



THE TEXAS THUNDERBOLT

**NATIONAL WEATHER SERVICE -- FORT WORTH, TX
SERVING ALL OF NORTH TEXAS**

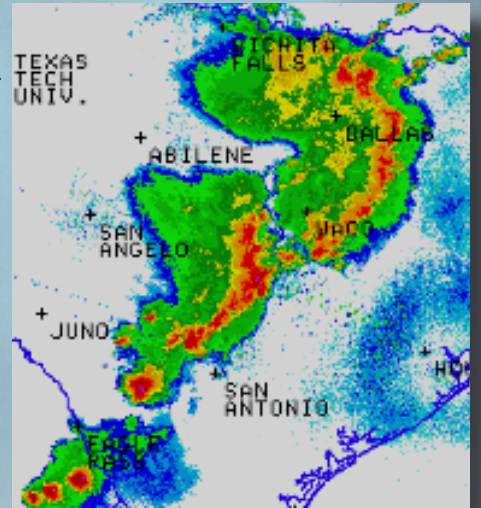
SUMMER 2007 WWW.WEATHER.GOV/FORTWORTH

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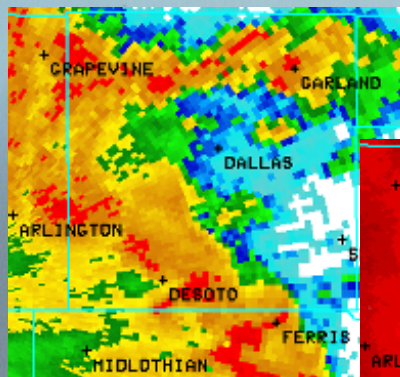
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Derecho Marches Across North Texas

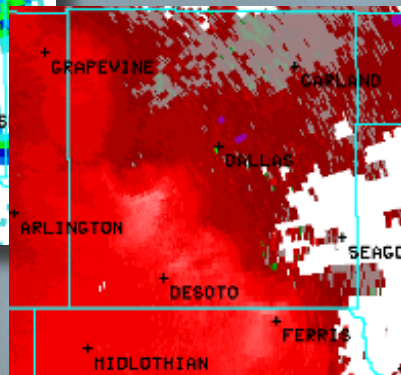
On May 2nd, a complex of strong thunderstorms moved across North Texas, bringing damaging wind gusts in excess of 80 mph. As seen on radar imagery, the storms took on an arc, or bow, appearance. Typically, the strongest winds at the surface are found at the center, or apex, of the bowing feature. Wind gusts ranging from 60 to 100 mph were reported all across North Texas over a 3-hour period. The strongest winds, estimated to be 90-100 mph, were reported in Terrell and 80-100 mph winds were estimated near Payne Springs in Henderson County. A long-lived severe straight-line wind event is named "derecho", which is a Spanish term for "straight" or "direct".



Above: Radar image of the derecho extending from the Red River to south of Waco. Another thunderstorm complex is located from central Texas to near San Antonio. Notice the supercell storms near Eagle Pass.



Above: Radar reflectivity image as the bow echo approached Dallas.



Left: Radar velocity image as the bow echo approached Dallas. The brighter red colors indicate winds in excess of 70 mph.

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Did you know?

Each year, approximately 175 Americans die from extreme heat. Young people, the elderly, and those who are sick or overweight are the most prone to heat-related illnesses.

Find out about heat safety on page 5.

Wacky Weather!

March and April in North Texas were characterized by winter weather and severe weather.

Beginning March 29-30th, the severe weather season was off to an early and active start. A weak tornado touched down in Collin County, in the town of Wylie. The severe weather continued into early April when another tornado touched down in Dalworthington Gardens near Arlington.

Then the area saw a change in seasons...right back to winter! On April 7th, many cities around the region reported snowfall, with DFW reporting a trace and Waco reporting 3.4 inches! Several records for low temperatures and low maximum temperatures were set.

Springtime quickly returned with an outbreak of severe storms on April 13th. Tornadoes were reported in Tarrant County and also in Dallas, Rockwall, and Hunt counties. Severe weather struck the area yet again on April 24th, with twisters in Denton and Hood Counties.

Date	City	County	Rating	Wind Estimate
March 30	Wylie	Collin	EF-1	95 mph
April 3	Dalworthington Gardens	Tarrant	EF-1	85-90 mph
April 13	Benbrook	Tarrant	EF-0	70-75 mph
April 13	Fort Worth, Haltom City	Tarrant	EF-1	100-110 mph
April 13	East Dallas	Dallas	EF-1	85-90 mph
April 13	5 miles South Royse City	Rockwall	EF-0	80 mph
April 24	Lincoln Park	Denton	EF-0	70-75 mph
April 24	Flower Mound	Denton	EF-1	80-85 mph
April 24	Pecan Plantation	Hood	EF-1	95-100 mph

Above: Table of tornadoes in North Texas March-April. Table does not include the April 13 Hunt County tornado. All data remains preliminary.

