2006 Calendar

Photo by Gary Skwira

National Weather Service
Lubbock, Texas

NWS Cooperative Observer Program (COOP)

What is the Coop Program?

Charles Sarchet given the **15-year Length of Service Award** for his work as the Cooperative Observer in Silverton.

The National Weather Service (NWS) Cooperative Observer Program (COOP) is truly the Nation's weather and climate observing network of, by and for the people. More than 11,000 volunteers take observations on farms, in urban and suburban areas, National Parks, seashores, and mountain tops. The data are truly representative of where people live, work and play.

The COOP was formally created in 1890 under the Organic Act. Its mission is two-fold:

- To provide observational meteorological data, usually consisting of daily maximum and minimum temperatures, snowfall, and 24-hour precipitation totals, required to define the climate of the United States and to help measure long-term climate changes
- To provide observational meteorological data in near real-time to support forecast, warning and other public service programs of the NWS.

COOP observational data supports the NWS climate program and field operations. The program responsibilities include:

- Selecting data sites
- Recruiting, appointing and training of observers
- Installing and maintaining equipment
- Keeping station documentation and observer payroll
- Collecting data and delivering them to users
- Maintaining data quality control
- Managing fiscal and human resources required to accomplish program objectives.

The NWS Lubbock COOP program has nearly 45 observers that collect valuable meteorological data every day. These data are widely used by surrounding NWS offices, River Forecast Centers at Tulsa, OK and Ft. Worth, TX, and the National Data Climatic Center (NCDC).

National Weather Service Lubbock would like to express their sincere appreciation to the many COOP observers who provide timely and superior service.

Observers at Muleshoe Wildlife Refuge receive the **25-year Institutional Award.**

J.K. Adams given the **30-year Length of Service Award** for his work as the Cooperative Observer in Muleshoe.

Glen Amburn given the **15-year Length of Service Award** for his work as the Cooperative Observer in Tulia.

Lubbock National Weather Service

January 2006

WWW.WEATHER.GOV/LUBBOCK

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
76-1997 / -2-1919 Lubbock Records **1** sr 752 am - sunrise ss 551 pm - sunset NEW YEARS DAY	77-1997 / -2-1979 **2** sr 752 am ss 551 pm	80-1997 / -2-1947 **3** sr 752 am ss 552 pm	76-1918 / -9-1947 **4** sr 752 am ss 553 pm	82-1927 / -4-1971 **5** sr 753 am ss 554 pm	79-1927 / 0-1971 **6** sr 753 am ss 554 pm  First Quarter	80-1927 / 6-1968 **7** sr 753 am ss 555 pm
82-1923 / 3-1967 **8** sr 753 am ss 556 pm	79-2002 / 2-1920 **9** sr 753 am ss 557 pm	76-1923 / -10-1930 **10** sr 753 am ss 558 pm	75-1936 / -7-1918 **11** sr 752 am ss 559 pm	77-1953 / -10-1918 **12** sr 752 am ss 600 pm	79-1957 / -16-1963 **13** sr 752 am ss 601 pm	82-1928 / 3-1963 **14** sr 752 am ss 602 pm  Full Moon
77-1999 / 4-1963 **15** sr 752 am ss 602 pm	80-1974 / 6-1930 **16** sr 752 am ss 603 pm Martin Luther King Jr. Day (Observed)	87-1914 / -2-1930 **17** sr 751 am ss 604 pm	82-1916 / -5-1951 **18** sr 751 am ss 605 pm	80-2000 / 0-1937 **19** sr 751 am ss 606 pm	78-1986 / 7-1937 **20** sr 750 am ss 607 pm	81-1950 / -4-1956 **21** sr 750 am ss 608 pm
79-1943 / -6-1957 **22** sr 749 am ss 609 pm  Last Quarter	83-1972/ 3-1983 **23** sr 749 am ss 610 pm	83-1970 /-1-1915 **24** sr 749 am ss 611 pm	79-1952 / 7-1929 **25** sr 748 am ss 612 pm	78-1953 / 7-1966 **26** sr 748 am ss 613 pm	78-1956 / 5-1925 **27** sr 747 am ss 614 pm	80-2003 / 8-1948 **28** sr 746 am ss 615 pm
79-1927 / 1-1948 **29** sr 746 am ss 616 pm  New Moon	80-1967 / 6-1951 **30** sr 745 am ss 617 pm	77-1963 / 2-1985 **31** sr 744 am ss 618 pm	NOAA WEATHER RADIO CAN BE FOUND AT THE FOLLOWING FREQUENCIES: Lubbock 162.400 Dimmitt 162.500 Plainview 162.450			

DROUGHT

A drought is a period of unusually persistent dry weather that lasts long enough to cause serious problems such as crop damage and/or water supply shortages. The severity of the drought depends upon the degree of moisture deficiency, the duration, and the size of the affected area.

There are actually four different ways that drought can be defined.

Meteorological-a measure of departure of precipitation from normal. Due to climatic differences, what might be considered a drought in one location of the country may not be a drought in another location.

Agricultural-refers to a situation where the amount of moisture in the soil no longer meets the needs of a particular crop.

Hydrological-occurs when surface and subsurface water supplies are below normal.

Socioeconomic-refers to the situation that occurs when physical water shortages begin to affect people.

What are the impacts of a drought?

Lack of rainfall for an extended period of time can bring farmers and metropolitan areas to their knees. It does not take very long; in some locations of the country, a few rain-free weeks can spread panic and affect crops. Before long, we are told to stop washing cars, cease watering grass, and take other water conservation steps. In this situation, sunny weather is not always the best weather.

Here in the desert Southwest, weeks without rain are not uncommon. However, when the weeks turn to months, serious problems can arise. Because of the fact that much of our drinking water comes from mountain snowmelt, a dry winter can have serious implications in terms of how much water is available for the following summer season. Most locations have sufficient water reservoirs to make it through one dry winter. The real problem develops with back to back dry winter seasons, similar to what occurred during the 1998-2000 period of time. With two significantly below-normal precipitation winter seasons, reservoirs became low and the fire danger increased as the forests dried out. However, summer rains can alleviate the situation, as the monsoon season typically develops by July.

The Dust Bowl of the 1930's affected 50,000,000 acres of land, rendering farmers helpless. In the 1950's, the Great Plains suffered a severe water shortage when several years went by with rainfall well below normal. Crop yields failed and the water supply fell. California suffered a severe drought around 1970. Rainfall was below normal for 1 1/2 years, and by the time September 1970 arrived, the fire potential was extremely high and dangerous. Temperatures rose to near the century mark and fires broke out. Losses were in the tens of millions of dollars.

The worst drought in 50 years affected at least 35 states during the long, hot summer of 1988. In some areas the lack of rainfall dated back to 1984. In 1988, rainfall totals over the Midwest, Northern Plains, and the Rockies were 50-85% below normal. Crops and livestock died and some areas became desert. Forest fires began over the Northwest and by autumn, 4,100,000 acres had been burned. A government policy called "Let Burn" was in effect for Yellowstone National Park. The result? Half of the park (2,100,000 acres) was charred when a huge forest fire developed.

How do meteorologists predict droughts?

Meteorologists determine the onset and the end of a drought by carefully monitoring meteorological and hydrological variables such as precipitation patterns, soil moisture, and stream flow. To do this, meteorologists make use of various indices that show deficits in precipitation over periods of time.

Lubbock National Weather Service

February 2006

WWW.WEATHER.GOV/LUBBOCK

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1 83-1963 / -7-1951 Lubbock Records sr 744 am - sunrise ss 619 pm - sunset	**2** 80-2003 / -4-1951 sr 743 am ss 620 pm Groundhog Day	**3** 80-1934 / 4-1972 sr 742 am ss 621 pm	**4** 82-1925 / 3-1989 sr 742 am ss 622 pm
5 81-1937 / 3-1982 sr 741 am ss 623 pm First Quarter	**6** 79-1950 / 4-1956 sr 740 am ss 624 pm	**7** 84-1918 / -3-1933 sr 739 am ss 625 pm	**8** 83-1951 / -17-1933 sr 738 am ss 626 pm	**9** 83-1976 / 0-1933 sr 737 am ss 626 pm	**10** 84-1962 / 1-1929 sr 736 am ss 627 pm	**11** 85-1916 / 6-1955 sr 736 am ss 628 pm
12 86-1962 / 9-1948 sr 735 am ss 629 pm	**13** 81-1979 / 7-1963 sr 734 am ss 630 pm Full Moon	**14** 87-1979 / 12-2004 sr 733 am ss 631 pm St. Valentine's Day	**15** 83-1945 / 8-1951 sr 732 am ss 632 pm	**16** 79-1959 / 13-1936 sr 731 am ss 633 pm	**17** 85-1970 / 0-1978 sr 730 am ss 634 pm	**18** 83-1996 / -2-1978 sr 728 am ss 635 pm
19 83-1986 / 2-1978 sr 727 am ss 636 pm	**20** 82-1996 / 4-1918 sr 726 am ss 637 pm Presidents' Day (Observed)	**21** 84-1996 / 6-1964 sr 725 am ss 637 pm Last Quarter	**22** 87-1996 / 13-1963 sr 724 am ss 638 pm	**23** 85-1918 / 9-1914 sr 723 am ss 639 pm	**24** 89-1918 / 1-1960 sr 722 am ss 640 pm	**25** 86-1917 / -8-1960 sr 721 am ss 641 pm
26 85-1918 / 8-1935 sr 719 am ss 642 pm	**27** 81-1932 / 10-1934 sr 718 am ss 643 pm	**28** 84-1980 / 7-1922 sr 717 am ss 643 pm New Moon		NOAA WEATHER RADIO CAN BE FOUND AT THE FOLLOWING FREQUENCIES: Lubbock 162.400 Dimmitt 162.500 Plainview 162.450		NATIONAL WEATHER SERVICE

