

***NWS LUBBOCK 2008
CALENDAR***

Enter into West Texas' crazy weather if you dare

NOAA Weather Radio All-Hazards

The most important weather safety rule of all is to know when you are at risk from a hazardous weather. Your best source for this information is the National Weather Service whose mission is to issue official weather watches, warnings, and advisories.

For over 130 years the National Weather Service, has been serving and protecting the nations citizens by monitoring the weather and providing alerts to any dangers.

How does one get this information? The most reliable method is via the NOAA Weather Radio broadcasts. NOAA Weather Radio (NWR) is a nationwide network of radio stations broadcasting continuous weather information direct from your local National Weather Service office.

NWR broadcasts National Weather Service warnings, watches, forecasts and other hazard and local information 24 hours a day. The information broadcast on the NWR is tailored for your area.

Working with the Federal Communication Commission's (FCC) Emergency Alert System, NWR is an "all hazards" radio network, making it your single source for comprehensive weather and emergency information. In addition to weather hazards, NWR also broadcasts warning and post-event information regarding earthquakes and volcanic activity, and environmental hazards including chemical releases and oil spills.

NWR broadcasts from numerous transmitters, covering all 50 states, adjacent coastal waters, Puerto Rico, the U.S. Virgin Islands, and the U.S. Pacific Territories. When a hazardous weather watch or warning is needed, an alert with a tone will automatically activate most receivers. The newest receivers have the ability to be set for just your county or any group of surrounding counties.

NWR receivers can be purchased at many electronic retail stores, electronic departments within department stores, and some drug stores. NWR's can also be purchased through some mail order catalogs. They are often sold in boat and marine accessory businesses. Prices vary from \$20 to \$200, depending on the model. The tone alarm feature will be found on models generally from \$35 and up.



NWR Radio frequencies across the South Plains and Rolling Plains:

Lubbock 162.400

Dimmitt 162.500

Plainview 162.450

Childress 162.525

Coming soon Dickens 162.???

**MARK TRAIL CHAMPIONS
NOAA WEATHER RADIO-**
THE VOICE OF THE NATIONAL WEATHER SERVICE



Mark Trail image courtesy of North America Syndicate, Inc., World Rights Reserved

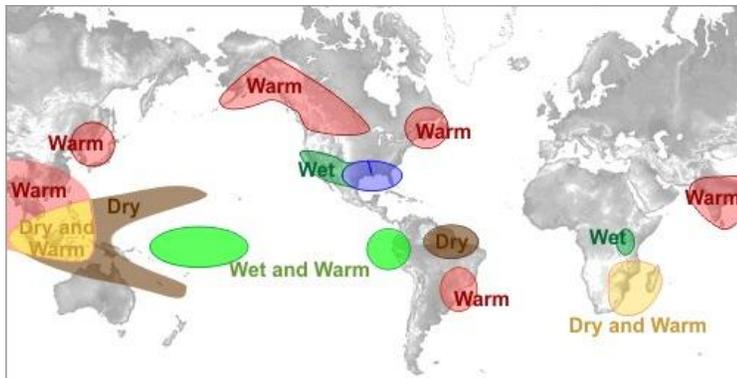
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1 76-1997 / -2-1919 Lubbock Records sr 752 am - sunrise ss 550 pm - sunset NEW YEARS DAY	2 77-1997 / -2-1979 sr 752 am ss 551 pm	3 83-2006 / -2-1947 sr 752 am ss 552 pm	4 76-1918 / -9-1947 sr 752 am ss 552 pm	5 82-1927 / -4-1971 sr 752 am ss 553 pm
6 79-1927 / 0-1971 sr 753 am ss 554 pm	7 80-2006 / 6-1968 sr 753 am ss 555 pm	8 82-1923 / 3-1967 sr 753 am ss 556 pm  New Moon	9 79-2002 / 2-1920 sr 753 am ss 557 pm	10 76-1923 / -10-1930 sr 753 am ss 557 pm	11 75-2006 / -7-1918 sr 753 am ss 558 pm	12 77-1953 / -10-1918 sr 752 am ss 559 pm
13 79-1957 / -16-1963 sr 752 am ss 600 pm	14 82-1928 / 3-1963 sr 752 am ss 601 pm	15 77-1999 / 4-1963 sr 752 am ss 602 pm  First Quarter	16 80-1974 / 6-1930 sr 752 am ss 603 pm	17 87-1914 / -2-1930 sr 751 am ss 604 pm	18 82-1916 / -5-1951 sr 751 am ss 605 pm	19 80-2000 / 0-1937 sr 751 am ss 606 pm
20 78-1986 / 7-1937 sr 750 am ss 607 pm	21 81-1950 / -4-1956 sr 750 am ss 608 pm Martin Luther King Jr. Day (Observed)	22 79-1943 / -6-1957 sr 750 am ss 609 pm  Full Moon	23 83-1972/ 3-1983 sr 749 am ss 610 pm	24 83-1970 / -1-1915 sr 749 am ss 611 pm	25 79-1952 / 7-1929 sr 748 am ss 612 pm	26 78-1953 / 7-1966 sr 748 am ss 613 pm
27 78-1956 / 5-1925 sr 747 am ss 613 pm	28 80-2003 / 8-1948 sr 747 am ss 614 pm	29 79-1927 / 1-1948 sr 746 am ss 615 pm	30 80-1967 / 6-1951 sr 745 am ss 616 pm  Last Quarter	31 77-1963 / 2-1985 sr 745 am ss 617 pm	NOAA WEATHER RADIO CAN BE FOUND AT THE FOLLOWING FREQUENCIES: Lubbock 162.400 Dimmitt 162.500 Plainview 162.450 Childress 162.525	



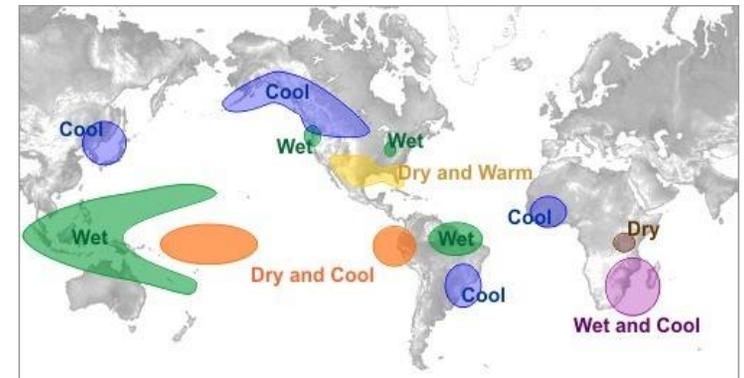
Average jet stream position during El Niño and La Niña.

El Niño and La Niña are determined by the position of the warm water along the equator as it shifts back and forth across the Pacific Ocean. The warmest water is also the position where the greatest evaporation of water into the atmosphere occurs. This has a profound effect on the average position of the jet stream which, in turn, affects the storm track.

During El Niño, the warmest water along the equator shifts eastward. This causes the jet stream's position to dip in the Eastern Pacific. The stronger the El Niño, the farther east in the Eastern Pacific the dip in the jet stream occurs. Conversely, during La Niña, the warmest water shifts westward. This shift causes the dip in the jet stream to shift west of its normal position toward the Central Pacific. The shift in the jet stream and storm track can have profound effects on temperature and precipitation patterns around the world. Below are the average long term impacts for El Niño and La Niña episodes.

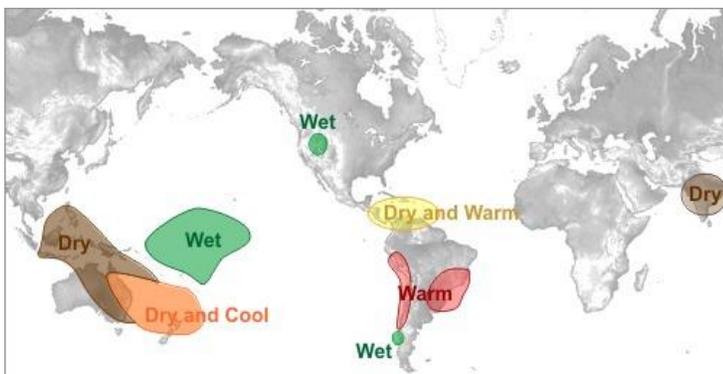


Average El Niño Impact (December-February)

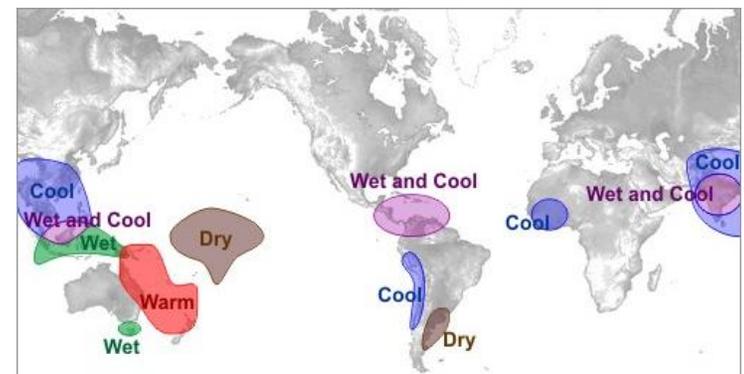


Average La Niña Impact (December-February)