Flash Flooding... Weather's #1 Killer

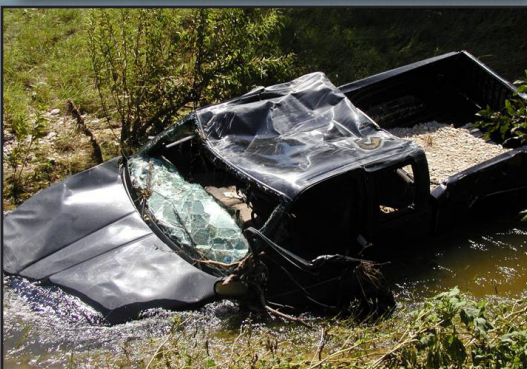
Mother nature is full of hazards: tornadoes, hurricanes, lightning, and flash flooding. While tornadoes and hurricanes are destructive, most weather-related deaths are the result of flash flooding and lightning. Flash flooding is the number one killer, taking an average of 130 lives annually nationwide.

North Texas Flash Flood Deaths
2006 - 2
2007 - 12*

* 2007 data is Jan-May. Data preliminary

- ▶ 6-12 inches of water can knock a person off his/her feet
- ▶ 2-3 feet of water can float most vehicles

Don't be the next victim!



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Tornado Hits Killeen on May 25th



Above: Tornado damage to a home in Killeen. Courtesy of KXXV-TV.

Right: Shoppers watch the tornadic storm near Harker Heights. Courtesy KXXV-TV.



Around 5pm on Friday, May 25th an EF-1 tornado, with wind speeds near 90 mph touched down over the eastern and northern portions of Killeen. The first signs of damage were around Twin Creek Drive and East Rancier Avenue. The twister then moved north toward

West Cliff Road near Fort Hood. Several businesses and an apartment building sustained damage, as well as minor tree damage in a park. Several homes also received roof damage. Numerous sightings of funnel clouds were reported from Harker Heights to Fort Hood.

NOAA Weather Radio... Plan Now for the Next Storm!

During summer, folks plan picnics, take dips in the pool, or head to the beach, but what about setting up and testing your NOAA All-hazards radio?

NOAA weather radios can be purchased at any electronics retailer, and are priced from \$30 on up. The weather radio broadcast is provided free of charge by your National Weather Service in Fort Worth.

Many radios offer a special coding feature, called SAME, which enables you to program your radio to only alert you for hazardous weather watches and warnings for your county or nearby counties.

To be sure your radio is functioning properly, listen for our weekly tests on Wednesdays between 10am and Noon and again between 6 and 8pm.

Remember to Place Fresh Batteries in your Radio!



www.srh.noaa.gov/fwd/radio.html

2007 Atlantic Tropical Cyclone Names

Andrea	Lorenzo
Barry	Melissa
Chantal	Noel
Dean	Olga
Erin	Pablo
Felix	Rebekah
Gabrielle	Sebastien
Humberto	Tanya
Ingrid	Van
Jerry	Wendy
Karen	

2007 Hurricane Season Underway

As North Texans prepare for summer heat, the coastal states are preparing for hurricanes. Officially, the Atlantic hurricane season began June 1st and runs through November 30th.

However, the 2007 season started early. On May 9th, the National Hurricane Center in Miami, FL named a strong subtropical low off the southeast U.S. coast as Andrea.

The last hurricane to strike Texas was Rita, which made landfall in the Beaumont-Port Arthur area on September 24, 2005 as a Category 3 storm (winds 111-130 mph). Although the center of the storm moved east of Lufkin, toward Shreveport, torrential rains and strong winds along the outer bands of the storm affected portions of North Texas. Dozens of trees and powerlines were downed in Anderson, Collin, Fannin, Hopkins, and Hunt counties. Wind gusts near 50 mph were recorded in Hunt and Hopkins counties. Several roofs also sustained damage in Collin and Hunt counties.

