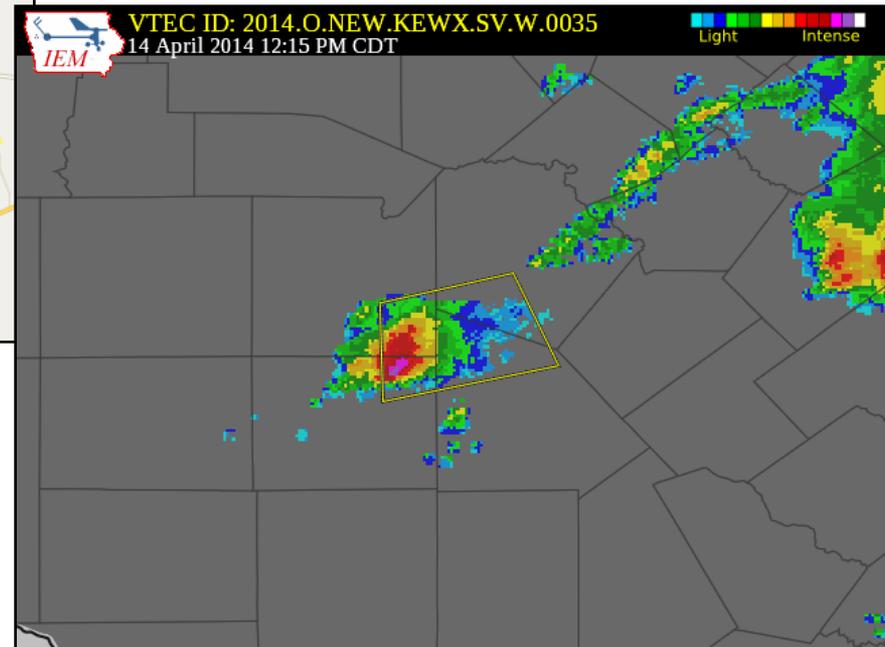


Northwestern Atascosa, Southwestern Bexar, Northeastern Frio, and Southeastern Medina Counties

12:15 pm – 1:00 pm

Reports:

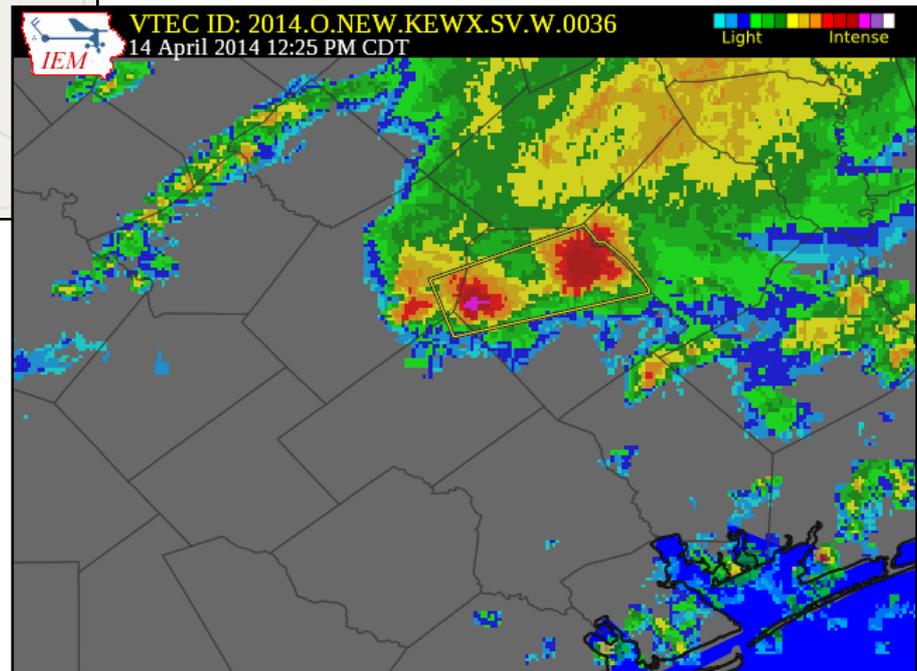
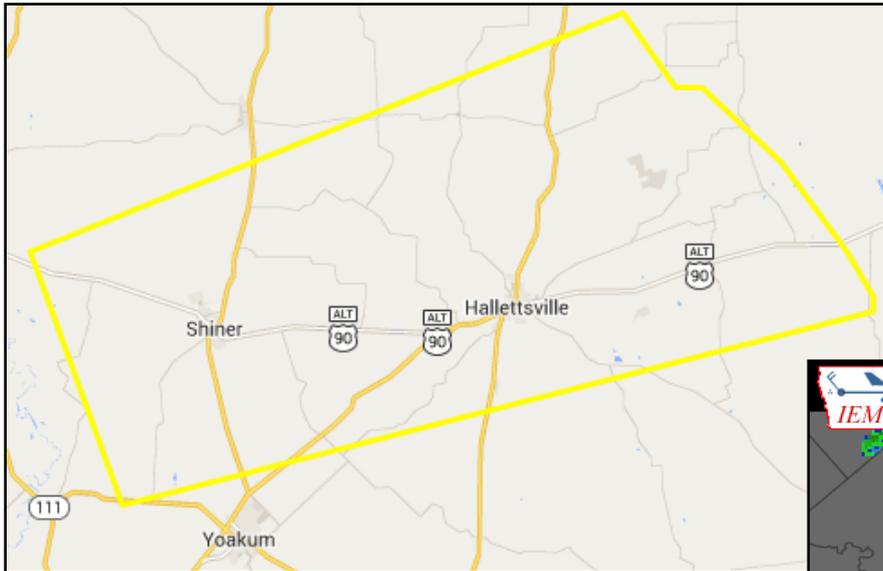
- 12:20 pm...0.25" Hail...5 ESE Natallia
- 12:16 pm...1.50" Hail...5 E Big Foot
- 12:45 pm...1.00" Hail...6 N Poteet
- 12:50 pm...1.00" Hail...4 NE Poteet