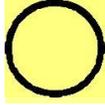
El Niño and La Niña



Average El Niño Impact (June-August)



Average La Niña Impact (June-August)

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	<p>NOAA WEATHER RADIO CAN BE FOUND AT THE FOLLOWING FREQUENCIES:</p> <p>Lubbock 162.400 Dimmitt 162.500 Plainview 162.450 Childress 162.525</p>				<p>1 83-1963 / -7-1951 Lubbock Records</p> <p>sr 744 am - sunrise ss 618 pm - sunset</p>	<p>2 80-2003 / -4-1951</p> <p>sr 743 am ss 619 pm</p> <p>Groundhog Day</p>
<p>3 80-1934 / 4-1972</p> <p>sr 743 am ss 620 pm</p>	<p>4 82-1925 / 3-1989</p> <p>sr 742 am ss 621 pm</p>	<p>5 81-1937 / 3-1982</p> <p>sr 741 am ss 622 pm</p>	<p>6 79-1950 / 4-1956</p> <p>sr 740 am ss 623 pm</p> <p>Ash Wednesday</p>  <p>New Moon</p>	<p>7 84-1918 / -3-1933</p> <p>sr 740 am ss 624 pm</p>	<p>8 83-1951 / -17-1933</p> <p>sr 739 am ss 625 pm</p>	<p>9 83-1976 / 0-1933</p> <p>sr 738 am ss 626 pm</p>
<p>10 84-1962 / 1-1929</p> <p>sr 737 am ss 627 pm</p>	<p>11 85-1916 / 6-1955</p> <p>sr 736 am ss 628 pm</p>	<p>12 86-1962 / 9-1948</p> <p>sr 735 am ss 629 pm</p>	<p>13 81-1979 / 7-1963</p> <p>sr 734 am ss 630 pm</p>  <p>First Quarter</p>	<p>14 87-1979 / 12-2004</p> <p>sr 733 am ss 631 pm</p> <p>St. Valentine's Day</p>	<p>15 83-1945 / 8-1951</p> <p>sr 732 am ss 632 pm</p>	<p>16 79-1959 / 13-1936</p> <p>sr 731 am ss 633 pm</p>
<p>17 85-1970 / 0-1978</p> <p>sr 730 am ss 633 pm</p>	<p>18 83-1996 / -2-1978</p> <p>sr 729 am ss 634 pm</p> <p>Presidents' Day (Observed)</p>	<p>19 83-1986 / 2-1978</p> <p>sr 728 am ss 635 pm</p>	<p>20 82-1996 / 4-1918</p> <p>sr 727 am ss 636 pm</p> <p>peak Full Lunar Eclipse (926pm)</p>  <p>Full Moon</p>	<p>21 84-1996 / 6-1964</p> <p>sr 726 am ss 637 pm</p>	<p>22 87-1996 / 13-1963</p> <p>sr 725 am ss 638 pm</p>	<p>23 85-1918 / 9-1914</p> <p>sr 724 am ss 639 pm</p>
<p>24 89-1918 / 1-1960</p> <p>sr 722 am ss 640 pm</p>	<p>25 86-1917 / -8-1960</p> <p>sr 721 am ss 640 pm</p>	<p>26 85-1918 / 8-1935</p> <p>sr 720 am ss 641 pm</p>	<p>27 81-2006 / 10-1934</p> <p>sr 719 am ss 642 pm</p>	<p>28 89-2006 / 7-1922</p> <p>sr 718 am ss 643 pm</p>  <p>Last Quarter</p>	<p>29 87-1940 / 14-1960</p> <p>sr 716 am ss 644 pm</p>	

Force	Speed	Description	Specifications for use on land
	(mph)		
0	0-1	Calm	Calm; smoke rises vertically.
1	1-3	Light Air	Direction of wind shown by smoke drift, but not by wind vanes.
2	4-7	Light Breeze	Wind felt on face; leaves rustle; ordinary vanes moved by wind.
3	8-12	Gentle Breeze	Leaves and small twigs in constant motion; wind extends light flag.
4	13-18	Moderate Breeze	Raises dust and loose paper; small branches are moved.
5	19-24	Fresh Breeze	Small trees in leaf begin to sway; crested wavelets form on inland waters.
6	25-31	Strong Breeze	Large branches in motion; whistling heard in telegraph wires; umbrellas used with difficulty.
7	32-38	Near Gale	Whole trees in motion; inconvenience felt when walking against the wind.
8	39-46	Gale	Breaks twigs off trees; generally impedes progress.
9	47-54	Severe Gale	Slight structural damage occurs (chimney-pots and slates removed)
10	55-63	Storm	Seldom experienced inland; trees uprooted; considerable structural damage occurs.
11	64-72	Violent Storm	Very rarely experienced; accompanied by wide-spread damage.
12	72-83	Hurricane	

The National Weather Service issues several different products for higher wind speeds across West Texas. The following is a list of products and the criteria used to issue them:

High Wind Warning - Wind speeds of 40 mph or greater lasting for 1 hour or wind gusts of 58 mph or greater for any duration.

Dust Storm Warning - Widespread blowing dust reducing visibilities to 1/4 mile or less. Sustained winds of 25 mph or greater.

Wind Advisory - Sustained wind speeds of 31 to 39 mph lasting for 1 hour or longer.

Blowing Dust Advisory - Widespread blowing dust reducing visibilities to 1/4 to 1 mile and winds greater than 25 mph.

Severe Thunderstorm Warning – Wind gusts expected to 58 mph or greater. (Also can be issued for large hail of 3/4 inch or larger)

Wind in West Texas

Tornado Wind Scale

Enhanced Fujita Scale

EF scale	Class	Wind speed		Description
		mph	kph	
EF0	weak	65-85	105-137	Gale
EF1	weak	86-110	138-177	Moderate
EF2	strong	111-135	178-217	Significant
EF3	strong	136-165	218-266	Severe
EF4	violent	166-200	267-322	Devastating
EF5	violent	> 200	> 322	Incredible

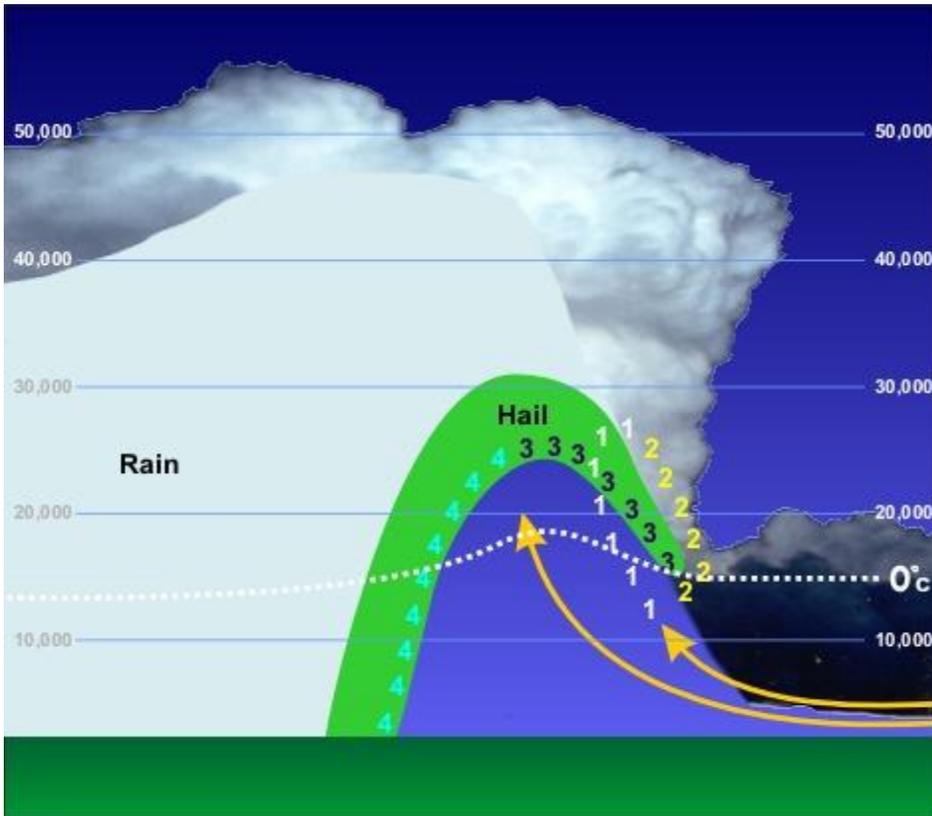
Winds from thunderstorms can also kick up dust from area fields as seen in the Haboob picture from 22 June 2006. (Photo courtesy of KCBD)



Blowing Dust can be a huge problem during extreme dry spells. The above photo was taken on the South Plains on 24 February 2007. (Photo courtesy of KCBD)