Saffir-Simpson Scale

Category	Winds (mph)
1	74-95
2	96-110
3	111-130
4	131-155
5	greater than 155

Visit the National Hurricane Center at www.nhc.noaa.gov

DR. WEATHER'S WISDOM



ALL ABOUT HEAT BURSTS

BY: TED RYAN

A heat burst is an interesting and fairly rare weather phenomenon that can abruptly alter weather on a quiet and tranquil evening. As the name would suggest, a heat burst is a blast of hot air which usually occurs in the nighttime hours. It is characterized by a dramatic rise in temperature, a sharp decrease in relative humidity, and gusty and rapidly shifting winds. Some heat bursts are very powerful and can produce wind gusts over 100 mph with temperatures rising 20 degrees in just a couple of minutes!

The town of Kopperl in central Texas, which is about 20 miles west of Hillsboro, is believed to have been struck by an extremely powerful heat burst during the early morning hours of June 15, 1960. Temperatures unofficially rose to 140 degrees as winds gusted to hurricane force.

Several cattle died and sleeping residents awoke, had trouble breathing, and were forced to wrap themselves in wet blankets to stay cool during the three-hour ordeal.

Today, meteorologists understand more about this unique and complex phenomenon, but it is still nearly impossible to forecast when and where a heat burst will occur.

So, how does a heat burst happen? When the atmosphere is very unstable, but also dry in the mid levels, sometimes a dissipating thunderstorm can send a rush of air accelerating down towards the surface. As this air is plummeting to the ground, where the air pressure is much higher, it heats up. When this jet of warm and sinking air finally slams into the ground, it is forced to spread out rapidly and thereby creates violent winds.

Attention Co-ops!

Several changes are coming for our cooperative observer program this summer. We will be launching a new website, and providing our observers with specialized cooperative newsletters twice a year.

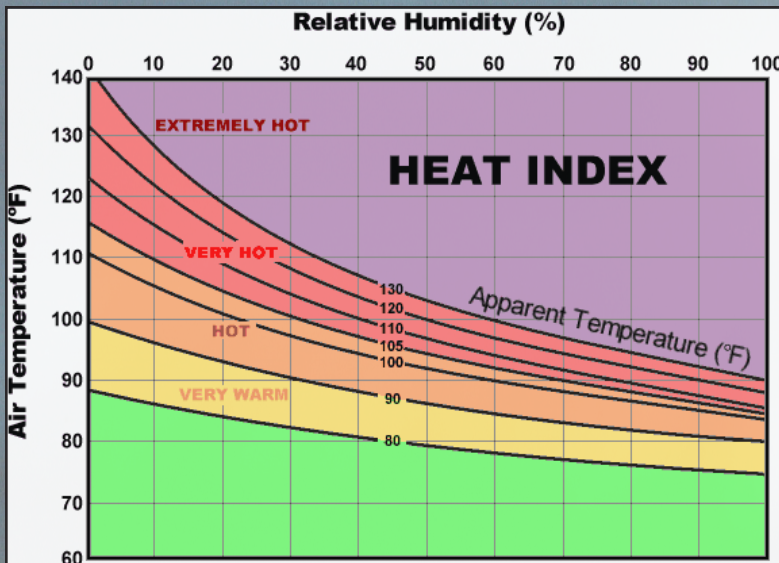
Would you like to report daily temperature, rainfall, and snowfall information? Would you like to become a cooperative observer? Contact our observing program leader, Gerald Shultz, at SR-FWD.webmaster@noaa.gov

www.srh.noaa.gov/fwd/coopcorner.htm

Summertime Heat Safety

Summer in North Texas means enjoying the great outdoors: boating, fishing, jogging, attending ball games, and taking care of the yard. However, the heat and humidity can be deadly if proper precautions are not taken.

Spending extended periods of time in the midday sun, especially while doing strenuous activity, can result in a range of conditions including: sunburn, heat cramps, heat exhaustion, and heat stroke.



Remember to check on the elderly and sick often.

NWS at HAMCOM 2007

Amateur radio operators are critical to the National Weather Service in Fort Worth fulfilling its mission to save lives and property. Our group of dedicated volunteer HAMS keeps us connected to amateur radio spotter groups across North Texas.

The National Weather Service in Fort Worth attended HAMCOM 2007 in Plano on June 8-9th. Several members of our staff met with numerous amateur operators from across the region. Thanks to all our HAM spotters for the great work you do for us!



Above: NWS Fort Worth Skywarn Team Member KD5VYK (left) and Service Hydrologist Bob Carle (right) work the NWS booth at HAMCOM.

Beat The Heat and Stay Safe:

- ▶ Avoid being outside during peak heating
- ▶ Dress appropriately for the heat
- ▶ Drink plenty of water or natural juices

Do not leave children and pets in vehicles, even with the windows cracked open.

Temperatures can easily climb in excess of 130 degrees inside the car.