Severe Thunderstorm Warning #36

Extreme North Central DeWitt
County, East Central Gonzales, and
Northern Lavaca Counties

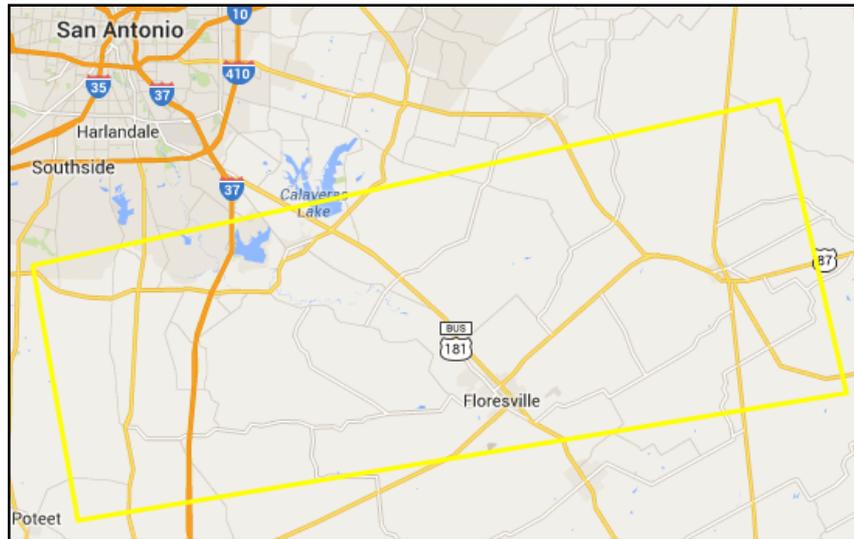
12:25 pm – 1:15 pm



Reports:

12:25 pm...1.00" Hail...Shiner

Severe Thunderstorm Warning #37



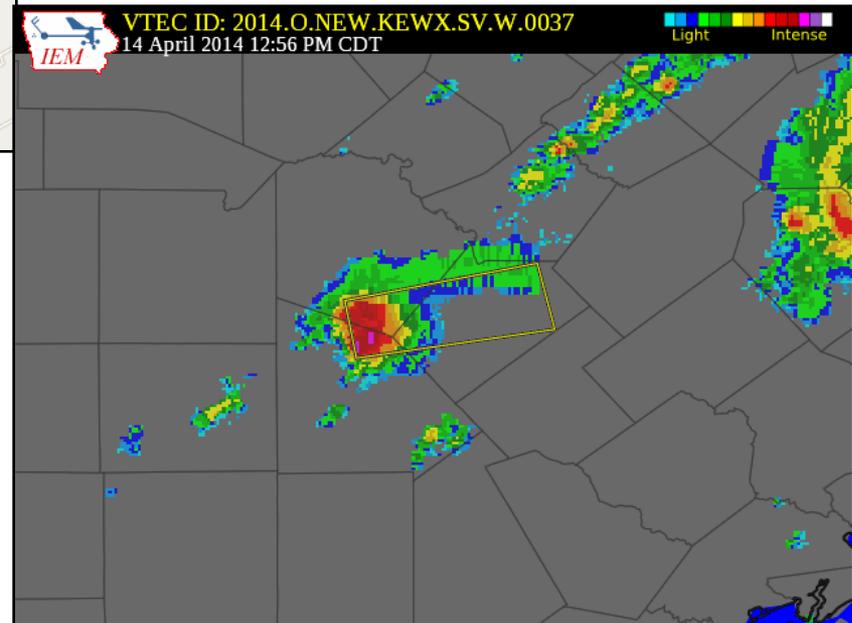
North Central Atascosa, South Central Bexar, and Northern Wilson Counties