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 Childress 162.525				1 89-2006 / 5-1922 Lubbock Records sr 715 am - sunrise ss 645 pm - sunset
2 86-1974 / -2-1922 sr 714 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 710 am ss 648 pm	6 87-1929 / 10-1920 sr 709 am ss 649 pm	7 88-2006 / 11-1996 sr 708 am ss 650 pm  New Moon	8 87-1918 / 12-1967 sr 706 am ss 650 pm
9 83-1940 / 13-1924 sr 805 am ss 751 pm Daylight Saving Time begins	10 86-1989 / 4-1948 sr 804 am ss 752 pm	11 95-1989 / 2-1948 sr 803 am ss 753 pm	12 94-1989 / 10-1948 sr 801 am ss 753 pm	13 91-1916 / 12-1950 sr 800 am ss 754 pm	14 86-1972 / 13-1954 sr 759 am ss 755 pm  First Quarter	15 86-1966 / 17-1947 sr 757 am ss 756 pm
16 87-1966 / 16-1923 sr 756 am ss 757 pm	17 89-1989 / 18-1917 sr 755 am ss 757 pm St. Patrick's Day	18 88-1916 / 11-1923 sr 753 am ss 758 pm	19 87-1995 / 11-1923 sr 752 am ss 759 pm Spring Equinox (1148 pm)	20 90-1960 / 8-1965 sr 751 am ss 800 pm	21 93-1997 / 17-1955 sr 749 am ss 800 pm  Full Moon	22 86-1934 / 18-1914 sr 748 am ss 801 pm
23 84-1998 / 13-1952 sr 747 am ss 802 pm Easter	24 88-1929 / 22-1965 sr 745 am ss 803 pm	25 90-1998 / 20-1996 sr 744 am ss 803 pm	26 88-1956 / 16-1965 sr 742 am ss 804 pm	27 94-1971 / 12-1931 sr 741 am ss 805 pm	28 90-1963 / 16-1931 sr 740 am ss 805 pm	29 89-1967 / 18-1944 sr 738 am ss 806 pm  Last Quarter
30 90-1946 / 16-1987 sr 737 am ss 807 pm	31 95-1946 / 19-1931 sr 736 am ss 808 pm					

How Hail is Formed



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

SEVERE



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 fall 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.

April 2008

Lubbock National Weather Service

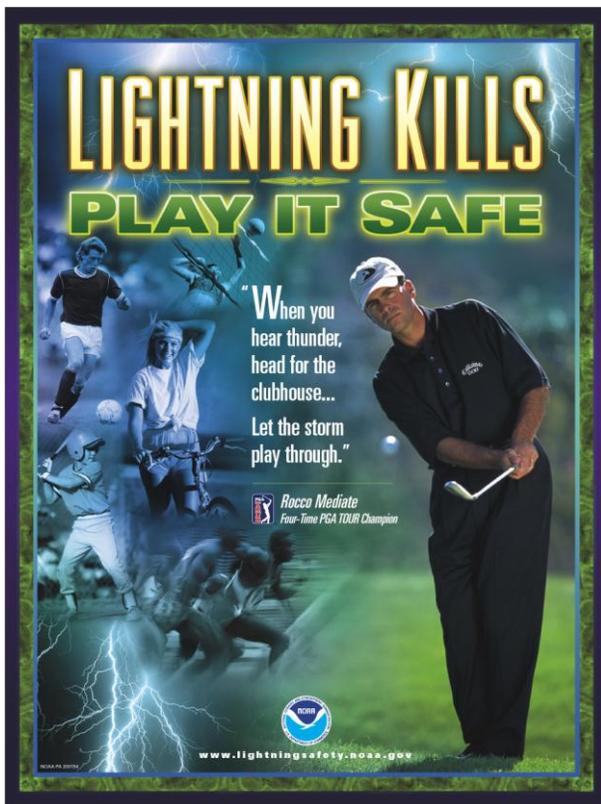
WWW.WEATHER.GOV/LUBBOCK

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>NOAA WEATHER RADIO CAN BE FOUND AT THE FOLLOWING FREQUENCIES:</p> <p>Lubbock 162.400 Dimmitt 162.500 Plainview 162.450 Childress 162.525</p>		<p>1 96-1946 / 22-1948 Lubbock Records sr 734 am - sunrise ss 808 pm - sunset</p> <p>April Fool's Day</p>	<p>2 90-1946 / 20-1936 sr 733 am ss 809 pm</p>	<p>3 90-1950 / 26-1975 sr 732 am ss 810 pm</p>	<p>4 92-1928 / 18-1920 sr 730 am ss 811 pm</p>	<p>5 92-2006 / 21-1917 sr 729 am ss 811 pm</p>  <p>New Moon</p>
<p>6 96-1972 / 21-1936 sr 728 am ss 812 pm</p>	<p>7 93-1930 / 21-1936 sr 727 am ss 813 pm</p>	<p>8 91-1930 / 23-1938 sr 725 am ss 814 pm</p>	<p>9 94-1939 / 23-1938 sr 724 am ss 814 pm</p>	<p>10 93-1934 / 26-1928 sr 723 am ss 815 pm</p>	<p>11 94-1972 / 25-1932 sr 721 am ss 816 pm</p>	<p>12 96-1972 / 22-1997 sr 720 am ss 817 pm</p>  <p>First Quarter</p>
<p>13 91-2006 / 26-1957 sr 719 am ss 817 pm</p>	<p>14 93-2006 / 27-1933 sr 718 am ss 818 pm</p>	<p>15 92-2006 / 25-1928 sr 716 am ss 819 pm</p>	<p>16 100-1925 / 31-1947 sr 715 am ss 820 pm</p>	<p>17 94-2006 / 23-1921 sr 714 am ss 820 pm</p>	<p>18 96-1987 / 29-1944 sr 713 am ss 821 pm</p>	<p>19 92-2001 / 31-1920 sr 712 am ss 822 pm</p>
<p>20 93-1925 / 30-1933 sr 710 am sr 823 pm</p>  <p>Full Moon</p>	<p>21 98-1965 / 28-1918 sr 709 am ss 823 pm</p>	<p>22 100-1989 / 29-1927 sr 708 am ss 824 pm</p> <p>Earth Day</p>	<p>23 97-1989 / 30-1928 sr 707 am ss 825 pm</p>	<p>24 95-1996 / 30-1968 sr 706 am ss 826 pm</p>	<p>25 96-1959 / 35-1918 sr 705 am ss 826 pm</p>	<p>26 96-1943 / 29-1947 sr 704 am ss 827 pm</p>
<p>27 97-1996 / 27-1920 sr 703 am ss 828 pm</p>	<p>28 94-1992 / 35-1994 sr 702 am ss 829 pm</p>  <p>Last Quarter</p>	<p>29 96-1928 / 31-1968 sr 701 am ss 829 pm</p>	<p>30 93-1961 / 33-1918 sr 700 am ss 830 pm</p>			

Number of "observed" tornadoes - 1950 to 2007

<u>Parmer</u>	<u>Castro</u>	<u>Swisher</u>	<u>Briscoe</u>	<u>Hall</u>	<u>Childress</u>
Total 48 F3+ 3	Total 54 F3+ 1	Total 65 F3+ 5	Total 39 F3+ 3	Total 42 F3+ 2	Total 25 F3+ 0
<u>Bailey</u>	<u>Lamb</u>	<u>Hale</u>	<u>Floyd</u>	<u>Motley</u>	<u>Cottle</u>
Total 49 F3+ 2	Total 82 F3+ 7	Total 119 F3+ 3	Total 47 F3+ 3	Total 20 F3+ 2	Total 22 F3+ 1
<u>Cochran</u>	<u>Hockley</u>	<u>Lubbock</u>	<u>Crosby</u>	<u>Dickens</u>	<u>King</u>
Total 28 F3+ 1	Total 56 F3+ 6	Total 82 F3+ 3 F5* 1	Total 50 F3+ 2	Total 29 F3+ 1	Total 17 F3+ 0
<u>Yoakum</u>	<u>Terry</u>	<u>Lynn</u>	<u>Garza</u>	<u>Kent</u>	<u>Stonewall</u>
Total 23 F3+ 0	Total 28 F3+ 0	Total 39 F3+ 1	Total 18 F3+ 0	Total 19 F3+ 0	Total 21 F3+ 0