Svr Wx Awareness Week

Pictured (from left to right) are SKYWARN member David Purkiss, WFO Lubbock ITO John Holsenbeck, and SKYWARN members Greg Varoff and Bruce Haynie, as they gather information through a variety of radio frequencies.

There are an over 1000 trained SKYWARN storm spotters across the 24 counties in the South Plains region served by the NWS Office in Lubbock. These volunteers come from all walks of life but most are affiliated with their local law enforcement agencies or fire departments. We also have an amateur radio storm spotting team, the South Plains Storm Spotting Team, that covers the majority of our area of responsibility. Most of our spotters attend annual training conducted by the NWS, which is designed to help them safely navigate severe storms and to correctly interpret what they see in the storm clouds. The information they relay to our office during severe weather events is used to compliment radar data and other meteorological data being analyzed by our warning forecasters and as such is vital to our office's warning program.

Every year, from about February 15 through April 30, staff members from the National Weather Service Lubbock forecast office conduct about 30 spotter training classes. Most classes are held at local fire departments since the vast majority of our spotters are volunteer firefighters. In some cases, the classes are taught at police departments, community centers, etc. For the latest schedule of classes, see our website at:

www.srh.noaa.gov/lub/safety/spotter.html

Lubbock National Weather Service

March 2006

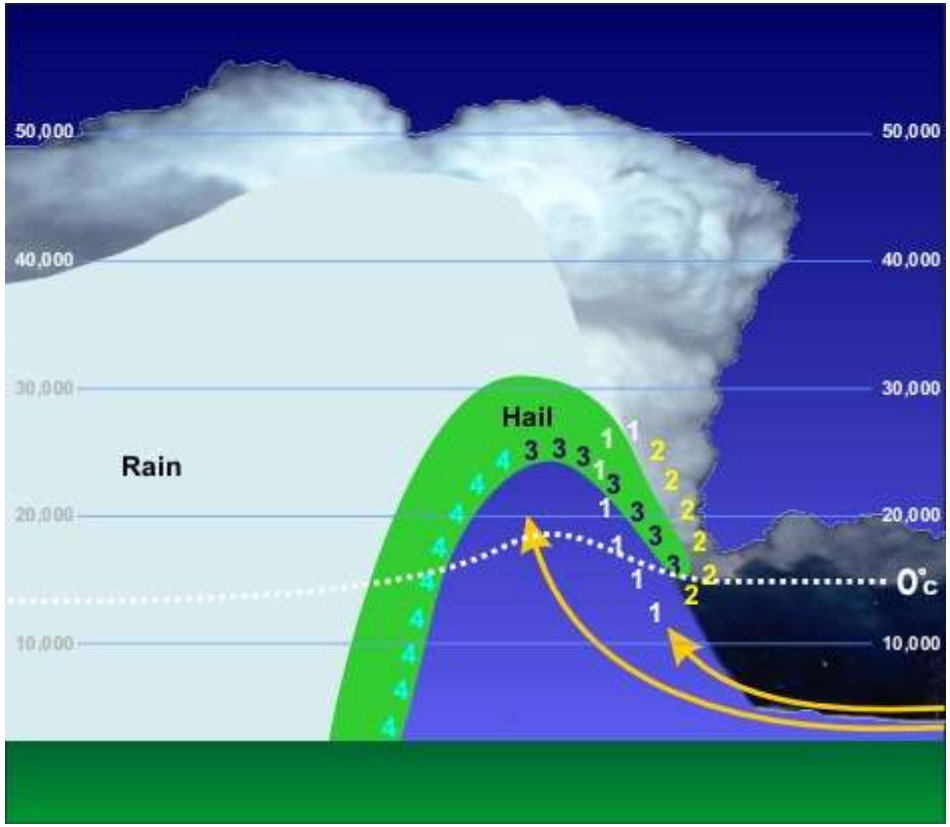
WWW.WEATHER.GOV/LUBBOCK

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1 82-1935 / 5-1922 Lubbock Records sr 716 am - sunrise ss 644 pm – sunset Ash Wednesday	**2** 86-1974 / -2-1922 sr 715 am ss 645 pm	**3** 84-1974 / 7-1943 sr 713 am ss 646 pm	**4** 83-1916 / -1-1917 sr 712 am ss 647 pm
5 90-1916 / 11-1989 sr 711 am ss 647 pm	**6** 87-1929 / 10-1920 sr 710 am ss 648 pm First Quarter	**7** 87-1925 / 11-1996 sr 708 am ss 649 pm	**8** 87-1918 / 12-1967 sr 707 am ss 650 pm	**9** 83-1940 / 13-1924 sr 706 am ss 651 pm	**10** 86-1989 / 4-1948 sr 704 am ss 651 pm	**11** 95-1989 / 2-1948 sr 703 am ss 652 pm
12 94-1989 / 10-1948 sr 702 am ss 653 pm	**13** 91-1916 / 12-1950 sr 701 am ss 654 pm	**14** 86-1972 / 13-1954 sr 659 am ss 655 pm Full Moon	**15** 86-1966 / 17-1947 sr 658 am ss 655 pm	**16** 87-1966 / 16-1923 sr 657 am ss 656 pm	**17** 89-1989 / 18-1917 sr 655 am ss 657 pm St. Patrick's Day	**18** 88-1916 / 11-1923 sr 654 am ss 658 pm
19 87-1995 / 11-1923 sr 653 am ss 658 pm	**20** 90-1960 / 8-1965 sr 651 am ss 659 pm Spring Equinox (1226 pm)	**21** 93-1997 / 17-1955 sr 650 am ss 700 pm	**22** 86-1934 / 18-1914 sr 649 am ss 701 pm Last Quarter	**23** 84-1998 / 13-1952 sr 647 am ss 701 pm	**24** 88-1929 / 22-1965 sr 646 am ss 702 pm	**25** 90-1998 / 20-1996 sr 645 am ss 703 pm
26 88-1956 / 16-1965 sr 643 am ss 704 pm	**27** 94-1971 / 12-1931 sr 642 am ss 704 pm	**28** 90-1963 / 16-1931 sr 640 am ss 705 pm	**29** 89-1967 / 18-1944 sr 639 am ss 706 pm New Moon	**30** 90-1946 / 16-1987 sr 638 am ss 707 pm	**31** 95-1946 / 19-1931 sr 636 am ss 707 pm	NOAA WEATHER RADIO CAN BE FOUND AT THE FOLLOWING FREQUENCIES: Lubbock 162.400 Dimmitt 162.500 Plainview 162.450

Severe Weather Awareness Week

Flood Safety Awareness Week

How Hail is Formed



1. The hail nucleus is carried aloft by the updraft and begins to grow in size as it collides with supercooled raindrops and other small pieces of hail.
2. Sometimes the hailstone is blown out of the main updraft and begins to falls to the earth.
3. If the updraft is strong enough it will move the hailstone back into the cloud where it once again collides with water and hail and grows. This process may be repeated several times.
4. In all cases, when the hailstone can no longer be supported by the updraft it falls to the earth. The stronger the updraft, the larger the hailstones that can be produced by the thunderstorm.

Largest recorded hail stone measured 7 inches in diameter. This stone fell in Aurora, Nebraska on the 22nd of June in 2003.