12:56 pm – 1:45 pm

Reports:

1:19 pm...1.25" Hail...1 NW Floresville

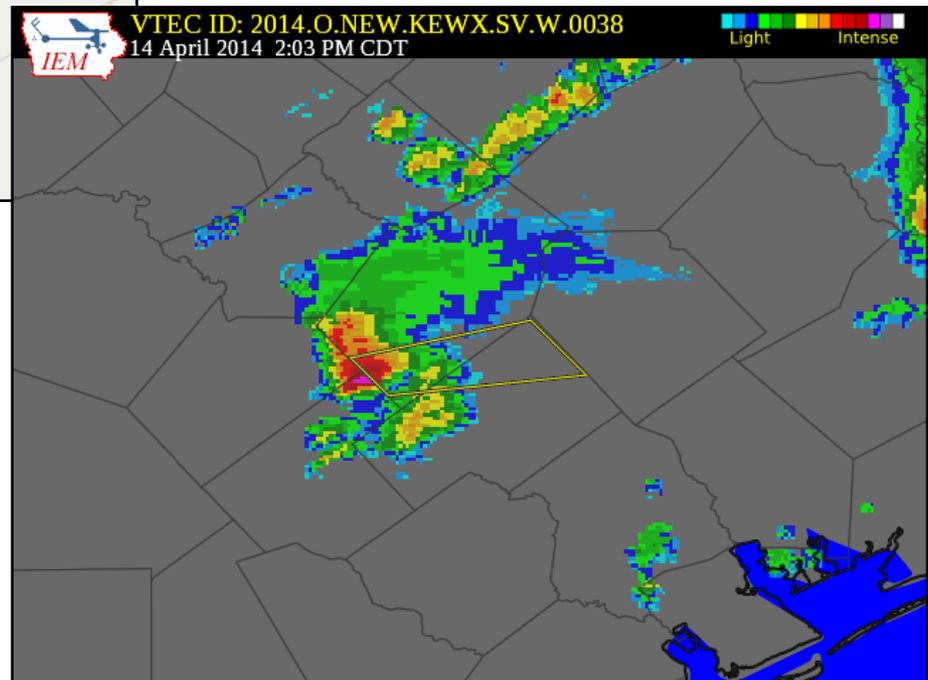
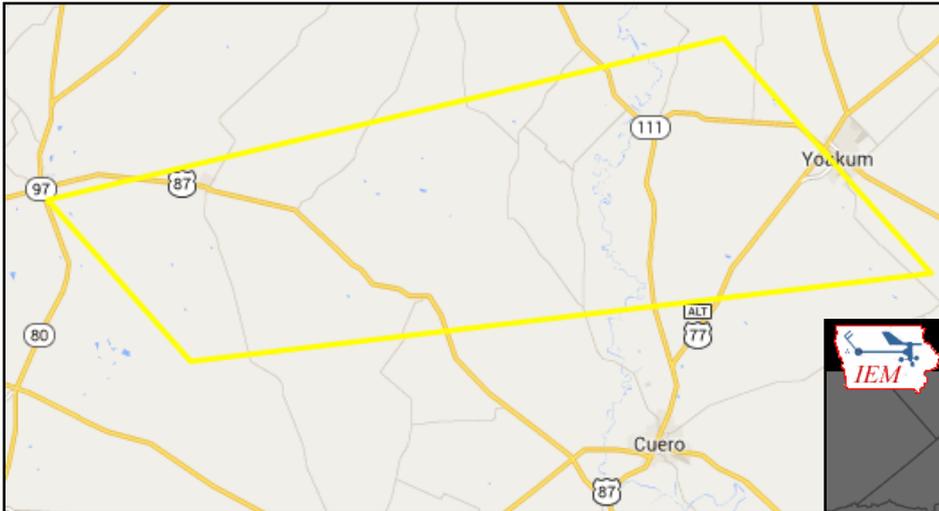
1:35 pm...0.88" Hail...Floresville



Severe Thunderstorm Warning #38

Northern DeWitt and Southern
Gonzales Counties

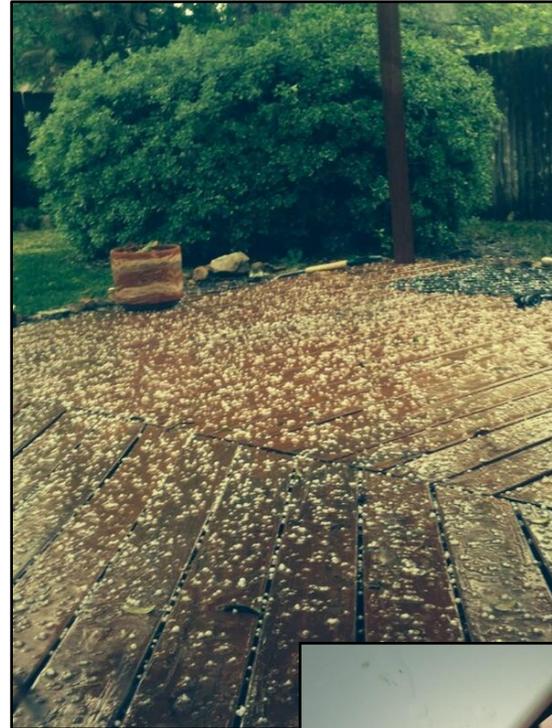
2:03 pm – 2:45 pm



Reports:

All Reports

0807 AM	HAIL	BLANCO	30.10N 98.42W
04/14/2014	M0.88 INCH	BLANCO	TX PUBLIC
0824 AM	HAIL	LAGO VISTA	30.45N 98.00W
04/14/2014	M0.70 INCH	TRAVIS	TX BROADCAST MEDIA
0826 AM	HAIL	7 E BLANCO	30.11N 98.31W
04/14/2014	M1.50 INCH	BLANCO	TX PUBLIC
0840 AM	HAIL	KERRVILLE	30.04N 99.14W
04/14/2014	M0.25 INCH	KERR	TX PUBLIC
0851 AM	HAIL	UVALDE	29.22N 99.78W
04/14/2014	M0.25 INCH	UVALDE	TX TRAINED SPOTTER
0900 AM	HAIL	ROUND ROCK	30.52N 97.67W
04/14/2014	M0.25 INCH	WILLIAMSON	TX TRAINED SPOTTER
0904 AM	HAIL	HUTTO	30.55N 97.54W
04/14/2014	M0.70 INCH	WILLIAMSON	TX BROADCAST MEDIA
0909 AM	HAIL	13 NNW AUSTIN	30.48N 97.83W
04/14/2014	M0.25 INCH	WILLIAMSON	TX CO-OP OBSERVER
0910 AM	HAIL	TAYLOR	30.57N 97.41W
04/14/2014	M0.25 INCH	WILLIAMSON	TX TRAINED SPOTTER
0938 AM	HAIL	BLANCO	30.10N 98.42W
04/14/2014	M1.75 INCH	BLANCO	TX PUBLIC



Hail in Circle C
(Southwest Austin) –
Photo Credit: Sarah (via
twitter)



Hail in Del Valle, TX – Photo Credit:
Desiree M. (via twitter)

All Reports

0948 AM HAIL BLANCO 30.10N 98.42W
 04/14/2014 E0.25 INCH BLANCO TX PUBLIC

PEA SIZED AND SLIGHTLY LARGER HAIL PILED IN DRIFTS

0952 AM HAIL LACOSTE 29.31N 98.81W
 04/14/2014 M0.25 INCH MEDINA TX PUBLIC

1011 AM HAIL AUSTIN 30.31N 97.75W
 04/14/2014 M0.25 INCH TRAVIS TX TRAINED SPOTTER

PEA SIZED HAIL AT CAMP MABRY

1015 AM HAIL DRIPPING SPRINGS 30.19N 98.09W
 04/14/2014 M0.25 INCH HAYS TX TRAINED SPOTTER

1020 AM HAIL 6 S LA VERNIA 29.26N 98.12W
 04/14/2014 M0.70 INCH WILSON TX COCORAHS

1021 AM TSTM WND DMG 3 NNE DRIFTWOOD 30.16N
 98.02W
 04/14/2014 HAYS TX PUBLIC

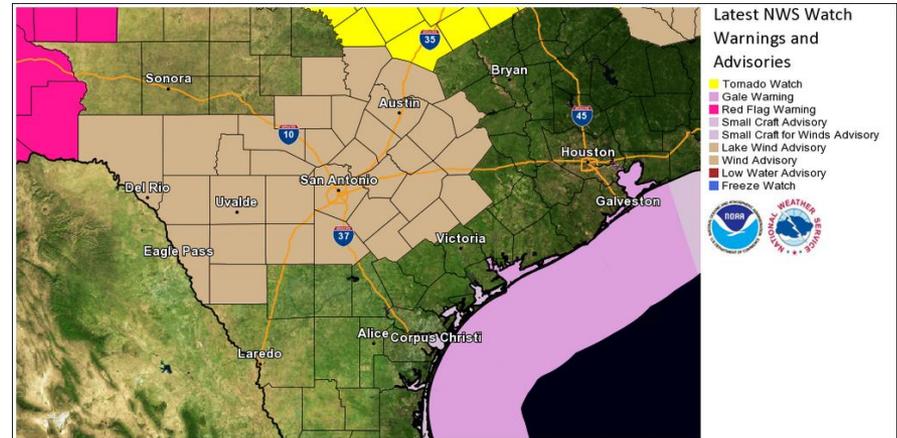
LARGE TREE BLOWN DOWN

1030 AM HAIL 6 N STOCKDALE 29.32N 97.96W
 04/14/2014 E1.00 INCH WILSON TX COCORAHS

COCORAHS OBSERVER REPORTED QUARTER SIZE HAIL. TIME ESTIMATED VIA RADAR.