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 Childress 162.525		1 96-1992 / 32-1970 Lubbock Records sr 659 am - sunrise ss 831 pm - sunset	2 97-1943 / 30-1967 sr 658 am ss 832 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 Cinco De Mayo  New Moon	6 99-2000 / 32-1917 sr 654 am ss 835 pm	7 99-2000 / 29-1917 sr 653 am ss 836 pm	8 102-1989 / 31-1938 sr 652 am ss 836 pm	9 97-1996 / 38-1961 sr 651 am ss 837 pm	10 99-2000 / 33-1918 sr 650 am ss 838 pm
11 101-2000 / 37-1930 sr 650 am ss 839 pm Mother's Day	12 98-1962 / 35-1960 sr 649 am ss 839 pm  First Quarter	13 100-2006 / 37-1953 sr 648 am ss 840 pm	14 100-1996 / 35-1953 sr 647 am ss 841 pm	15 103-1996 / 34-1967 sr 647 am ss 842 pm	16 102-1996 / 37-1945 sr 646 am ss 842 pm	17 101-1996 / 41-1916 sr 645 am ss 843 pm
18 103-2003 / 42-1916 sr 645 am ss 844 pm	19 105-1996 / 42-1971 sr 644 am ss 844 pm	20 102-2006 / 40-1931 sr 643 am ss 845 pm  Full Moon	21 101-1966 / 39-1967 sr 643 am ss 846 pm	22 105-1996 / 40-1931 sr 642 am ss 846 pm	23 105-2000 / 45-1917 sr 642 am ss 847 pm	24 109-2000 / 40-1930 sr 641 am ss 848 pm
25 101-1953 / 44-1924 sr 641 am ss 849 pm	26 101-1945 / 43-1950 sr 640 am ss 849 pm Memorial Day	27 103-1984 / 48-1961 sr 640 am ss 850 pm	28 102-1974 / 43-1917 sr 640 am ss 850 pm  Last Quarter	29 104-1938 / 38-1947 sr 639 am ss 851 pm	30 103-1998 / 45-1947 sr 639 am ss 852 pm	31 102-1916 / 43-1983 sr 639 am ss 852 pm



Lightning Safety



Lightning **routinely kills more people** each year than tornadoes and hurricanes COMBINED.

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!**

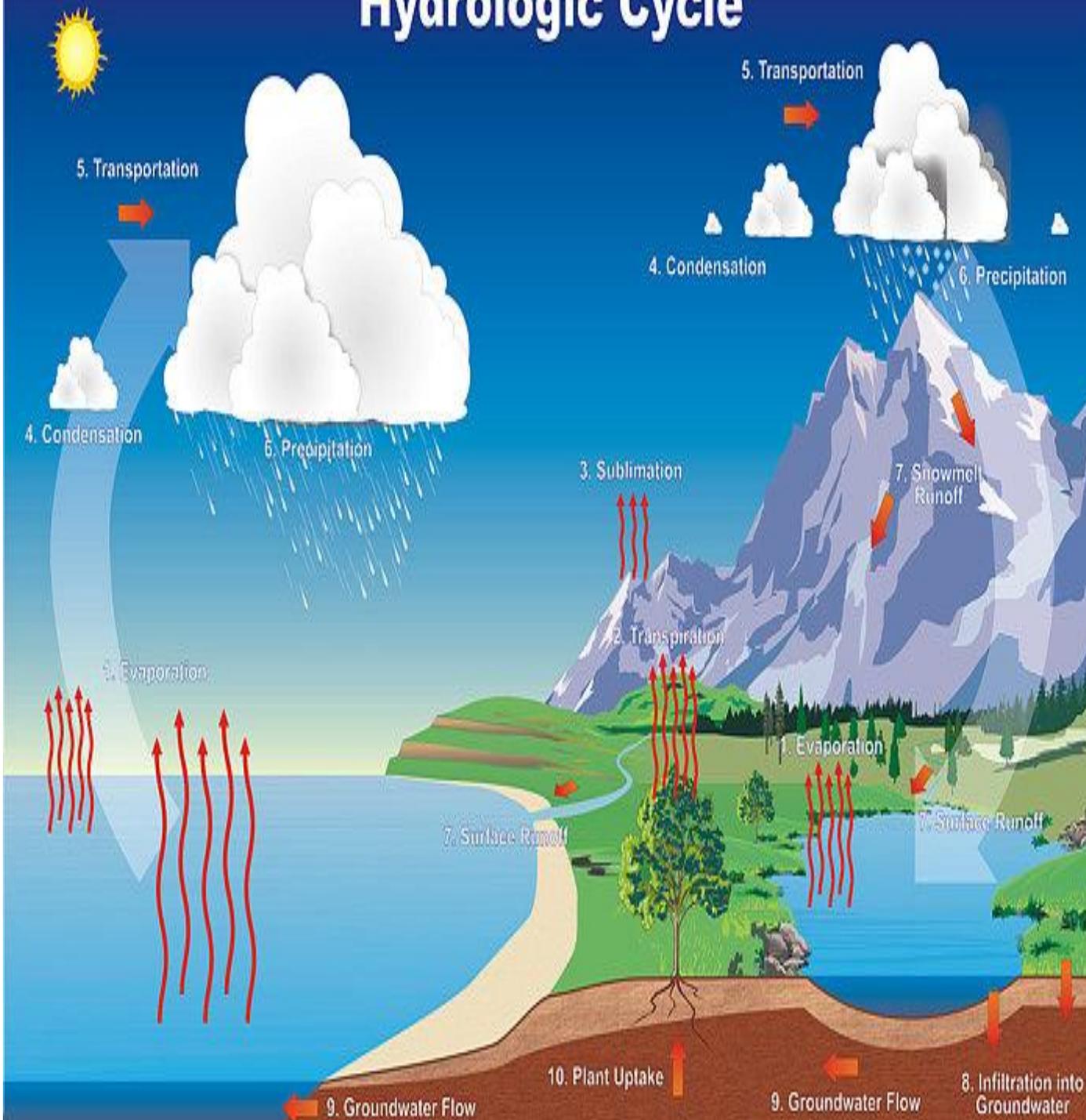
June 2008

Lubbock National Weather Service

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SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
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  New Moon	4 101-1933 / 47-1970 sr 638 am ss 855 pm	5 106-1990 / 45-1928 sr 637 am ss 855 pm	6 107-1990 / 45-1917 sr 637 am ss 856 pm	7 103-1994 / 45-1915 sr 637 am ss 856 pm
8 106-1981 / 43-1915 sr 637 am ss 857 pm	9 107-1981 / 50-1923 sr 637 am ss 857 pm	10 105-1917 / 47-1955 sr 637 am ss 857 pm  First Quarter	11 105-1934 / 50-1940 sr 637 am ss 858 pm	12 105-2001 / 52-1945 sr 637 am ss 858 pm	13 105-1931 / 53-1947 sr 637 am ss 859 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 Father's Day	16 108-1924 / 49-1917 sr 637 am ss 900 pm	17 107-1924 / 53-1999 sr 637 am ss 900 pm	18 107-1924 / 56-1922 sr 637 am ss 900 pm  Full Moon	19 106-1998 / 52-1945 sr 638 am ss 900 pm	20 108-1935 / 49-1973 sr 638 am ss 901 pm Summer Solstice (659 pm)	21 107-1981 / 54-1946 sr 638 am ss 901 pm
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	26 111-1994 / 53-1958 sr 639 am ss 902 pm  Last Quarter	27 114-1994 / 56-1958 sr 640 am ss 902 pm	28 108-1928 / 56-1946 sr 640 am ss 902 pm
<h2>Lightning Safety Awareness Week</h2>						
29 107-1957 / 57-1948 sr 640 am ss 902 pm	30 106-1957 / 57-1940 sr 641 am ss 902 pm				NOAA WEATHER RADIO CAN BE FOUND AT THE FOLLOWING FREQUENCIES: Lubbock 162.400 Dimmitt 162.500 Plainview 162.450 Childress 162.525	

Hydrologic Cycle



1. Evaporation is the change of state of water (a liquid) to water vapor (a gas). On average, about 47 inches (120 cm) is evaporated into the atmosphere from the ocean each year.

2. Transpiration is evaporation of liquid water from plants and trees into the atmosphere. About 90% of all water that enters the roots transpires into the atmosphere.

3. Sublimation is the process where ice and snow (a solid) changes into water vapor (a gas) without moving through the liquid phase.

4. Condensation is the process where water vapor (a gas) changes back into a water droplets (a liquid). This is when we begin to see clouds.

5. Transportation is the movement of solid, liquid and gaseous water through the atmosphere. Without this movement, the water evaporated over the ocean would not precipitate over land.

6. Precipitation is water that falls to the earth. Most precipitation falls as rain but includes snow, sleet, drizzle, and hail. Around 313,000 mi³ (515,000 km³) of water falls each year, mainly over the ocean.

7. Runoff is the variety of ways of which water moves over the earth's surface. This comes from melting snow or rain.

8. Infiltration is the movement of water into the ground from the surface.

9. Groundwater flow is the flow of water underground in aquifers. The water may return to the surface in springs or eventually seep into the oceans.

10. Plant uptake is water taken from the groundwater flow and soil moisture.



1. Evaporation is the change of state of water (a liquid) to water vapor (a gas). On average, about 47 inches (120 cm) is evaporated into the atmosphere from the ocean each year.
2. Transpiration is evaporation of liquid water from plants and trees into the atmosphere. About 90% of all water that enters the roots transpires into the atmosphere.
3. Sublimation is the process where ice and snow (a solid) changes into water vapor (a gas) without moving through the liquid phase.
4. Condensation is the process where water vapor (a gas) changes back into a water droplets (a liquid). This is when we begin to see clouds.
5. Transportation is the movement of solid, liquid and gaseous water through the atmosphere. Without this movement, the water evaporated over the ocean would not precipitate over land.
6. Precipitation is water that falls to the earth. Most precipitation falls as rain but includes snow, sleet, drizzle, and hail. Around 313,000 mi³ (515,000 km³) of water falls each year, mainly over the ocean.
7. Runoff is the variety of ways of which water moves over the earth's surface. This comes from melting snow or rain.
8. Infiltration is the movement of water into the ground from the surface.
9. Groundwater flow is the flow of water underground in aquifers. The water may return to the surface in springs or eventually seep into the oceans.
10. Plant uptake is water taken from the groundwater flow and soil moisture.