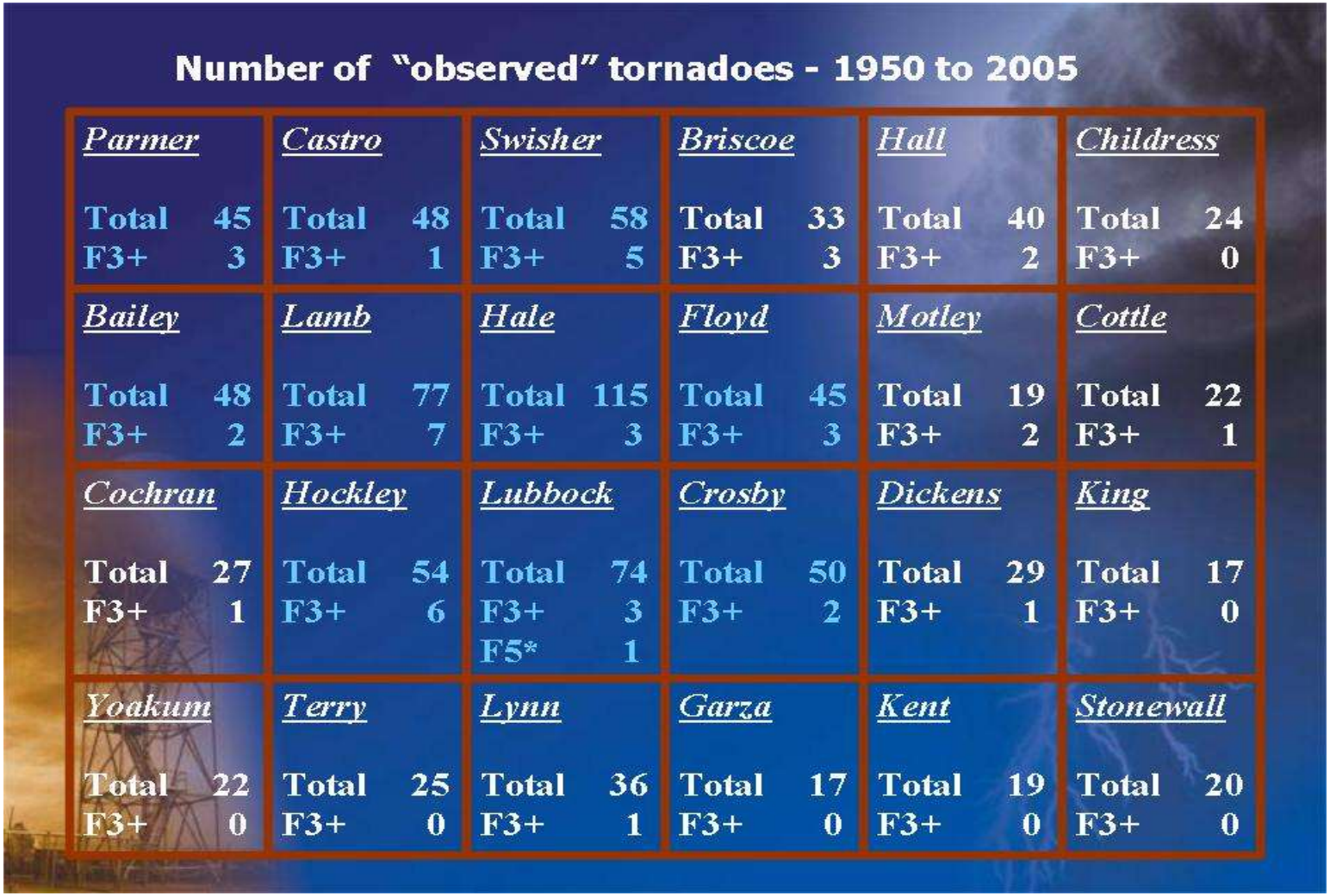
Hailstone size	Measurement		Updraft Speed	
	in.	cm.	mph	m/s
bb	< 1/4	< 0.64	< 24	< 11
pea	1/4	0.64	24	11
marble	1/2	1.3	35	16
dime	7/10	1.8	38	17
penny	3/4	1.9	40	18
nickel	7/8	2.2	46	21
quarter	1	2.5	49	22
half dollar	1 1/4	3.2	54	24
walnut	1 1/2	3.8	60	27
golf ball	1 3/4	4.4	64	29
hen egg	2	5.1	69	31
tennis ball	2 1/2	6.4	77	34
baseball	2 3/4	7.0	81	36
tea cup	3	7.6	84	38
grapefruit	4	10.1	98	44
softball	4 1/2	11.4	103	46

April 2006

Lubbock National Weather Service

WWW.WEATHER.GOV/LUBBOCK

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			NOAA WEATHER RADIO CAN BE FOUND AT THE FOLLOWING FREQUENCIES: Lubbock 162.400 Dimmitt 162.500 Plainview 162.450			**1** 96-1946 / 22-1948 Lubbock Records sr 635 am - sunrise ss 708 pm - sunset April Fool's Day
2 90-1946 / 20-1936 sr 734 am ss 809 pm Daylight Savings Time begins	**3** 90-1950 / 26-1975 sr 732 am ss 810 pm	**4** 92-1928 / 18-1920 sr 731 am ss 810 pm	**5** 92-1946 / 21-1917 sr 730 am ss 811 pm First Quarter	**6** 96-1972 / 21-1936 sr 729 am ss 812 pm	**7** 93-1930 / 21-1936 sr 727 am ss 812 pm	**8** 91-1930 / 23-1938 sr 726 am ss 813 pm
9 94-1939 / 23-1938 sr 725 am ss 814 pm	**10** 93-1934 / 26-1928 sr 723 am ss 815 pm	**11** 94-1972 / 25-1932 sr 722 am ss 815 pm	**12** 96-1972 / 22-1997 sr 721 am ss 816 pm	**13** 91-1932 / 26-1957 sr 720 am ss 817 pm Full Moon	**14** 92-1935 / 27-1933 sr 718 am ss 818 pm	**15** 92-1925 / 25-1928 sr 717 am ss 819 pm
16 100-1925 / 31-1947 sr 716 am ss 819 pm Easter	**17** 94-1925 / 23-1921 sr 715 am ss 820 pm	**18** 96-1987 / 29-1944 sr 713 am ss 821 pm	**19** 92-2001 / 31-1920 sr 712 am ss 821 pm	**20** 93-1925 / 30-1933 sr 711 am sr 822 pm Last Quarter	**21** 98-1965 / 28-1918 sr 710 am ss 823 pm	**22** 100-1989 / 29-1927 sr 709 am ss 824 pm Earth Day
23 97-1989 / 30-1928 sr 708 am ss 824 pm **30** 93-1961 / 33-1918 sr 700 am ss 830 pm	**24** 95-1996 / 30-1968 sr 706 am ss 825 pm	**25** 96-1959 / 35-1918 sr 705 am ss 826 pm	**26** 96-1943 / 29-1947 sr 704 am ss 827 pm	**27** 97-1996 / 27-1920 sr 703 am ss 827 pm New Moon	**28** 94-1992 / 35-1994 sr 702 am ss 828 pm	**29** 96-1928 / 31-1968 sr 701 am ss 829 pm



*** The Lubbock Tornado of May 11, 1970, is the only F5 tornado to occur on the South Plains**

F-Scale	Class	Wind speed (mph)	Description
F0	Weak	40-72	Gale
F1	Weak	73-112	Moderate
F2	Strong	113-157	Significant
F3	Strong	158-206	Severe
F4	Violent	207-260	Devastating
F5	Violent	261-318	Incredible