1033 AM HAIL AUSTIN 30.31N 97.75W
 04/14/2014 M0.25 INCH TRAVIS TX TRAINED SPOTTER

1041 AM HAIL PFLUGERVILLE 30.44N 97.62W
 04/14/2014 M0.25 INCH TRAVIS TX TRAINED SPOTTER



Wind Advisory (tan) and Freeze Warning (Cyan) issued behind the front. Many areas saw winds gusting above 30 mph out of the north. Wind Advisory ran from 7am to 7pm on the 14th. The Freeze Warning was for the morning of the 15th.

All Reports

1044 AM HAIL 2 SSE SUNSET VALLEY 30.20N 97.81W
04/14/2014 E1.00 INCH TRAVIS TX PUBLIC

1050 AM HAIL 6 SE AUSTIN 30.24N 97.68W
04/14/2014 M0.75 INCH TRAVIS TX TRAINED SPOTTER

NEAR BERGSTROM AIRPORT

1051 AM HAIL AUSTIN 30.31N 97.75W
04/14/2014 M1.75 INCH TRAVIS TX PUBLIC

NEAR AUSTIN COMMUNITY COLLEGE

1054 AM HAIL 6 SE AUSTIN 30.24N 97.68W
04/14/2014 M1.00 INCH TRAVIS TX TRAINED SPOTTER

NEAR DEL VALLE

1054 AM HAIL 6 SE AUSTIN 30.24N 97.68W
04/14/2014 M1.75 INCH TRAVIS TX TRAINED SPOTTER

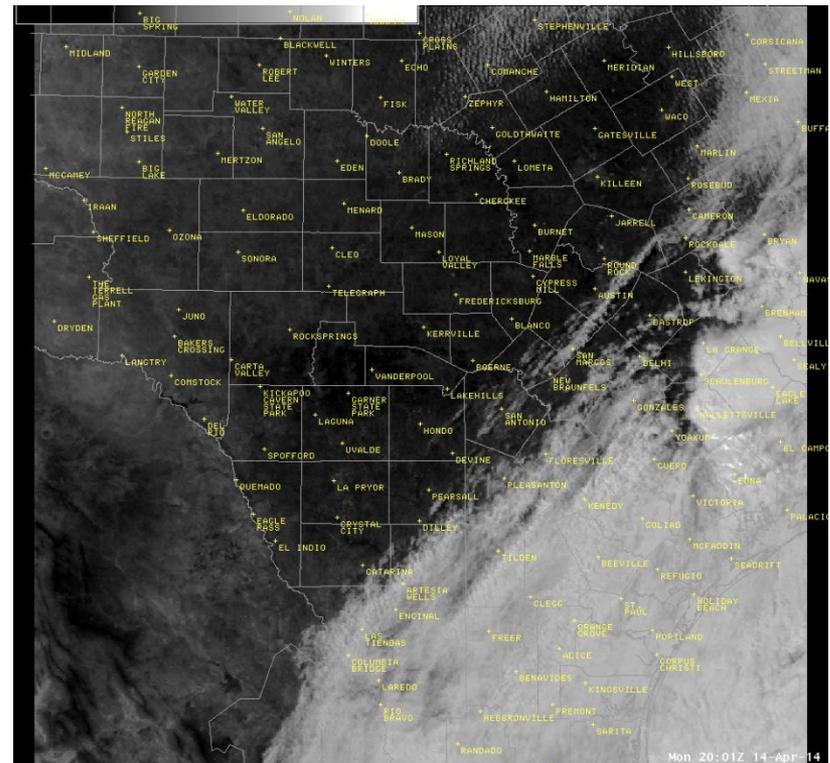
GOLF BALL SIZED HAIL NEAR DEL VALLE

1056 AM HAIL 2 N STOCKDALE 29.26N 97.96W
04/14/2014 M1.75 INCH WILSON TX PUBLIC

1058 AM HAIL 3 SE SUNSET VALLEY 30.20N 97.78W
04/14/2014 M1.00 INCH TRAVIS TX PUBLIC

NICKEL TO QUARTER SIZED HAIL

1100 AM HAIL 1 E AUSTIN BERGSTROM IN 30.22N 97.67W
04/14/2014 M1.25 INCH TRAVIS TX STORM CHASER



Skies clearing behind the front and storms from this morning. Visible Satellite image from 3:01pm.