<p>NOAA WEATHER RADIO CAN BE FOUND AT THE FOLLOWING FREQUENCIES:</p> <p>Lubbock 162.400 Dimmitt 162.500 Plainview 162.450 Childress 162.525</p>		<p>1 105-1994 / 56-1924 Lubbock Records sr 641 am - sunrise ss 902 pm - sunset</p>	<p>2 106-1989 / 56-1944</p> <p>sr 642 am ss 901 pm</p>  <p>New Moon</p>	<p>3 108-1983 / 54-1924</p> <p>sr 642 am ss 901 pm</p>	<p>4 105-1987 / 56-1922</p> <p>sr 643 am ss 901 pm</p> <p style="text-align: center;">Independence Day</p>	<p>5 104-1971 / 49-1915</p> <p>sr 643 am ss 901 pm</p>
<p>6 105-1994 / 53-1946</p> <p>sr 644 am ss 901 pm</p>	<p>7 103-1998 / 51-1952</p> <p>sr 644 am ss 901 pm</p>	<p>8 103-1939 / 51-1952</p> <p>sr 645 am ss 900 pm</p>	<p>9 107-1940 / 56-1952</p> <p>sr 645 am ss 900 pm</p>	<p>10 109-1940 / 58-1915</p> <p>sr 646 am ss 900 pm</p>  <p>First Quarter</p>	<p>11 104-1933 / 57-1999</p> <p>sr 646 am ss 900 pm</p>	<p>12 105-1933 / 57-1999</p> <p>sr 647 am ss 859 pm</p>
<p>13 107-1933 / 54-1953</p> <p>sr 648 am ss 859 pm</p>	<p>14 108-1933 / 55-1950</p> <p>sr 648 am ss 858 pm</p>	<p>15 105-2001 / 58-1926</p> <p>sr 649 am ss 858 pm</p>	<p>16 105-2001 / 58-1926</p> <p>sr 649 am ss 858 pm</p>	<p>17 105-1989 / 59-1930</p> <p>sr 650 am ss 857 pm</p>	<p>18 103-1978 / 60-1935</p> <p>sr 651 am ss 857 pm</p>  <p>Full Moon</p>	<p>19 108-1936 / 55-1947</p> <p>sr 651 am ss 856 pm</p>
<p>20 105-1925 / 59-1971</p> <p>sr 652 am ss 856 pm</p>	<p>21 102-1951 / 57-1988</p> <p>sr 653 am ss 855 pm</p>	<p>22 102-2001 / 55-1915</p> <p>sr 653 am ss 854 pm</p>	<p>23 104-2001 / 54-1915</p> <p>sr 654 am ss 854 pm</p>	<p>24 104-1943 / 57-1915</p> <p>sr 655 am ss 853 pm</p>	<p>25 104-1940 / 59-1916</p> <p>sr 655 am ss 852 pm</p>  <p>Last Quarter</p>	<p>26 105-1995 / 58-1942</p> <p>sr 656 am ss 852 pm</p>
<p>27 106-1995 / 57-1933</p> <p>sr 657 am ss 851 pm</p>	<p>28 105-1995 / 54-2005</p> <p>sr 657 am ss 850 pm</p>	<p>29 102-1948 / 60-2004</p> <p>sr 658 am ss 849 pm</p>	<p>30 104-1946 / 60-2000</p> <p>sr 659 am ss 849 pm</p>	<p>31 104-1934//56-1971</p> <p>sr 659 am ss 848 pm</p>		

Flash Floods



Flooding Safety

Follow these safety rules:

- _ If flooding occurs, get to higher ground. Stay away from flood-prone areas, including dips, low spots, valleys, ditches, washes, etc.
- _ Avoid flooded areas or those with rapid water flow. Do not attempt to cross a flowing stream. It takes only six inches of fast flowing water to sweep you off your feet.
- _ Don't allow children to play near high water, storm drains or ditches. Hidden dangers could lie beneath the water.
- _ Flooded roads could have significant damage hidden by floodwaters. NEVER drive through floodwaters or on flooded roads. If your vehicle stalls, leave it immediately and seek higher ground. Water only two feet deep can float away most automobiles.
- _ Do not camp or park your vehicle along streams and washes, particularly when threatening conditions exist.
- _ Be especially cautious at night when it is harder to recognize flood dangers.
- _ Monitor NOAA Weather Radio or your local media for vital weather related information.

Except for heat related fatalities, more deaths occur from flooding than any other hazard. Why? Most people fail to realize the power of water. For example, six inches of fast-moving flood water can knock you off your feet.

While the number of fatalities can vary dramatically with weather conditions from year to year, the national 30-year average for flood deaths is 127. That compares with a 30-year average of 73 deaths for lightning, 68 for tornadoes and 16 for hurricanes.

National Weather Service data also shows:

- Nearly half of all flash flood fatalities are vehicle-related,
- The majority of victims are males, and
- Flood deaths affect all age groups.

Most flash floods are caused by slow moving thunderstorms, thunderstorms that move repeatedly over the same area or heavy rains from tropical storms and hurricanes. These floods can develop within minutes or hours depending on the intensity and duration of the rain, the topography, soil conditions and ground cover.

Flash floods can roll boulders, tear out trees, destroy buildings and bridges, and scour out new channels. Rapidly rising water can reach heights of 30 feet or more. Furthermore, flash flood-producing rains can also trigger catastrophic mud slides.

Occasionally, floating debris can accumulate at a natural or man-made obstruction and restrict the flow of water. Water held back by the debris dam can cause flooding upstream. Subsequent flash flooding can occur downstream if the obstruction should suddenly release.

August 2008

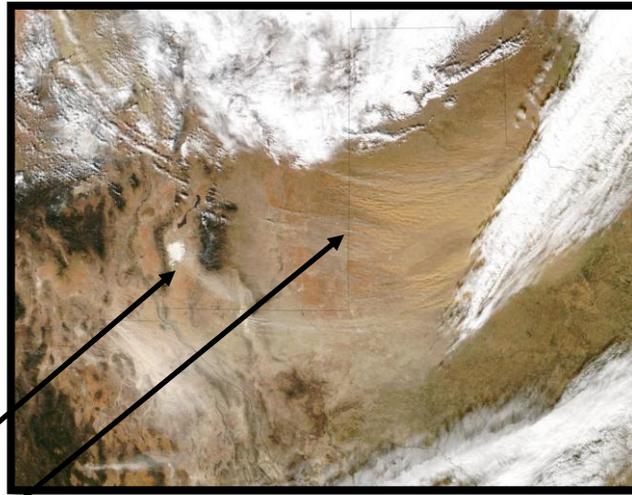
Lubbock National Weather Service

WWW.WEATHER.GOV/LUBBOCK

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	<p>NOAA WEATHER RADIO CAN BE FOUND AT THE FOLLOWING FREQUENCIES:</p> <p>Lubbock 162.400 Dimmitt 162.500 Plainview 162.450 Childress 162.525</p>				<p>1 106-1966 / 55-1925 Lubbock Records</p> <p>sr 700 am - sunrise ss 847 pm - sunset</p>  <p>New Moon</p>	<p>2 105-1943 / 54-1925</p> <p>sr 701 am ss 846 pm</p>
<p>3 107-1944 / 56-1921</p> <p>sr 702 am ss 845 pm</p>	<p>4 105-2003 / 57-1915</p> <p>sr 702 am ss 844 pm</p>	<p>5 102-2003 / 57-1915</p> <p>sr 703 am ss 843 pm</p>	<p>6 102-2003 / 57-1990</p> <p>sr 704 am ss 842 pm</p>	<p>7 104-2003 / 58-1971</p> <p>sr 704 am ss 841 pm</p>	<p>8 105-2003 / 58-1989</p> <p>sr 705 am ss 840 pm</p>	<p>9 101-1943 / 51-1946</p> <p>sr 706 am ss 839 pm</p>
<p>10 103-1935 / 55-1915</p> <p>sr 707 am ss 838 pm</p>  <p>First Quarter</p>	<p>11 103-1936 / 56-1915</p> <p>sr 707 am ss 837 pm</p>	<p>12 107-1936 / 54-1979</p> <p>sr 708 am ss 836 pm</p> <p>Perseids Meteor Shower (Aug 12-13)</p>	<p>13 107-1936 / 54-1920</p> <p>sr 709 am ss 835 pm</p>	<p>14 103-1946 / 53-1920</p> <p>sr 709 am ss 834 pm</p>	<p>15 103-1982 / 56-1920</p> <p>sr 710 am ss 833 pm</p>	<p>16 104-1943 / 55-1931</p> <p>sr 711 am ss 832 pm</p>
<p>17 103-1978 / 55-1915</p> <p>sr 711 am ss 831 pm</p>	<p>18 103-1994 / 55-1943</p> <p>sr 712 am ss 830 pm</p>  <p>Full Moon</p>	<p>19 103-1994 / 58-1950</p> <p>sr 713 am ss 828 pm</p>	<p>20 103-1930 / 54-1915</p> <p>sr 714 am ss 827 pm</p>	<p>21 103-1930 / 52-1956</p> <p>sr 714 am ss 826 pm</p>	<p>22 100-1999 / 58-1915</p> <p>sr 715 am ss 825 pm</p>	<p>23 101-1985 / 54-1923</p> <p>sr 716 am ss 824 pm</p>
<p>24 101-1936 / 51-1916</p> <p>sr 716 am ss 822 pm</p> <p>31 100-1930 / 43-1915</p> <p>sr 721 am ss 813 pm</p>	<p>25 105-1936 / 54-1962</p> <p>sr 717 am ss 821 pm</p>  <p>Last Quarter</p>	<p>26 102-1922 / 53-1962</p> <p>sr 718 am ss 820 pm</p>	<p>27 100-1931 / 53-1926</p> <p>sr 718 am ss 819 pm</p>	<p>28 100-1943 / 54-1916</p> <p>sr 719 am ss 817 pm</p>	<p>29 99-1943 / 54-1917</p> <p>sr 720 am ss 816 pm</p>	<p>30 101-1943 / 44-1915</p> <p>sr 720 am ss 815 pm</p>