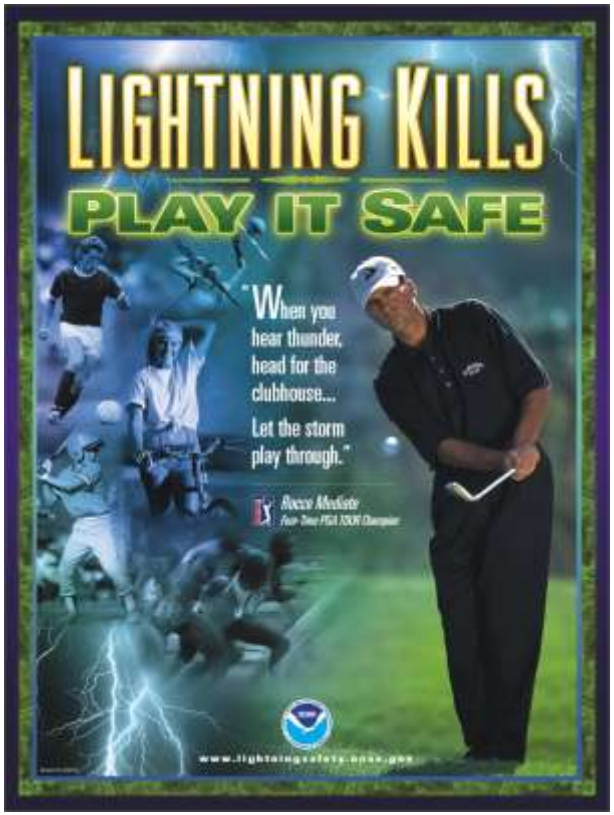
Lubbock National Weather Service

May 2006

WWW.WEATHER.GOV/LUBBOCK

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1 96-1992 / 32-1970 Lubbock Records sr 659 am - sunrise ss 831 pm - sunset	**2** 97-1943 / 30-1967 sr 658 am ss 831 pm	**3** 98-1996 / 30-1918 sr 657 am ss 832 pm	**4** 104-1947 / 35-1933 sr 656 am ss 833 pm	**5** 99-1940 / 34-1953 sr 655 am ss 834 pm First Quarter Cinco De Mayo	**6** 99-2000 / 32-1917 sr 654 am ss 834 pm
7 99-2000 / 29-1917 sr 653 am ss 835 pm	**8** 102-1989 / 31-1938 sr 653 am ss 836 pm	**9** 97-1996 / 38-1961 sr 652 am ss 837 pm	**10** 99-2000 / 33-1918 sr 651 am ss 837 pm	**11** 101-2000 / 37-1930 sr 650 am ss 838 pm	**12** 98-1962 / 35-1960 sr 649 am ss 839 pm	**13** 98-2003 / 37-1953 sr 648 am ss 840 pm Full Moon
14 100-1996 / 35-1953 sr 648 am ss 840 pm Mother's Day	**15** 103-1996 / 34-1967 sr 647 am ss 841 pm	**16** 102-1996 / 37-1945 sr 646 am ss 842 pm	**17** 101-1996 / 41-1916 sr 646 am ss 843 pm	**18** 103-2003 / 42-1916 sr 645 am ss 843 pm	**19** 105-1996 / 42-1971 sr 644 am ss 844 pm	**20** 100-1998 / 40-1931 sr 644 am ss 845 pm Last Quarter
21 101-1966 / 39-1967 sr 643 am ss 845 pm	**22** 105-1996 / 40-1931 sr 643 am ss 846 pm	**23** 105-2000 / 45-1917 sr 642 am ss 847 pm	**24** 109-2000 / 40-1930 sr 642 am ss 847 pm	**25** 101-1953 / 44-1924 sr 641 am ss 848 pm	**26** 101-1945 / 43-1950 sr 641 am ss 849 pm	**27** 103-1984 / 48-1961 sr 640 am ss 849 pm New Moon
28 102-1974 / 43-1917 sr 640 am ss 850 pm	**29** 104-1938 / 38-1947 sr 639 am ss 851 pm Memorial Day	**30** 103-1998 / 45-1947 sr 639 am ss 851 pm	**31** 102-1916 / 43-1983 sr 639 am ss 852 pm		NOAA WEATHER RADIO CAN BE FOUND AT THE FOLLOWING FREQUENCIES: Lubbock 162.400 Dimmitt 162.500 Plainview 162.450	

Hurricane Awareness Week



30 seconds
30 minutes

The 30/30 Rule states that people should seek shelter if the "Flash-To-Bang" delay is 30 seconds or less, and they remain under cover until 30 minutes after the final clap of thunder.

IF YOU CAN HEAR THUNDER, YOU ARE WITHIN STRIKING DISTANCE.
SEEK SAFE SHELTER IMMEDIATELY!

June 2006

Lubbock National Weather Service

WWW.WEATHER.GOV/LUBBOCK

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		NOAA WEATHER RADIO CAN BE FOUND AT THE FOLLOWING FREQUENCIES: Lubbock 162.400 Dimmitt 162.500 Plainview 162.450		**1** 107-1998 / 45-1917 Lubbock Records sr 638 am - sunrise ss 853 pm - sunset Beginning of the Atlantic Hurricane Season	**2** 107-1998 / 39-1917 sr 638 am ss 853 pm	**3** 104-1998 / 43-1919 sr 638 am ss 854 pm First Quarter
4 101-1933 / 47-1970 sr 638 am ss 854 pm	**5** 106-1990 / 45-1928 sr 637 am ss 855 pm	**6** 107-1990 / 45-1917 sr 637 am ss 855 pm	**7** 103-1994 / 45-1915 sr 637 am ss 856 pm	**8** 106-1981 / 43-1915 sr 637 am ss 856 pm	**9** 107-1981 / 50-1923 sr 637 am ss 857 pm	**10** 105-1917 / 47-1955 sr 637 am ss 857 pm
11 105-1934 / 50-1940 sr 637 am ss 858 pm Full Moon	**12** 105-2001 / 52-1945 sr 637 am ss 858 pm	**13** 105-1931 / 53-1947 sr 637 am ss 858 pm	**14** 106-1939 / 44-1947 sr 637 am ss 859 pm Flag Day	**15** 109-1939 / 49-1927 sr 637 am ss 859 pm	**16** 108-1924 / 49-1917 sr 637 am ss 859 pm	**17** 107-1924 / 53-1999 sr 637 am ss 900 pm
18 107-1924 / 56-1922 sr 637 am ss 900 pm Last Quarter Father's Day	**19** 106-1998 / 52-1945 sr 637 am ss 900 pm	**20** 108-1935 / 49-1973 sr 638 am ss 901 pm	**21** 107-1981 / 54-1946 sr 638 am ss 901 pm Summer Solstice (726 am)	**22** 106-1978 / 50-1927 sr 638 am ss 901 pm	**23** 107-1980 / 56-1927 sr 638 am ss 901 pm	**24** 110-1990 / 56-1957 sr 639 am ss 901 pm
25 108-1994 / 54-1940 sr 639 am ss 901 pm New Moon	**26** 111-1994 / 53-1958 sr 639 am ss 901 pm	**27** 114-1994 / 56-1958 sr 640 am ss 902 pm	**28** 108-1928 / 56-1946 sr 640 am ss 902 pm	**29** 107-1957 / 57-1948 sr 640 am ss 902 pm	**30** 106-1957 / 57-1940 sr 641 am ss 902 pm	

Lightning Safety Awareness Week

Celestial Sights

2006 Major Meteor Showers

Shower	Dates	Peak	Notes
Quadrantids	Jan 1-5	Jan 3	
Lyrids	Apr 16-25	Apr 22	sporadic
Southern Delta Aquarids	Jul 18-Aug 18	Jul 28	sporadic
Perseids	Jul 23-Aug 22	Aug 12	one of best
Orionids	Oct 15-29	Oct 21	sporadic
Leonids	Nov 14-21	Nov 17	
Geminids	Dec 7-17	Dec 14	one of best

The above image shows the view of the October 29, 2003 aurora from just northwest of Midland, Texas. The photo was taken around 4 am, and depicts an intense auroral substorm that was highly visible to the unaided eye in the form of brilliant crimson colored vertical rays of light.

The image to the right shows the view of the Hale-Bopp comet in March of 1997. The picture was taken from near Clarendon, Texas.