All Reports

1102 AM HAIL CEDAR CREEK 30.08N 97.50W
04/14/2014 M0.70 INCH BASTROP TX EMERGENCY MNGR

1105 AM HAIL GARFIELD 30.19N 97.56W
04/14/2014 M1.25 INCH TRAVIS TX PUBLIC

1111 AM HAIL 4 N STOCKDALE 29.29N 97.97W
04/14/2014 M1.75 INCH WILSON TX PUBLIC

1155 AM HAIL SHINER 29.43N 97.17W
04/14/2014 M1.00 INCH LAVACA TX PUBLIC

1210 PM HAIL 4 WNW HALLETTSVILLE 29.46N 97.00W
04/14/2014 M1.25 INCH LAVACA TX TRAINED SPOTTER

1220 PM HAIL 5 ESE NATALIA 29.16N 98.78W
04/14/2014 M0.25 INCH ATASCOSA TX PUBLIC

1225 PM HAIL SHINER 29.43N 97.17W
04/14/2014 M1.00 INCH LAVACA TX PUBLIC

1226 PM HAIL 5 E BIG FOOT 29.05N 98.80W
04/14/2014 M1.50 INCH ATASCOSA TX TRAINED SPOTTER

1245 PM HAIL 6 N POTEET 29.12N 98.59W
04/14/2014 M1.00 INCH ATASCOSA TX PUBLIC

1250 PM HAIL 4 NE POTEET 29.08N 98.53W
04/14/2014 M1.00 INCH ATASCOSA TX PUBLIC

0119 PM HAIL 1 NW FLORESVILLE 29.15N 98.17W
04/14/2014 E1.25 INCH WILSON TX TRAINED SPOTTER

0135 PM HAIL FLORESVILLE 29.14N 98.16W
04/14/2014 M0.88 INCH WILSON TX AMATEUR RADIO

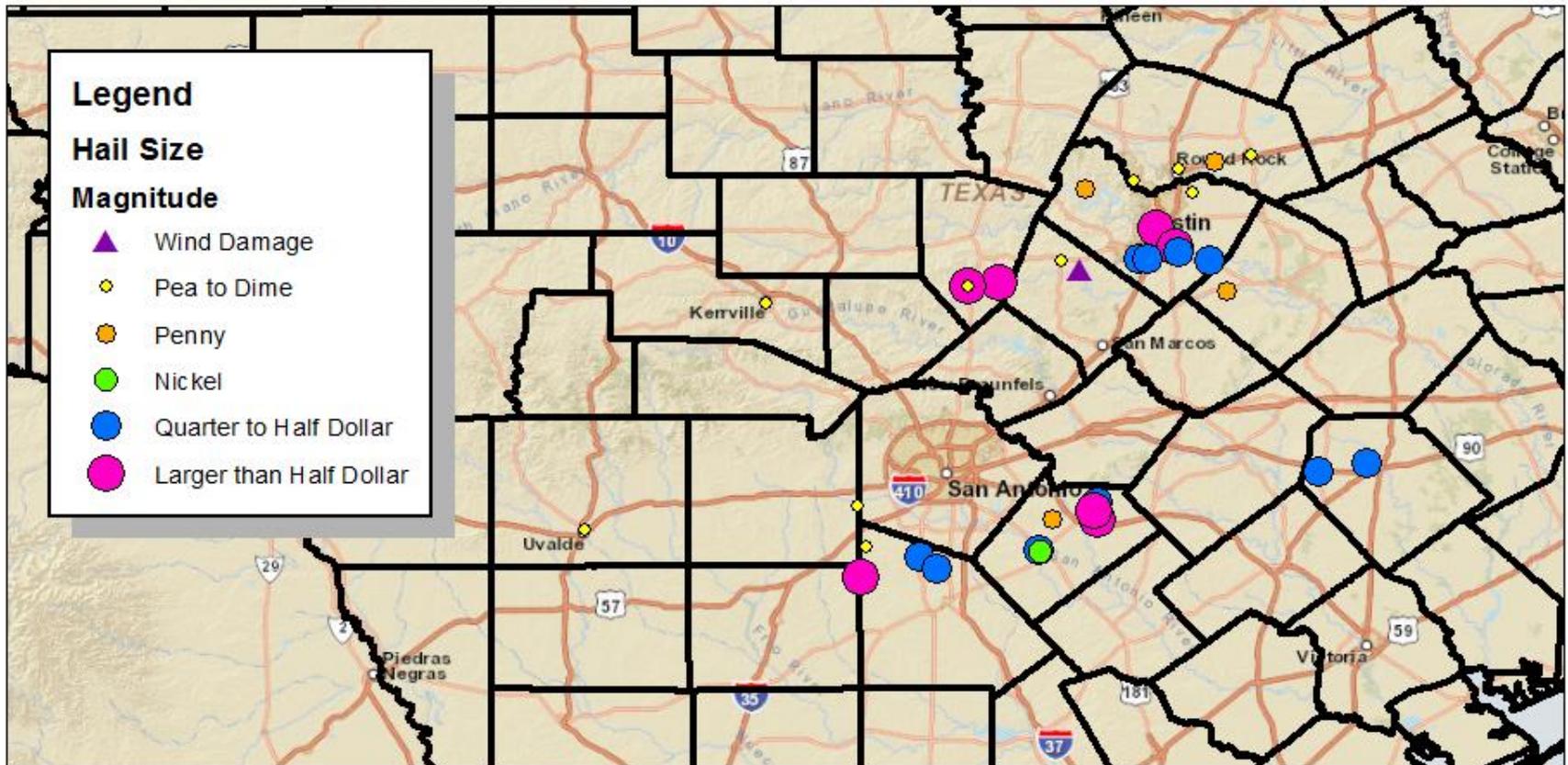


Hail in Sutherland Springs, TX – Photo Credit: Jason
(via twitter)

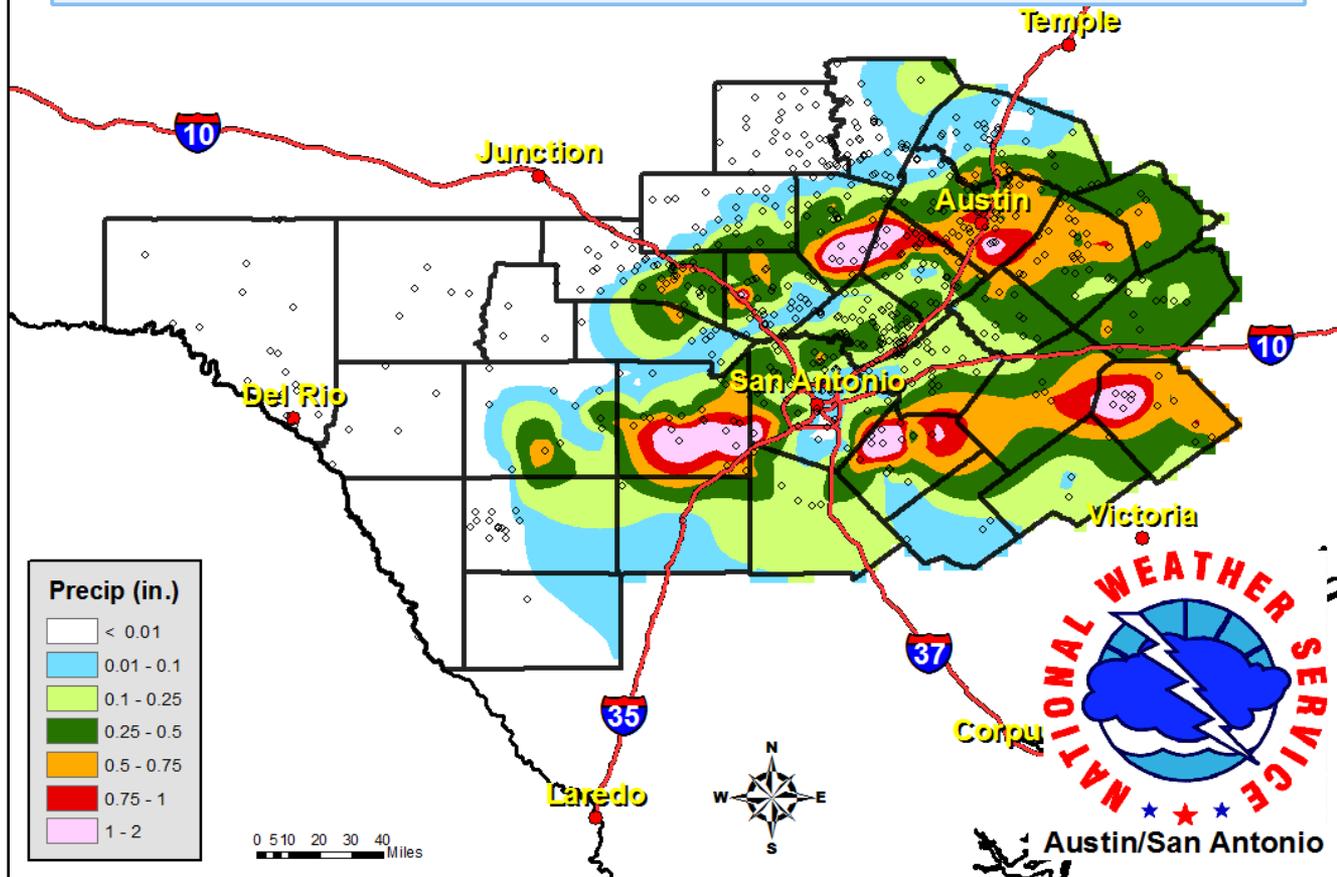
We are still collecting storm reports! If you received hail/wind on April 13th or 14th you can submit the report through our website: weather.gov/Austin