Satellites allow us to see many different large scale features from space. One such example is the dust storm image to the right.



Dust from:
White Sands
Open fields in
TX and NM

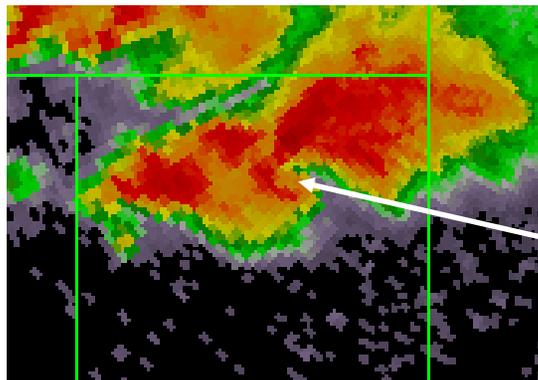
Weather Tools

The National Weather Service uses many different tools to access the current state of the atmosphere and make forecasts.

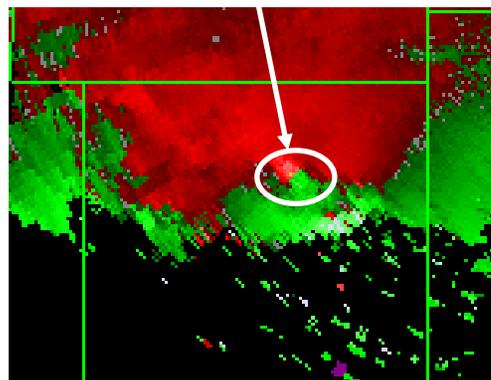


Doppler Radar is a very important tool for observing precipitation. It is especially critical for monitoring severe thunderstorms since it provides a picture of their structure and the relative motion of the air within the storm.

Velocity Couplet
indicating strong rotation



Hook
Echo



The **ASOS** (Automated Surface Observing System) measures temperature, wind, humidity, pressure, visibility, precipitation type and amount at ground level. Above is a picture of the ASOS located in Childress.



Weather Balloons are launched twice a day and measure temperature, moisture, wind and pressure above the ground. Balloons are launched from various sites around the country, including Midland and Amarillo.

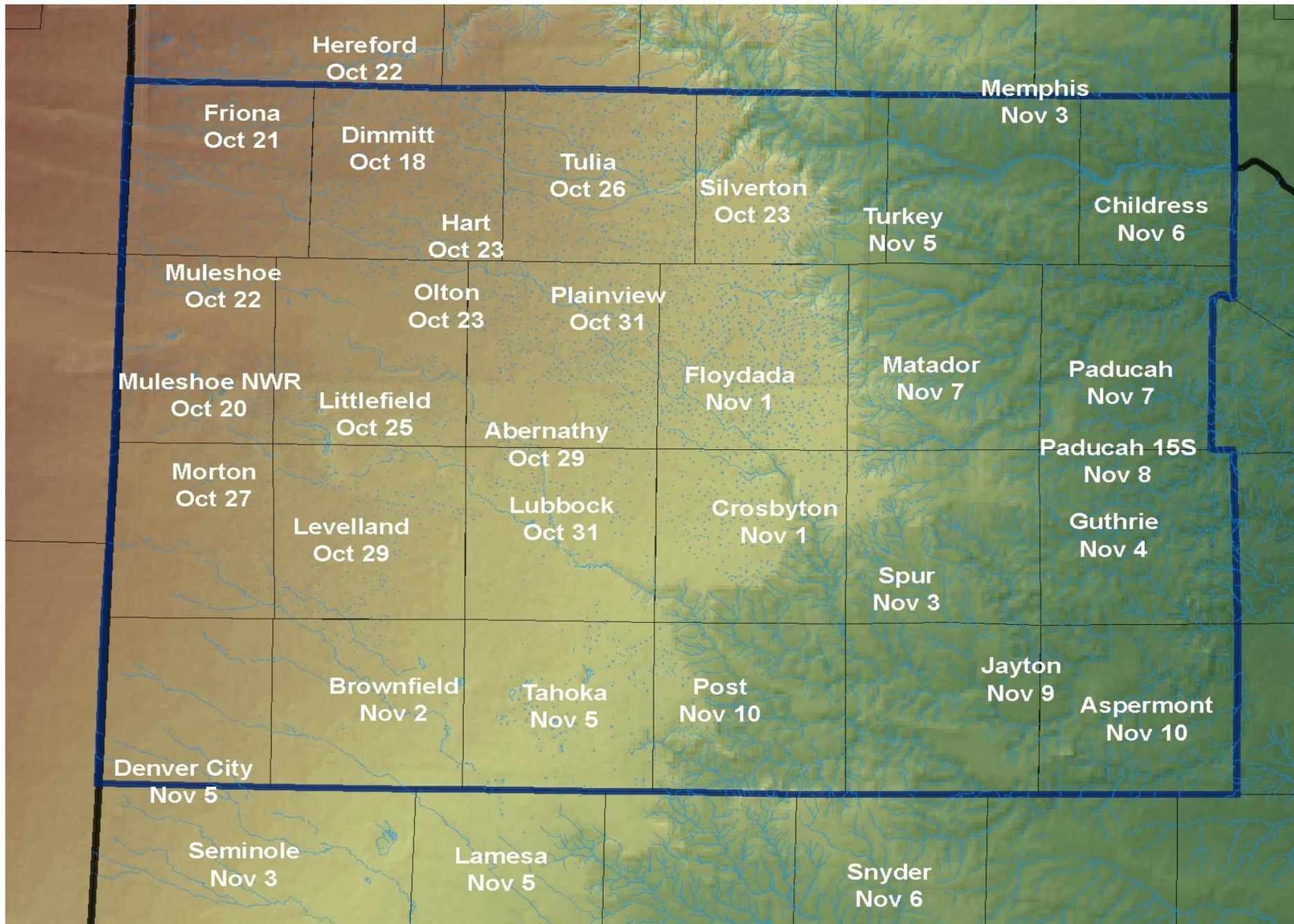
September 2008

Lubbock National Weather Service

WWW.WEATHER.GOV/LUBBOCK

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1 99-1922 / 43-1915 Lubbock Records sr 722 am - sunrise ss 812 pm - sunset Labor Day	2 101-1947 / 50-1915 sr 722 am ss 811 pm	3 101-2000 / 48-1915 sr 723 am ss 810 pm	4 101-2000 / 47-1961 sr 724 am ss 808 pm	5 102-2000 / 46-1961 sr 724 am ss 807 pm	6 103-1948 / 51-1918 sr 725 am ss 805 pm
7 98-2000 / 45-1918 sr 726 am ss 804 pm  First Quarter	8 97-1915 / 47-2004 sr 727 am ss 803 pm	9 99-1984 / 47-1956 sr 727 am ss 801 pm	10 100-2000 / 47-1956 sr 728 am ss 800 pm	11 103-2000 / 47-1959 sr 729 am ss 759 pm	12 100-1930 / 44-1959 sr 729 am ss 757 pm	13 101-1930 / 43-1959 sr 730 am ss 756 pm
14 100-1965 / 42-1945 sr 731 am ss 755 pm	15 99-1956 / 42-1993 sr 731 am ss 753 pm  Full Moon	16 100-1965 / 42-1951 sr 732 am ss 752 pm	17 98-2005 / 42-1951 sr 733 am ss 750 pm	18 98-1997 / 43-1971 sr 733 am ss 749 pm	19 105-1930 / 42-1991 sr 734 am ss 748 pm	20 98-1977 / 41-1971 sr 735 am ss 746 pm
21 98-1998 / 33-1983 sr 735 am ss 745 pm	22 98-1977 / 40-1995 sr 736 am ss 743 pm Autumnal Equinox (1044 am)  Last Quarter	23 98-1926 / 42-1989 sr 737 am ss 742 pm	24 97-1953 / 38-1989 sr 737 am ss 741 pm	25 100-2005 / 36-2000 sr 738 am ss 739 pm	26 99-1953 / 36-1926 sr 739 am ss 738 pm	27 100-1953 / 39-1917 sr 739 am ss 737 pm
28 98-1994 / 36-1918 sr 740 am ss 735 pm	29 97-1977 / 33-1916 sr 741 am ss 734 pm  New Moon	30 99-1977 / 35-1985 sr 741 am ss 733 pm	NOAA WEATHER RADIO CAN BE FOUND AT THE FOLLOWING FREQUENCIES: Lubbock 162.400 Dimmitt 162.500 Plainview 162.450 Childress 162.525			