July 2006

Lubbock National Weather Service

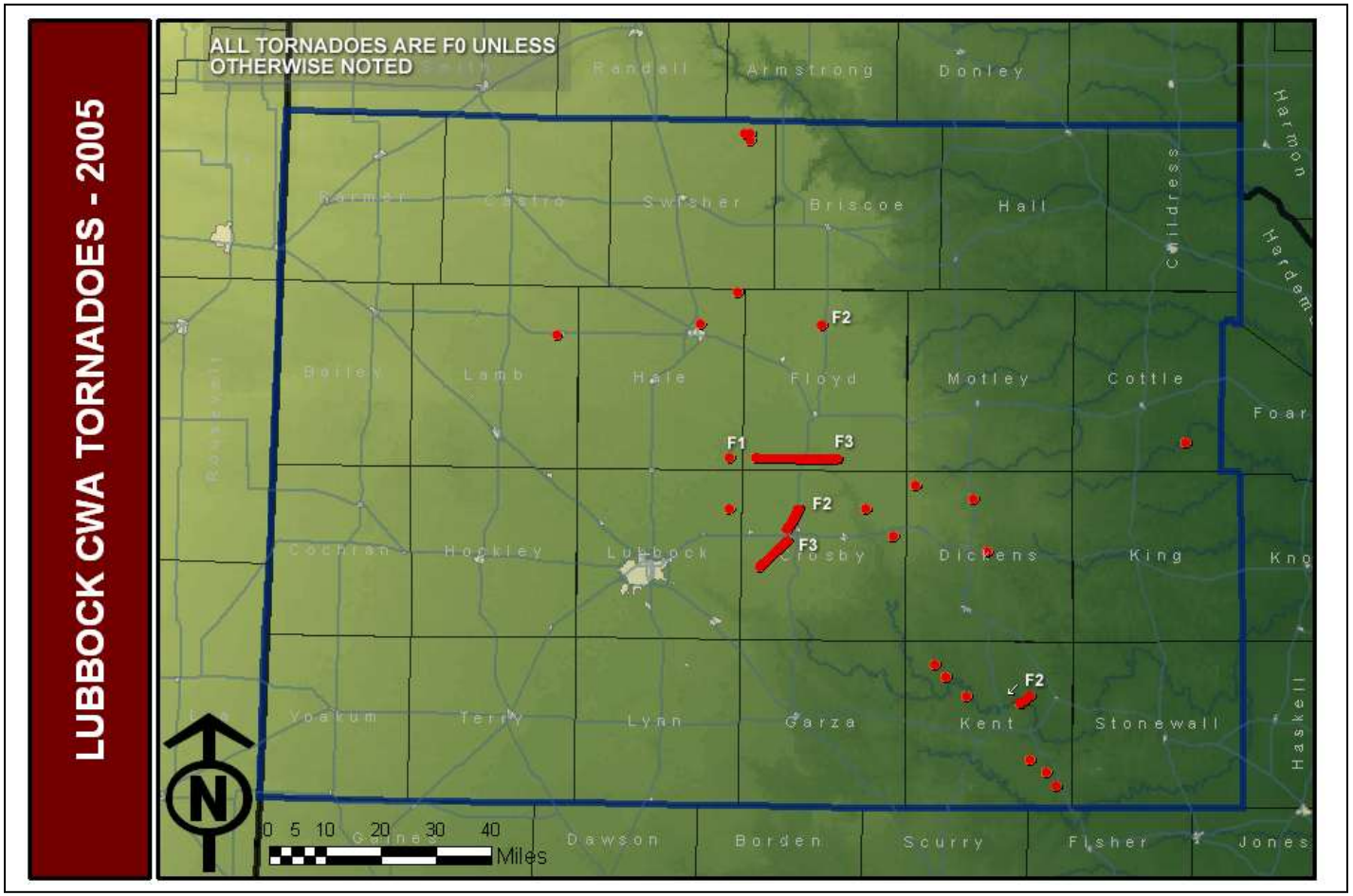
WWW.WEATHER.GOV/LUBBOCK

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	NOAA WEATHER RADIO CAN BE FOUND AT THE FOLLOWING FREQUENCIES: Lubbock 162.400 Dimmitt 162.500 Plainview 162.450					**1** 105-1994 / 56-1924 Lubbock Records sr 641 am - sunrise ss 902 pm - sunset
2 106-1989 / 56-1944 sr 641 am ss 902 pm	**3** 108-1983 / 54-1924 sr 642 am ss 901 pm First Quarter	**4** 105-1987 / 56-1922 sr 642 am ss 901 pm Independence Day	**5** 104-1971 / 49-1915 sr 643 am ss 901 pm	**6** 105-1994 / 53-1946 sr 643 am ss 901 pm	**7** 103-1998 / 51-1952 sr 644 am ss 901 pm	**8** 103-1939 / 51-1952 sr 644 am ss 901 pm
9 107-1940 / 56-1952 sr 645 am ss 900 pm	**10** 109-1940 / 58-1915 sr 645 am ss 900 pm Full Moon	**11** 104-1933 / 57-1999 sr 646 am ss 900 pm	**12** 105-1933 / 57-1999 sr 647 am ss 859 pm	**13** 107-1933 / 54-1953 sr 647 am ss 859 pm	**14** 108-1933 / 55-1950 sr 648 am ss 859 pm	**15** 105-2001 / 58-1926 sr 648 am ss 858 pm
16 105-2001 / 58-1926 sr 649 am ss 858 pm	**17** 105-1989 / 59-1930 sr 650 am ss 857 pm Last Quarter	**18** 103-1978 / 60-1935 sr 650 am ss 857 pm	**19** 108-1936 / 55-1947 sr 651 am ss 856 pm	**20** 105-1925 / 59-1971 sr 652 am ss 856 pm	**21** 102-1951 / 57-1988 sr 652 am ss 855 pm	**22** 102-2001 / 55-1915 sr 653 am ss 855 pm
23 104-2001 / 54-1915 sr 654 am ss 854 pm **30** 104-1946 / 60-2000 sr 658 am ss 849 pm	**24** 104-1943 / 57-1915 sr 654 am ss 853 pm New Moon 104-1934//56-1971 **31** sr 659 am ss 848 pm	**25** 104-1940 / 59-1916 sr 655 am ss 853 pm	**26** 105-1995 / 58-1942 sr 656 am ss 852 pm	**27** 106-1995 / 57-1933 sr 656 am ss 851 pm	**28** 105-1995 / 54-2005 sr 657 am ss 851 pm	**29** 102-1948 / 60-2004 sr 658 am ss 850 pm

Near Ralls, May 12, 2005

Petersburg, June 9, 2005

Petersburg, June 9, 2005



Since 1990, the average number of tornadoes impacting the Lubbock County Warning Area is just under 17. However, 2005 was well above normal, producing 26 tornadoes (9 in May and 17 in June). Additionally, the 2005 tornado season was significant in that a great number of the tornadoes were long-lived and quite large (see above image for tornado tracks). Unfortunately, a few of these occurred in areas susceptible to structural damage (see pictures to the left), resulting in F2 and F3 Fujita damage ratings. However you look at it, 2005 was a very active tornado season!

August 2006

Lubbock National Weather Service

WWW.WEATHER.GOV/LUBBOCK

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
NOAA WEATHER RADIO CAN BE FOUND AT THE FOLLOWING FREQUENCIES: Lubbock 162.400 Dimmitt 162.500 Plainview 162.450		**1** 106-1966 / 55-1925 Lubbock Records sr 700 am - sunrise ss 847 pm - sunset	**2** 105-1943 / 54-1925 sr 701 am ss 847 pm First Quarter	**3** 107-1944 / 56-1921 sr 701 am ss 846 pm	**4** 105-2003 / 57-1915 sr 702 am ss 845 pm	**5** 102-2003 / 57-1915 sr 703 am ss 844 pm
6 102-2003 / 57-1990 sr 703 am ss 843 pm	**7** 104-2003 / 58-1971 sr 704 am ss 842 pm	**8** 105-2003 / 58-1989 sr 705 am ss 841 pm	**9** 101-1943 / 51-1946 sr 705 am ss 840 pm Full Moon	**10** 103-1935 / 55-1915 sr 706 am ss 839 pm	**11** 103-1936 / 56-1915 sr 707 am ss 838 pm	**12** 107-1936 / 54-1979 sr 708 am ss 837 pm
13 107-1936 / 54-1920 sr 708 am ss 836 pm	**14** 103-1946 / 53-1920 sr 709 am ss 835 pm	**15** 103-1982 / 56-1920 sr 710 am ss 834 pm Last Quarter	**16** 104-1943 / 55-1931 sr 710 am ss 833 pm	**17** 103-1978 / 55-1915 sr 711 am ss 831 pm	**18** 103-1994 / 55-1943 sr 712 am ss 830 pm	**19** 103-1994 / 58-1950 sr 713 am ss 829 pm
20 103-1930 / 54-1915 sr 713 am ss 828 pm	**21** 103-1930 / 52-1956 sr 714 am ss 827 pm	**22** 100-1999 / 58-1915 sr 715 am ss 826 pm	**23** 101-1985 / 54-1923 sr 715 am ss 824 pm New Moon	**24** 101-1936 / 51-1916 sr 716 am ss 823 pm	**25** 105-1936 / 54-1962 sr 717 am ss 822 pm	**26** 102-1922 / 53-1962 sr 717 am ss 821 pm
27 100-1931 / 53-1926 sr 718 am ss 819 pm	**28** 100-1943 / 54-1916 sr 719 am ss 818 pm	**29** 99-1943 / 54-1917 sr 719 am ss 817 pm	**30** 101-1943 / 44-1915 sr 720 am ss 815 pm	**31** 100-1930 / 43-1915 sr 721 am ss 814 pm First Quarter		NATIONAL WEATHER SERVICE

2005 Hurricane Season Most Active on Record

The 2005 Hurricane season went down in the record books as the most active hurricane season. The 2005 season produced 27 named storms, breaking the previous record of 21 set in 1933. Of the 27 named storms, 13 became hurricanes, breaking the previous record of 12 set in 1969. Additionally, seven of the hurricanes became major hurricanes (Category 3 or higher on the Saffir-Simpson scale), including Katrina, Rita, and Wilma, which reached the pinnacle Category 5 status. This was the first time since 1851 that three category five storms have been known to occur in a season. Also, this was the first time the Greek alphabet was required to name storms since they began naming storms in 1953.

