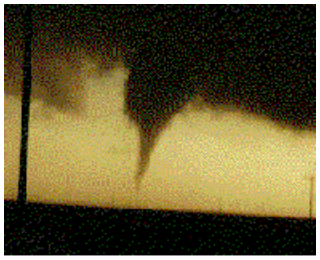
The West Texas TWISTER



SUMMER 1997 NATIONAL WEATHER SERVICE FORECAST OFFICE LUBBOCK TEXAS

Severe Weather Season 1997

This year's severe weather season was more active than last year's. In April, May, and June, the NWS in Lubbock issued 261 Severe Thunderstorm or Tornado Warnings within the county warning area (ie, in 24 counties surrounding Lubbock). By comparison, 162 warnings were issued for the same area April-June 1996.

Forty percent of this season's warnings occurred on just three days: April 10 (49 warnings), June 14 (33), and May 29 (22). Severe Thunderstorm and/or Tornado warnings were issued on 28 different days between April 1 and June 30.

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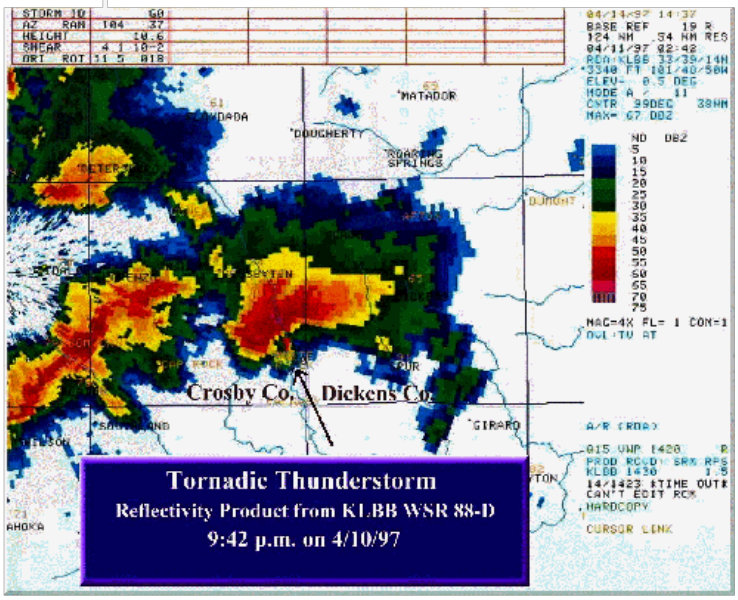

El Nino Makes a Return

El Nino is an abnormal state of the ocean-atmosphere system that develops every few years. It involves anomalous warming of the surface waters in the eastern portion of the tropical Pacific Ocean. This yields important consequences for weather around the globe, especially the southern United States.

(CONTINUED ON PAGE 2)

What's In This Edition...

(CONTINUED FROM PAGE 1)

In normal conditions, the trade winds blow toward the west across the tropical Pacific Ocean. Rainfall follows the warm water eastward. The eastward translation of the atmospheric heat source above the warmest water results in large changes in the global atmospheric circulation.

As of June 1997, satellite and other observations revealed unusually strong El Nino conditions have developed over the tropical Pacific Ocean. Preliminary indications suggest this developing El Nino may be the strongest one since the fall and spring of 1982/1983. The 1982/83 El Nino was the greatest ocean-atmosphere disturbance ever recorded to date...and its effects were felt across the United States and the world.

Strong El Ninos do have an effect on West Texas weather, especially during the fall and winter seasons. During this period, there is an increased tendency towards above normal precipitation. If the current strong El Nino conditions persist, the weather across West Texas will be inclined toward a period of above normal precipitation through the coming months.

For more information on El Nino, check out the "El Nino Theme Page" on the Internet... at **www.pmel.noaa.gov/toga-tao/el-nino/home.html**

EL NINO Usually Spells Rain and Snow!!

1. November through March precipitation (at Lubbock Int'l Airport) during El Nino episodes:

MONTHLY PRECIPITATION

El Nino Years	Nov	Dec	Jan	Feb	Mar	TOTAL	PCT OF NORMAL
1991-92	1.07	2.24	1.32	2.01	1.36	8.00	**261**
1986-87	1.73	1.29	.54	1.47	.41	5.44	**177**
1982-82	1.18	1.95	2.75	.32	.55	6.75	**224**
1976-77	.56	.01	.24	.38	.82	2.01	**65**
1972-73	.97	.32	1.44	1.26	1.90	5.89	**192**
1969-70	.77	.82	.00	.11	2.15	3.85	**125**
1965-66	.02	.50	.52	.06	.13	1.23	**40**
1957-58	1.27	.06	1.35	.33	3.23	6.24	**203**
1940-41	2.35	.20	.55	.61	3.56	7.27	**237**
1918-19	.69	2.03	.12	.25	3.39	6.48	**211**
1914-15	.35	1.47	.09	3.00	2.52	7.43	**242**

Averaging these periods, Lubbock receives 1.5 to 2 times its "normal" rainfall during the 5 month window from November through March.

2. Wettest year ever in Lubbock: 1941 (El Nino year -coincidence?)
Also, BOTH the second and third wettest years (1915 and 1919) were also El Nino years!