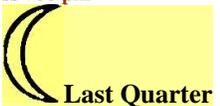
AVERAGE FIRST FREEZE DATES



October 2008

Lubbock National Weather Service

WWW.WEATHER.GOV/LUBBOCK

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		<p>NOAA WEATHER RADIO CAN BE FOUND AT THE FOLLOWING FREQUENCIES:</p> <p>Lubbock 162.400 Dimmitt 162.500 Plainview 162.450 Childress 162.525</p>	<p>1 98-2000 / 39-1985 Lubbock Records sr 742 am - sunrise ss 731 pm - sunset</p>	<p>2 99-2000 / 40-1975 sr 743 am ss 730 pm</p>	<p>3 100-2000 / 35-1961 sr 744 am ss 728 pm</p>	<p>4 96-2000 / 41-1961 sr 744 am ss 727 pm</p>
<p>5 97-1934 / 33-1932 sr 745 am ss 726 pm</p>	<p>6 94-1931 / 34-2001 sr 746 am ss 725 pm</p>	<p>7 98-1979 / 31-1952 sr 747 am ss 723 pm</p> 	<p>8 98-1979 / 31-1976 sr 747 am ss 722 pm</p>	<p>9 93-1965 / 29-1970 sr 748 am ss 721 pm</p>	<p>10 93-1965 / 38-1993 sr 749 am ss 719 pm</p>	<p>11 93-1979 / 38-1932 sr 750 am ss 718 pm</p>
<p>12 92-1989 / 33-1927 sr 750 am ss 717 pm</p>	<p>13 92-1989 / 28-1969 sr 751 am ss 716 pm</p> <p>Columbus Day</p>	<p>14 91-1917 / 31-1969 sr 752 am ss 714 pm</p> 	<p>15 92-1917 / 31-1966 sr 753 am ss 713 pm</p>	<p>16 92-1917 / 30-2001 sr 753 am ss 712 pm</p>	<p>17 93-1988 / 32-1999 sr 754 am ss 711 pm</p>	<p>18 90-2001 / 32-1968 sr 755 am ss 710 pm</p>
<p>19 92-1940 / 24-1917 sr 756 am ss 708 pm</p>	<p>20 92-2007 / 25-1916 sr 757 am ss 707 pm</p>	<p>21 88-1961 / 26-1917 sr 757 am ss 706 pm</p> 	<p>22 89-1961 / 28-1945 sr 758 am ss 705 pm</p>	<p>23 88-1921 / 22-1917 sr 759 am ss 704 pm</p>	<p>24 91-1933 / 26-1929 sr 800 am ss 703 pm</p>	<p>25 91-1959 / 30-1955 sr 801 am ss 702 pm</p>
<p>26 88-1979 / 29-1932 sr 802 am ss 701 pm</p>	<p>27 87-1922 / 26-1997 sr 802 am ss 700 pm</p>	<p>28 91-1943 / 25-1925 sr 803 am ss 659 pm</p> 	<p>29 90-2003 / 20-1917 sr 804 am ss 658 pm</p>	<p>30 88-1934 / 18-1993 sr 805 am ss 657 pm</p>	<p>31 88-1934 / 20-1991 sr 806 am ss 656 pm</p> <p>Halloween</p>	

The Beautiful Sky of West Texas

Photos below are from Texas Tech West Texas Mesonet



Above is an image of Comet Holmes taken from Lubbock, Texas, on 5 November 2007. Comet Holmes is the bright shining orb toward the bottom center of the picture. A zoomed in view of the comet is located in the upper left-hand corner. The Photo was taken by Todd Lindley.



Above is a photograph taken in southwest Lubbock that shows the circumscribed halo with a colorful upper tangent arc and a portion of the white colored perhelion circle stretching horizontally from the sun across the western sky.



Composite image of the moon's transition to totality during the lunar eclipse on the early morning hours of Tuesday, August 28, 2007. The images were taken, from left to right, at 10:08 pm on the 27th, 4:19 am, 4:38 am, 4:52 am, 5:01 am and 5:20 am on the 28th, respectively. The photos were taken by Todd Lindley from Lubbock..

Photo by West Texas Mesonet

2008 Meteor Showers

Shower	Radiant and direction	Morning of maximum	Hourly rate
Quadrantid	Draco (NE)	Jan. 4	100
Lyrid*	Lyra (E)	Apr. 22	10-20
Eta Aquarid	Aquarius (E)	May 5	20-40
Delta Aquarid	Aquarius (S)	July 29	20
Perseid	Perseus (NE)	Aug. 12	60
Orionid*	Orion (SE)	Oct. 21	10-15
Leonid*	Leo (E)	Nov. 17	10
Geminid*	Gemini (S)	Dec. 14	75

* Moonlight will wash out fainter meteors in these showers.

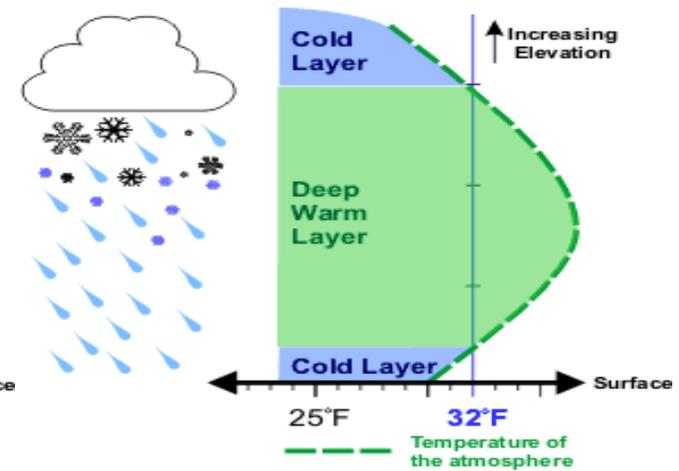
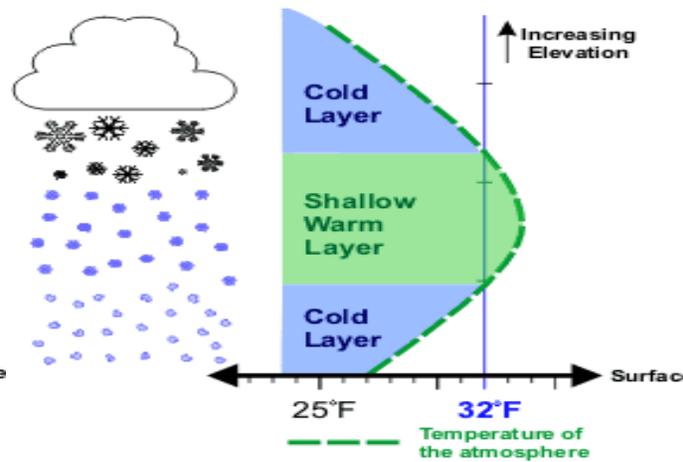
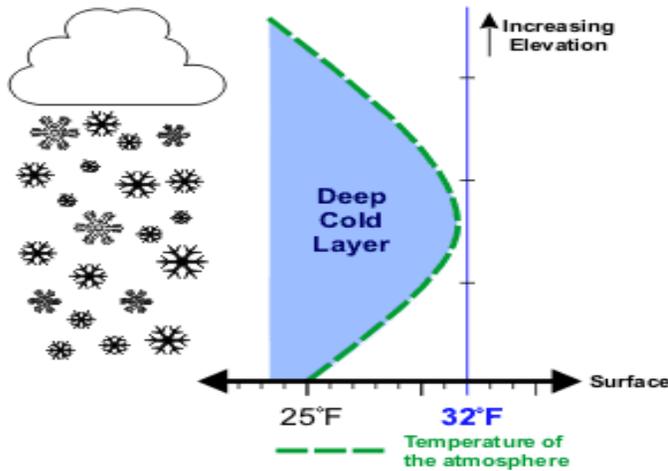
November 2008