The 2005 Season

- 27 Storms (Avg 11)
- 13 Hurricanes (Avg 6)
- 7 Major Hurricane (Avg 2)
- 4 Major U.S. Landfalls (previous record 3, 2003)
- 3 Category 5 Hurricanes (previous record 2, 1960, 1961)
- 7 Tropical Storms before Aug 1 (previous record 5, 1997)
- Costliest: Katrina ($80B +) (previous Andrew, $26.5B)
- Deadliest U.S. hurricane since 1928: Katrina, 1,300+ lives lost
- Strongest hurricane in the Atlantic Basin: Wilma, with a lowest pressure of 882 mb (previous record: Gilbert, 888 mb)
- Three of the six strongest Atlantic basin hurricanes (Wilma 882 mb, Rita 897 mb, and Katrina 902 mb)

Saffir-Simpson Scale

Category	Winds (mph)	Description (damage)
1	74-95	Minimal
2	96-110	Moderate
3	111-130	Extensive
4	131-155	Extreme
5	> 155	Catastrophic

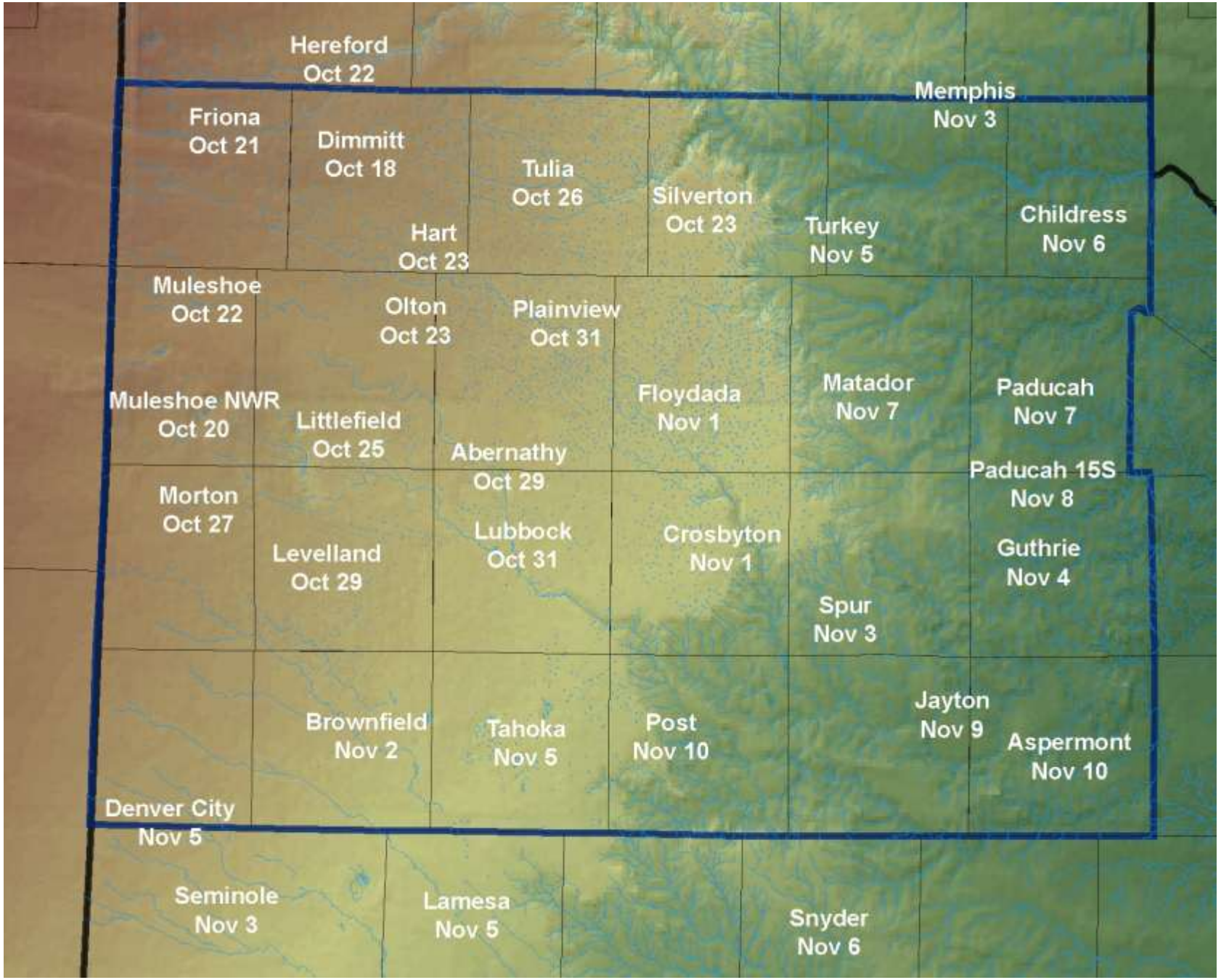
September 2006

Lubbock National Weather Service

WWW.WEATHER.GOV/LUBBOCK

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	NOAA WEATHER RADIO CAN BE FOUND AT THE FOLLOWING FREQUENCIES: Lubbock 162.400 Dimmitt 162.500 Plainview 162.450				**1** 99-1922 / 43-1915 Lubbock Records sr 721 am - sunrise ss 813 pm - sunset	**2** 101-1947 / 50-1915 sr 722 am ss 812 pm
3 101-2000 / 48-1915 sr 723 am ss 810 pm	**4** 101-2000 / 47-1961 sr 723 am ss 809 pm Labor Day	**5** 102-2000 / 46-1961 sr 724 am ss 808 pm	**6** 103-1948 / 51-1918 sr 725 am ss 806 pm	**7** 98-2000 / 45-1918 sr 725 am ss 805 pm Full Moon	**8** 97-1915 / 47-2004 sr 726 am ss 803 pm	**9** 99-1984 / 47-1956 sr 727 am ss 802 pm
10 100-2000 / 47-1956 sr 728 am ss 801 pm	**11** 103-2000 / 47-1959 sr 728 am ss 759 pm	**12** 100-1930 / 44-1959 sr 729 am ss 758 pm	**13** 101-1930 / 43-1959 sr 730 am ss 757 pm	**14** 100-1965 / 42-1945 sr 730 am ss 755 pm Last Quarter	**15** 99-1956 / 42-1993 sr 731 am ss 754 pm	**16** 100-1965 / 42-1951 sr 732 am ss 752 pm
17 98-2005 / 42-1951 sr 732 am ss 751 pm	**18** 98-1997 / 43-1971 sr 733 am ss 750 pm	**19** 105-1930 / 42-1991 sr 734 am ss 748 pm	**20** 98-1977 / 41-1971 sr 734 am ss 747 pm	**21** 98-1998 / 33-1983 sr 735 am ss 746 pm	**22** 98-1977 / 40-1995 sr 736 am ss 744 pm New Moon Autumnal Equinox (1103 pm)	**23** 98-1926 / 42-1989 sr 736 am ss 743 pm
24 97-1953 / 38-1989 sr 737 am ss 741 pm	**25** 100-2005 / 36-2000 sr 738 am ss 740 pm	**26** 99-1953 / 36-1926 sr 738 am ss 739 pm	**27** 100-1953 / 39-1917 sr 739 am ss 737 pm	**28** 98-1994 / 36-1918 sr 740 am ss 736 pm	**29** 97-1977 / 33-1916 sr 740 am ss 735 pm	**30** 99-1977 / 35-1985 sr 741 am ss 733 pm First Quarter