3. Snowiest winter ever in Lubbock: 1982-83 (El Nino -coincidence?)
In fact, 5 of the 7 snowiest Lubbock winters were El Nino years.

Severe Weather Season '97 (CONTINUED FROM PAGE 1)

Worst Day: April 10, 1997 - The season started with a bang on this day. A strong cold front and advancing dryline combined with other atmospheric ingredients to create widespread severe weather from late afternoon well into the night.

A particularly strong, long-lived storm caused large hail and tornadoes from Lynn County across northwest Garza County, into Crosby, Dickens, and Cottle Counties. It caused several tornadoes, one of which struck a mobile home (killing one person and injuring another) one mile west of White River Lake in southeast Crosby County.

At virtually the exact time of the fatality, another storm was damaging Liberty Acres, a small community 4 miles east of Lubbock International Airport. This weak tornado and/or strong downburst caused light to moderate damage to many of that community's structures. This night's storms dumped large hail (the size of golfballs or larger) near Hart (Castro Co.), New Moore and Tahoka (Lynn Co.), and in north and west parts of Lubbock. In Lubbock alone, damage to roofs, cars, etc. likely exceeded 30 million dollars.

Two Other Active Days - Severe weather was also widespread on June 14. Most of the damage was due to very strong winds. We received many reports of 60-75 MPH winds. Power poles were snapped, trees damaged or uprooted, and sheds were damaged in several areas, including near Denver City, Levelland, South Plains (Floyd Co.), Vigo Park (Swisher Co.), and Silverton (Briscoe Co.). On May 29, severe storms struck parts of the northern South Plains and extreme southern panhandle. Hail reports varied from the size of nickels to as large as ping-pong balls. Hardest hit areas included Plainview and Petersburg (Hale Co.), Happy and Tulia (Swisher Co.), and near Ralls (Crosby Co.).

A WET START TO 1997

JANUARY-JUNE PRECIPITATION TOTALS

STATION	1996	1997
ABERNATHY	8.68	14.33
BROWNFIELD	7.71	13.66
CROSBYTON	5.00	20.77
DIMMITT	4.11	11.79
FLOYDADA	11.24	16.72
FRIONA	1.79	11.48
JAYTON	7.43	15.30
LEVELLAND	7.80	14.88
LITTLEFIELD	4.98	11.10
LOCKETTVILLE	6.99	11.47
LUBBOCK	6.01	13.63
MORTON	5.77	8.12
MULESHOE	4.90	11.28
MULESHOE REFUGE	4.76	9.88
OLTON	3.69	12.25
PADUCAH	5.73	19.38
PLAINVIEW	3.34	10.25
POST	5.21	15.15
SEMINOLE	6.99	9.38
SILVERTON	4.27	17.16
SNYDER	5.07	19.42
SPUR	3.28	15.90
TAHOKA	5.58	18.28
TULIA	4.00	15.63
AVERAGE	**5.60**	**14.10**

January-June 1997 Precipitation Update

After an unseasonably dry 1996, the first half of 1997 has been one of the wettest 6 month periods in recent years across the South Plains and the extreme southern panhandle. Area stations have already received rainfall amounts closer to yearly normals and many stations have reported amounts nearly 4 times as much as they received last year between January and June.

Although rainfall amounts for the first 6 months of 1997 were above normal in most areas, the western South Plains received the lesser amounts while the most impressive totals were found across the eastern South Plains and the Low Rolling Plains where from 15 to 20 inches fell at many locations. Rainfall totals from January through June averaged 14.1 inches and ranged from 8.12 inches at Morton to 20.77 inches at Crosbyton. Lubbock received 13.63 inches which made it the second wettest January through June period in the last 30 years, loosing out only to the 1992 season where 15.6 inches fell in this six month period.

Scattered shower and thunderstorm activity during the first week of July continued to add to regional rainfall totals. If this trend continues, 1997 may turn out to be one of the wettest years across West Texas in some time. See the precipitation table for January through June totals from a few of the stations across the region.

In This Issue...

1997 Severe Weather Season Summary, El Nino, Climate Stats and more...

National Weather Service
2579 South Loop 289
Suite 100
Lubbock TX 79423
Ph. (806) 745-4260

Web address:
dryline.nws.noaa.gov

Contributing Authors

Jody James - Editor
Tim Tinsley
Larry Vannozzi
Steve Fano

NEW WEATHER RADIOS AVAILABLE SOON!

An exciting new development in NOAA Weather Radio (NWR) will soon be available. "S.A.M.E." (Specific Area Message Encoder) allows listeners to receive only the warnings that interest them. Radio Shack may have their version ready in August (see their web page at http://www.lib.siu.edu/weather/tandy.txt), and other manufacturers will likely soon follow.

SAME allows people to receive warning alarms that pertain to their area of interest. For instance, a Lubbock listener will have the capability to receive only Lubbock County warnings while screening out warnings for all other areas. The radio broadcast is unchanged; SAME is just a new way to receive warning alarms. For more information, call 745-4260 (ask for Larry Vannozzi, Greg Shelton, or Jody James).