Lubbock National Weather Service

WWW.WEATHER.GOV/LUBBOCK

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	<p>NOAA WEATHER RADIO CAN BE FOUND AT THE FOLLOWING FREQUENCIES:</p> <p>Lubbock 162.400 Dimmitt 162.500 Plainview 162.450 Childress 162.525</p>					<p>1 85-1994 / 23-1951 Lubbock Records</p> <p>sr 807 am - sunrise ss 655 pm - sunset</p>
<p>2 83-2001 / 19-1951</p> <p>sr 708 am ss 554 pm</p> <p>Daylight Saving Time ends</p>	<p>3 88-2005 / 7-1991</p> <p>sr 709 am ss 553 pm</p>	<p>4 86-1916 / 20-1950</p> <p>sr 710 am ss 552 pm</p> <p>Election Day</p>	<p>5 86-1916 / 22-1959</p> <p>sr 710 am ss 551 pm</p> 	<p>6 85-1975 / 16-1959</p> <p>sr 711 am ss 551 pm</p>	<p>7 89-1916 / 19-1947</p> <p>sr 712 am ss 550 pm</p>	<p>8 88--2005 / 20-1943</p> <p>sr 713 am ss 549 pm</p>
<p>9 90-2006 / 21-1943</p> <p>sr 714 am ss 548 pm</p>	<p>10 85-1927 / 19-1950</p> <p>sr 715 am ss 548 pm</p>	<p>11 82-1956 / 16-1947</p> <p>sr 716 am ss 547 pm</p> <p>Veteran's Day</p>	<p>12 85-1995 / 19-1915</p> <p>sr 717 am ss 546 pm</p>	<p>13 82-1973 / 14-1976</p> <p>sr 718 am ss 546 pm</p> 	<p>14 85-1933 / 4-1976</p> <p>sr 719 am ss 545 pm</p>	<p>15 88-1948 / 10-1916</p> <p>sr 720 am ss 544 pm</p>
<p>16 83-1966 / 11-1916</p> <p>sr 721 am ss 544 pm</p>	<p>17 85-1966 / 10-1959</p> <p>sr 721 am ss 543 pm</p>	<p>18 82-1999 / 16-1951</p> <p>sr 722 am ss 543 pm</p>	<p>19 85-1996 / 14-1921</p> <p>sr 723 am ss 542 pm</p> 	<p>20 88-1996 / 17-1937</p> <p>sr 724 am ss 542 pm</p>	<p>21 84-1927 / 18-1956</p> <p>sr 725 am ss 542 pm</p>	<p>22 81-1998 / 6-1957</p> <p>sr 726 am ss 541 pm</p>
<p>23 84-1965 / -1-1957</p> <p>sr 727 am ss 541 pm</p> <p>30 80-1946 / 10-1918 End of the Atlantic Hur Season</p>	<p>24 82-1915 / 7-1938</p> <p>sr 728 am ss 541 pm</p>	<p>25 86-1965 / 15-1993</p> <p>sr 729 am ss 540 pm</p>	<p>26 82-1970 / 8-1980</p> <p>sr 730 am ss 540 pm</p>	<p>27 81-1950 / 12-1938</p> <p>sr 731 am ss 540 pm</p> <p>Thanksgiving Day</p> 	<p>28 83-1949 / 5-1976</p> <p>sr 732 am ss 540 pm</p>	<p>29 76-1927 / 1-1976</p> <p>sr 732 am ss 539 pm</p>

Forecasting Precipitation type in the Winter



In the image (left) the green dashed line is the temperature in respect to elevation. The surface temperature is 25°F (-4°C) and increases with height before decreasing. However, since the temperature remains below freezing any precipitation that falls will remain as snow.

In this image the surface temperature is higher, 27°F (-3°C). Also as elevation increases, the temperature increases to a point where some of the atmosphere is above freezing before the temperature lowers again below freezing.

Freezing rain will occur if the warm layer in the atmosphere is deep with only a shallow layer of below freezing air at the surface. The precipitation can begin as either rain and/or snow but becomes all rain in the warm layer. The rain falls back into the air that is below freezing but since the depth is shallow, the rain does not have time to freeze into sleet.

Upon hitting the ground or objects such as bridges and vehicles, the rain freezes on contact. Some of the most disastrous winter weather storms are due primarily to freezing rain.

Types of Warnings or Advisories that may be issued with this temperature profile follow:

Heavy Snow Warning – 4" or greater in 12 hours, or 6" or greater in 24 hours

Snow Advisory -- issued when from 1 up to 3 inches of snow are expected in a 12 hour period.

As snow falls into the layer of air where the temperature is above freezing, the snow flakes partially melt. As the precipitation reenters the air that is below freezing, the precipitation will re-freeze into ice pellets that bounce off the ground, commonly called sleet. The most likely place for freezing rain and sleet is to the north of warm fronts. The cause of the wintertime mess is a layer of air above freezing aloft.

Types of Warnings or Advisories that may be issued with this temperature profile follow:

Heavy Sleet Warning -- ½ inch or more accumulation

Sleet Advisory -- sleet accumulation of less than ½ inch

Winter Weather Advisory – significant inconvenience to travel

Types of Warnings or Advisories that may be issued with this temperature profile follow:

Ice Storm WARNING – 1/4 inch of glaze or more

Freezing Rain ADVISORY -- Light glaze accumulating less than ¼ inch

Winter Weather Advisory – significant inconvenience to travel

SUNDAY

MONDAY

TUESDAY

WEDNESDAY

THURSDAY

FRIDAY

SATURDAY

	<p>1 76-1995 / 12-1918 Lubbock Records</p> <p>sr 734 am - sunrise ss 539 pm - sunset</p>	<p>2 80-2005 / 13-1915</p> <p>sr 735 am ss 539 pm</p>	<p>3 79-1926 / 15-1967</p> <p>sr 736 am ss 539 pm</p>	<p>4 81-1958 / 15-1921</p> <p>sr 737 am ss 539 pm</p>	<p>5 79-1939 / 10-1950</p> <p>sr 737 am ss 539 pm</p>  <p>First Quarter</p>	<p>6 83-1939 / 1-1950</p> <p>sr 738 am ss 539 pm</p>
<p>7 79-2007 / 8-2005</p> <p>sr 739 am ss 539 pm</p>	<p>8 78-1970 / 3-1917</p> <p>sr 740 am ss 539 pm</p>	<p>9 80-1939 / 5-1978</p> <p>sr 741 am ss 540 pm</p>	<p>10 81-1933 / 5-1917</p> <p>sr 741 am ss 540 pm</p>	<p>11 80-1939 / 6-1917</p> <p>sr 742 am ss 540 pm</p>	<p>12 82-1937 / 6-1961</p> <p>sr 743 am ss 540 pm</p>  <p>Full Moon</p> <p>Geminids Meteor Shower Dec 13-14</p>	<p>13 79-1921 / 5-1917</p> <p>sr 743 am ss 540 pm</p>
<p>14 75-1922 / 8-1919</p> <p>sr 744 am ss 541 pm</p>	<p>15 76-1977 / 10-1917</p> <p>sr 745 am ss 541 pm</p>	<p>16 76-1939 / 11-1914</p> <p>sr 745 am ss 541 pm</p>	<p>17 78-1980 / 5-1932</p> <p>sr 746 am ss 542 pm</p>	<p>18 77-1980 / 6-1996</p> <p>sr 747 am ss 542 pm</p>	<p>19 76-1921 / 0-1924</p> <p>sr 747 am ss 543 pm</p>  <p>Last Quarter</p>	<p>20 80-1921 / 3-1924</p> <p>sr 748 am ss 543 pm</p>
<p>21 78-1981 / 2-1983</p> <p>sr 748 am ss 544 pm</p> <p>Winter Solstice (604 am)</p>	<p>22 79-1955 / 1-1983</p> <p>sr 749 am ss 544 pm</p>	<p>23 80-1964 / 3-1983</p> <p>sr 749 am ss 545 pm</p>	<p>24 80-1955 / 0-1983</p> <p>sr 750 am ss 545 pm</p>	<p>25 76-1955 / -1-1924</p> <p>sr 750 am ss 546pm</p> <p>Christmas</p>	<p>26 77-2005 / 0-1918</p> <p>sr 750 am ss 547 pm</p>	<p>27 76-1976 / 3-1918</p> <p>sr 751 am ss 547 pm</p>  <p>New Moon</p>
<p>28 81-1928 / -2-1924</p> <p>sr 751 am ss 548 pm</p>	<p>29 77-1920 / -1-1939</p> <p>sr 751 am ss 549 pm</p>	<p>30 77-1951 / 7-2000</p> <p>sr 752 am ss 549 pm</p>	<p>31 75-2005 / 8-1923</p> <p>sr 752 am ss 550 pm</p> <p>New Year's Eve</p>		<p>NOAA WEATHER RADIO CAN BE FOUND AT THE FOLLOWING FREQUENCIES:</p> <p>Lubbock 162.400 Dimmitt 162.500 Plainview 162.450 Childress 162.525</p>	

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, and extra batteries.
- Special items for infant, elderly, or disabled family members.

When a Severe Thunderstorm or Tornado WATCH is issued—

- Listen to NOAA Weather Radio, 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 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.