AVERAGE FIRST FREEZE DATES



October 2006

Lubbock National Weather Service

WWW.WEATHER.GOV/LUBBOCK

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
1 98-2000 / 39-1985 Lubbock Records sr 742 am - sunrise ss 732 pm - sunset	**2** 99-2000 / 40-1975 sr 743 am ss 731 pm	**3** 100-2000 / 35-1961 sr 743 am ss 729 pm	**4** 96-2000 / 41-1961 sr 744 am ss 728 pm	**5** 97-1934 / 33-1932 sr 745 am ss 727 pm	**6** 94-1931 / 34-2001 sr 745 am ss 725 pm Full Moon	**7** 98-1979 / 31-1952 sr 746 am ss 724 pm
8 98-1979 / 31-1976 sr 747 am ss 723 pm	**9** 93-1965 / 29-1970 sr 748 am ss 721 pm	**10** 93-1965 / 38-1993 sr 748 am ss 720 pm Columbus Day	**11** 93-1979 / 38-1932 sr 749 am ss 719 pm	**12** 92-1989 / 33-1927 sr 750 am ss 717 pm	**13** 92-1989 / 28-1969 sr 751 am ss 716 pm Last Quarter	**14** 91-1917 / 31-1969 sr 751 am ss 715 pm
15 92-1917 / 31-1966 sr 752 am ss 714 pm	**16** 92-1917 / 30-2001 sr 753 am ss 713 pm	**17** 93-1988 / 32-1999 sr 754 am ss 711 pm	**18** 90-2001 / 32-1968 sr 755 am ss 710 pm	**19** 92-1940 / 24-1917 sr 755 am ss 709 pm	**20** 89-1920 / 25-1916 sr 756 am ss 708 pm	**21** 88-1961 / 26-1917 sr 757 am ss 707 pm
22 89-1961 / 28-1945 sr 758 am ss 706 pm New Moon	**23** 88-1921 / 22-1917 sr 759 am ss 704 pm	**24** 91-1933 / 26-1929 sr 800 am ss 703 pm	**25** 91-1959 / 30-1955 sr 800 am ss 702 pm	**26** 88-1979 / 29-1932 sr 801 am ss 701 pm	**27** 87-1922 / 26-1997 sr 802 am ss 700 pm	**28** 91-1943 / 25-1925 sr 803 am ss 659 pm
29 90-2003 / 20-1917 sr 704 am ss 558 pm First Quarter Central Standard Time Begins	**30** 88-1934 / 18-1993 sr 705 am ss 558 pm	**31** 88-1934 / 20-1991 sr 706 am ss 556 pm Halloween		NOAA WEATHER RADIO CAN BE FOUND AT THE FOLLOWING FREQUENCIES: Lubbock 162.400 Dimmitt 162.500 Plainview 162.450	NATIONAL WEATHER SERVICE	


Photo by Erin Shaw


Photo by John Lipe

WINTER WEATHER PREPAREDNESS

Winter storms are considered deceptive killers because most of the deaths are indirectly related to the storm:

- People die in traffic accidents on icy roads
- People die of heart attacks while shoveling snow
- People die of hypothermia from prolonged exposure to cold, even with temperatures above freezing.

When caught in a winter storm. . .

If outside: Find shelter, try to stay dry and cover all exposed parts of the body. If no shelter, prepare a lean-to or wind-break for protection from the wind. Build a fire for heat and to attract attention; place rocks around the fire to absorb and reflect the heat. Do not eat snow; it will lower your body temperature. Melt it first.

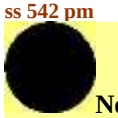
If in a car: Stay in your car or truck. Disorientation occurs quickly in wind-driven snow and cold. Run the motor about 10 minutes each hour for heat; open the window a little for fresh air to avoid carbon monoxide poisoning, and make sure the exhaust pipe is not blocked. Make yourself visible to rescuers; turn on the dome light at night when running the engine. Tie a colored cloth (preferably red) to your antenna or door. Raise the hood to indicate trouble after the snow stops falling. Exercise from time to time by vigorously moving arms, legs, fingers, and toes to keep blood circulating and to keep warm.

If inside: Stay inside. When using alternative heat from a fireplace, wood stove, space heater, etc. use fire safeguards and proper ventilation. If you have no heat, close off unneeded rooms and stuff towels or rags in cracks under doors. Cover windows at night. Eat and drink. Food provides the body with energy for producing its own heat. Keep the body replenished with fluids to prevent dehydration. Wear layers of loose-fitting, light-weight, warm clothing. Remove layers to avoid overheating, perspiration, and subsequent chill.

November 2006

Lubbock National Weather Service

WWW.WEATHER.GOV/LUBBOCK

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	NOAA WEATHER RADIO CAN BE FOUND AT THE FOLLOWING FREQUENCIES: Lubbock 162.400 Dimmitt 162.500 Plainview 162.450		**1** 85-1994 / 23-1951 Lubbock Records sr 706 am - sunrise ss 555 pm - sunset	**2** 83-2001 / 19-1951 sr 707 am ss 554 pm	**3** 88-2005 / 7-1991 sr 708 am ss 554 pm	**4** 86-1916 / 20-1950 sr 709 am ss 553 pm
5 86-1916 / 22-1959 sr 710 am ss 552 pm  Full Moon	**6** 85-1975 / 16-1959 sr 711 am ss 551 pm	**7** 89-1916 / 19-1947 sr 712 am ss 550 pm	**8** 86-1980 / 20-1943 sr 713 am ss 549 pm	**9** 83-1942 / 21-1943 sr 714 am ss 549 pm	**10** 85-1927 / 19-1950 sr 715 am ss 548 pm	**11** 82-1956 / 16-1947 sr 715 am ss 547 pm Veteran's Day
12 85-1995 / 19-1915 sr 716 am ss 547 pm  Last Quarter	**13** 82-1973 / 14-1976 sr 717 am ss 546 pm	**14** 85-1933 / 4-1976 sr 718 am ss 545 pm	**15** 88-1948 / 10-1916 sr 719 am ss 545 pm	**16** 83-1966 / 11-1916 sr 720 am ss 544 pm	**17** 85-1966 / 10-1959 sr 721 am ss 544 pm	**18** 82-1999 / 16-1951 sr 722 am ss 543 pm
19 85-1996 / 14-1921 sr 723 am ss 543 pm	**20** 88-1996 / 17-1937 sr 724 am ss 542 pm  New Moon	**21** 84-1927 / 18-1956 sr 725 am ss 542 pm	**22** 81-1998 / 6-1957 sr 726 am ss 541 pm	**23** 84-1965 / -1-1957 sr 727 am ss 541 pm Thanksgiving Day	**24** 82-1915 / 7-1938 sr 727 am ss 541 pm	**25** 86-1965 / 15-1993 sr 728 am ss 540 pm
26 82-1970 / 8-1980 sr 729 am ss 540 pm	**27** 81-1950 / 12-1938 sr 730 am ss 540 pm	**28** 83-1949 / 5-1976 sr 731 am ss 540 pm  First Quarter	**29** 76-1927 / 1-1976 sr 732 am ss 540 pm	**30** 80-1946 / 10-1918 sr 733 am ss 539 pm End of the Atlantic Hurricane Season		