Submit Storm Report

GIS Storm Report Map



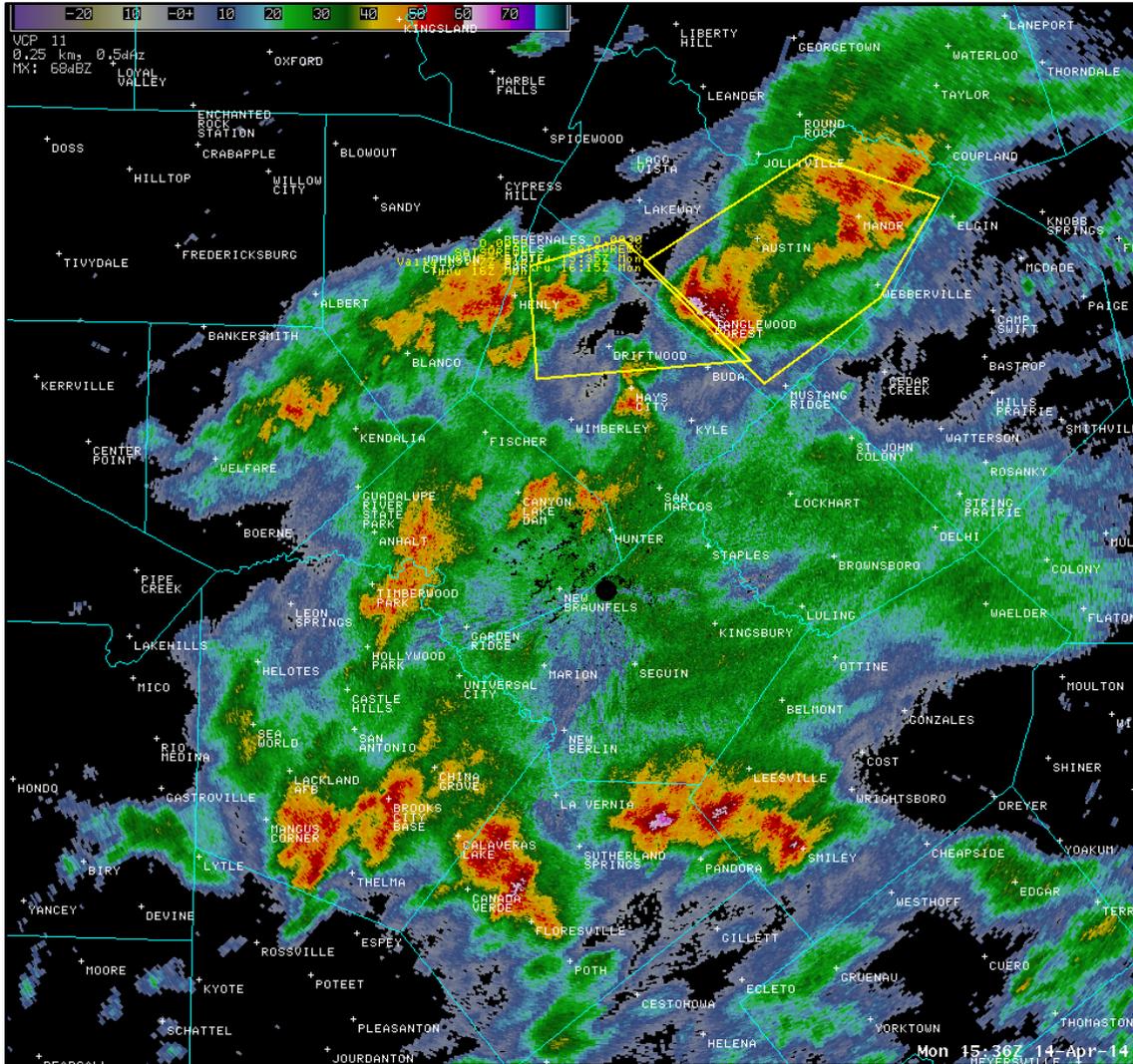
24Hr Rainfall Ending 7AM Apr 15, 2014



A DAILY RECORD RAINFALL OF 1.34 INCHES WAS SET AT AUSTIN CAMP MABRY TODAY. THIS BREAKS THE OLD RECORD OF 1.15 SET IN 1991.

A RECORD RAINFALL OF 1.14 INCHES WAS SET AT AUSTIN BERGSTROM TODAY. THIS BREAKS THE OLD RECORD OF 1.00 SET IN 1947.

Social Media



**Austin/San Antonio, TX
Weather Forecast Office**
weather.gov/ewx



**US National Weather
Service Austin-San
Antonio, Texas**



@NWSSanAntonio

Storms ongoing across the area at
10:36 am on the morning of 4/14/14.