WIND CHILL TEMPERATURE

TEMP	Wind (mph)																							TEMP
	0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	45	50	
40	40	40	37	36	35	34	33	32	32	31	30	30	30	29	29	28	28	28	28	27	27	26	26	40
38	38	38	35	33	32	31	30	30	29	28	28	27	27	27	26	26	25	25	25	24	24	23	23	38
36	36	35	33	31	30	29	28	27	26	26	25	25	24	24	23	23	23	22	22	22	21	21	20	36
34	34	33	30	29	27	26	25	25	24	23	23	22	22	21	21	20	20	20	19	19	19	18	17	34
32	32	31	28	26	25	24	23	22	21	21	20	19	19	18	18	18	17	17	16	16	16	15	14	32
30	30	29	26	24	22	21	20	19	19	18	17	17	16	16	15	15	14	14	14	13	13	12	12	30
28	28	27	23	21	20	19	18	17	16	15	15	14	14	13	13	12	12	11	11	11	10	9	9	28
26	26	24	21	19	18	16	15	14	14	13	12	12	11	10	10	9	9	9	8	8	7	7	6	26
24	24	22	19	17	15	14	13	12	11	10	9	9	8	8	7	7	6	6	5	5	5	4	3	24
22	22	20	17	14	13	11	10	9	8	8	7	6	6	5	5	4	4	3	3	2	2	1	0	22
20	20	18	14	12	10	9	8	7	6	5	4	4	3	2	2	1	1	0	-0	-1	-1	-2	-3	20
18	18	16	12	10	8	6	5	4	3	2	2	1	0	-0	-1	-1	-2	-2	-3	-3	-4	-5	-6	18
16	16	13	10	7	5	4	3	2	1	-0	-1	-2	-2	-3	-4	-4	-5	-5	-6	-6	-6	-7	-8	16
14	14	11	7	5	3	1	0	-1	-2	-3	-4	-4	-5	-6	-6	-7	-7	-8	-8	-9	-9	-10	-11	14
12	12	9	5	2	0	-1	-2	-4	-5	-5	-6	-7	-8	-8	-9	-10	-10	-11	-11	-12	-12	-13	-14	12
10	10	7	3	0	-2	-4	-5	-6	-7	-8	-9	-10	-10	-11	-12	-12	-13	-13	-14	-14	-15	-16	-17	10
8	8	5	0	-2	-4	-6	-7	-9	-10	-11	-12	-12	-13	-14	-14	-15	-16	-16	-17	-17	-18	-19	-20	8
6	6	2	-2	-5	-7	-8	-10	-11	-12	-13	-14	-15	-16	-16	-17	-18	-18	-19	-19	-20	-20	-22	-23	6
4	4	0	-4	-7	-9	-11	-12	-14	-15	-16	-17	-18	-18	-19	-20	-20	-21	-22	-22	-23	-23	-24	-25	4
2	2	-2	-7	-9	-12	-13	-15	-16	-17	-18	-19	-20	-21	-22	-22	-23	-24	-24	-25	-25	-26	-27	-28	2
0	0	-4	-9	-12	-14	-16	-17	-19	-20	-21	-22	-23	-24	-24	-25	-26	-27	-27	-28	-28	-29	-30	-31	0
-2	-2	-6	-11	-14	-17	-18	-20	-21	-23	-24	-25	-26	-26	-27	-28	-29	-29	-30	-30	-31	-32	-33	-34	-2
-4	-4	-9	-14	-17	-19	-21	-22	-24	-25	-26	-27	-28	-29	-30	-31	-31	-32	-33	-33	-34	-34	-36	-37	-4
-6	-6	-11	-16	-19	-21	-23	-25	-26	-28	-29	-30	-31	-32	-33	-33	-34	-35	-35	-36	-37	-37	-38	-40	-6
-8	-8	-13	-18	-21	-24	-26	-28	-29	-30	-31	-32	-33	-34	-35	-36	-37	-37	-38	-39	-39	-40	-41	-42	-8
-10	-10	-15	-20	-24	-26	-28	-30	-32	-33	-34	-35	-36	-37	-38	-39	-39	-40	-41	-41	-42	-43	-44	-45	-10
-12	-12	-17	-23	-26	-29	-31	-33	-34	-35	-37	-38	-39	-40	-41	-41	-42	-43	-44	-44	-45	-45	-47	-48	-12
-14	-14	-20	-25	-29	-31	-33	-35	-37	-38	-39	-40	-41	-42	-43	-44	-45	-46	-46	-47	-48	-48	-50	-51	-14
-16	-16	-22	-27	-31	-34	-36	-38	-39	-41	-42	-43	-44	-45	-46	-47	-48	-48	-49	-50	-50	-51	-53	-54	-16
-18	-18	-24	-30	-33	-36	-38	-40	-42	-43	-44	-46	-47	-48	-49	-49	-50	-51	-52	-53	-53	-54	-55	-57	-18
-20	-20	-26	-32	-36	-38	-41	-43	-44	-46	-47	-48	-49	-50	-51	-52	-53	-54	-55	-55	-56	-57	-58	-60	-20
TEMP	0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	45	50	TEMP
	Wind (mph)																							

The wind chill is the effect of the wind on people and animals. The wind chill temperature is based on the rate of heat loss from exposed skin caused by wind and cold and gives you an approximation of how cold the air feels on your body.

As the wind speed increases, it removes heat from the body, driving down skin temperature and eventually the internal body temperature. Therefore, the wind makes it *FEEL* much colder. If the temperature is 0°F (-18°C) and the wind is blowing at 15 mph (13 kts), the wind chill temperature is -19°F (-28°C). At this level, exposed skin can freeze in just a few minutes.

The only effect wind chill has on inanimate objects, such as car radiators and water pipes, is to shorten the amount of time for the object to cool. The inanimate object will not cool below the actual air temperature. For example, if the temperature outside is -5°F (-21°C) and the wind chill temperature is -31°F (-35°C), then your car's radiator temperature will be no lower than the air temperature of -5°F (-21°C).

Wind Chill	Cold Threat
21°F to 40°F	COLD. Unpleasant.
1°F to 20°F	VERY COLD. Very unpleasant.
-19°F to 0°F	BITTER COLD. Frostbite possible. Exposed skin can freeze within 5 minutes.
-20°F to -69°F	EXTREMELY COLD. Frostbite likely. Exposed skin can freeze within 1 minute. Outdoor activity becomes dangerous.

Lubbock National Weather Service

December 2006

WWW.WEATHER.GOV/LUBBOCK

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	NOAA WEATHER RADIO CAN BE FOUND AT THE FOLLOWING FREQUENCIES: Lubbock 162.400 Dimmitt 162.500 Plainview 162.450				76-1995 / 12-1918 Lubbock Records **1** sr 734 am - sunrise ss 539 pm - sunset	80-2005 / 13-1915 **2** sr 735 am ss 539 pm
79-1926 / 15-1967 **3** sr 735 am ss 539 pm	81-1958 / 15-1921 **4** sr 736 am ss 539 pm Full Moon	79-1939 / 10-1950 **5** sr 737 am ss 539 pm	83-1939 / 1-1950 **6** sr 738 am ss 539 pm	78-2003 / 8-2005 **7** sr 739 am ss 539 pm	78-1970 / 3-1917 **8** sr 739 am ss 539 pm	80-1939 / 5-1978 **9** sr 740 am ss 539 pm
81-1933 / 5-1917 **10** sr 741 am ss 540 pm	80-1939 / 6-1917 **11** sr 742 am ss 540 pm	82-1937 / 6-1961 **12** sr 742 am ss 540 pm Last Quarter	79-1921 / 5-1917 **13** sr 743 am ss 540 pm	75-1922 / 8-1919 **14** sr 744 am ss 541 pm	76-1977 / 10-1917 **15** sr 744 am ss 541 pm	76-1939 / 11-1914 **16** sr 745 am ss 541 pm
78-1980 / 5-1932 **17** sr 746 am ss 542 pm	77-1980 / 6-1996 **18** sr 746 am ss 542 pm	76-1921 / 0-1924 **19** sr 747 am ss 542 pm	80-1921 / 3-1924 **20** sr 747 am ss 543 pm New Moon	78-1981 / 2-1983 **21** sr 748 am ss 543 pm Winter Solstice (622 pm)	79-1955 / 1-1983 **22** sr 748 am ss 544 pm	80-1964 / 3-1983 **23** sr 749 am ss 544 pm
80-1955 / 0-1983 **24** sr 749 am ss 545 pm 74-1920 / 8-1923 **31** sr 752 am ss 550 pm New Year's Eve	76-1955 / -1-1924 **25** sr 750 am ss 546 pm Christmas	73-1980 / 0-1918 **26** sr 750 am ss 546 pm	76-1976 / 3-1918 **27** sr 751 am ss 547 pm First Quarter	81-1928 / -2-1924 **28** sr 751 am ss 548 pm	77-1920 / -1-1939 **29** sr 751 am ss 548 pm	77-1951 / 7-2000 **30** sr 751 am ss 549 pm

ACT NOW!

Prepare a Home Severe Weather Plan—

- Pick a place where family members could gather if a tornado is headed your way. It could be your basement or, if there is no basement, a center hallway, bathroom, or closet on the lowest floor. Keep this place uncluttered.
- If you are in a high-rise building, you may not have enough time to go to the lowest floor. Pick a place in a hallway in the center of the building.

Assemble a Disaster Supplies Kit containing—

- First aid kit and essential medications.
- Canned food and can opener.
- At least three gallons of water per person.
- Protective clothing, bedding, or sleeping bags.
- Battery-powered radio, flashlight, NOAA Weather Radio All Hazards, and extra batteries.
- Special items for infant, elderly, or disabled family members.

When a Severe Thunderstorm or Tornado WATCH is issued—

- Listen to local radio and TV stations for further updates.
- Be alert to changing weather conditions.

When a Severe Thunderstorm or Tornado WARNING is issued—

- If you are inside, go to the safe place you picked to protect yourself from glass and other flying objects.
- If you are outside, hurry to the basement of a nearby sturdy building or lie flat in a ditch or low-lying area.
- If you are in a car or mobile home, get out immediately and head for safety (as above).

After the Severe Thunderstorm or Tornado passes—

- Watch out for fallen power lines and stay out of the damaged area.
- Listen to the radio for information and instructions.
- Use a flashlight to inspect your home for damage.

Conduct periodic Severe Weather drills so everyone remembers what to do. Stay tuned for warnings—

- Listen to your NOAA Weather Radio All Hazards, local radio and TV stations for updated storm information.
- Severe Thunderstorm and Tornado WATCHES and WARNINGS are issued by county.
- Know what a Severe Thunderstorm or Tornado WATCH and WARNING means:
  - A Tornado/Severe Thunderstorm WATCH means a Tornado/Severe Thunderstorm is possible in your area.
  - A Tornado/Severe Thunderstorm WARNING means a Tornado/Severe Thunderstorm has been sighted and may be headed for your area. Go to a safe location immediately.