Southwest Weather Bulletin

Spring-Summer 2012 Edition

National Weather Service Santa Teresa-El Paso

Heavy Autumn Rains and Early Winter Snows Followed by Warm Dry and Occasionally Windy Weather

A wide variety of weather affected southwestern and south central New Mexico and western Texas during the autumn, winter and early spring of 2011/2012. Most of the October period saw warm and mostly dry weather with above normal temperatures. Despite this, showers and thunderstorms with hail and heavy rains did strike a few locations during the month. West to southwest winds prevailed for much of November resulting in continued dry conditions until a deep low pressure system brought much needed heavy rains to portions of southwestern New Mexico west of the Rio Grande. December was a chilly month for the Borderland as a series of low pressure systems with cold Canadian air invaded the region causing well below normal temperatures along with areas of heavy rains and snow, again mainly west of the Rio Grande and over the higher mountains. The weather pattern for January through April was conducive for persistent west to southwest winds.

Visibilities were occasionally near zero across the El Paso area during the March 18 2012 wind and dust storm. (Joe Rogash NWS/NOAA)

Consequently temperatures were near or above normal January through April with little rain or snow falling. However a series of deep low pressure systems moving west to east across the southwestern United States produced very windy conditions with extensive blowing dust and low visibilities. The continuation of very dry weather also created the worst drought in 40 years for much of the area, especially east of the Rio Grande.

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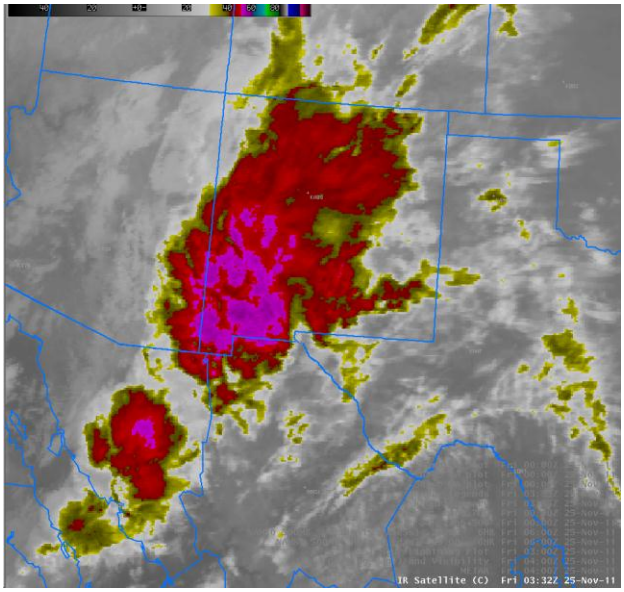
Seasonal Weather Highlights



November 24, 2011 satellite image showing the storm that brought heavy rains to New Mexico.

Heavy snow fell over Silver City on December 3. (Carlos Silva/Silver City Sun News)

October 2: Strong thunderstorms drop 1.2 inches of rain over Cloverdale in Hidalgo County New Mexico.

October 4: Widespread showers and thunderstorms move across Hidalgo, Grant, Luna and Sierra Counties producing locally heavy rains and small hail. Half-inch hail is reported at Lordsburg.

November 5: Very windy as winds gust to near 70 mph over northeast El Paso with gusts around 50 to 60 mph most elsewhere.

November 24-25: A powerful Pacific storm moves across the southwestern United States pulling abundant moisture northward into southern New Mexico. As a result moderate to heavy rains fall across portions of south central and southwestern New Mexico with around 1 to almost 2 inch rainfalls reported over portions of Grant, Luna and Hidaldo Counties. Minor flooding occurs in Deming.

December 01: Very windy as gusts are measured to 75 mph over west El Paso with gusts near 80 mph at Dripping Springs New Mexico.

Dense fog formed over Santa Teresa during the morning of December 5. (Joe Rogash NWS/NOAA)

Gusts around 60 mph also occur in the Las Cruces area. The winds blow the roof off of a trailer in northeast Las Cruces.

December 02-03: Winter storm produces 4 to 8 inches of snow around Cloudcroft and Silver City. 3 to 4 inches of snow also fall around Truth or Consequences with 2 inch snowfalls at Alamogordo.

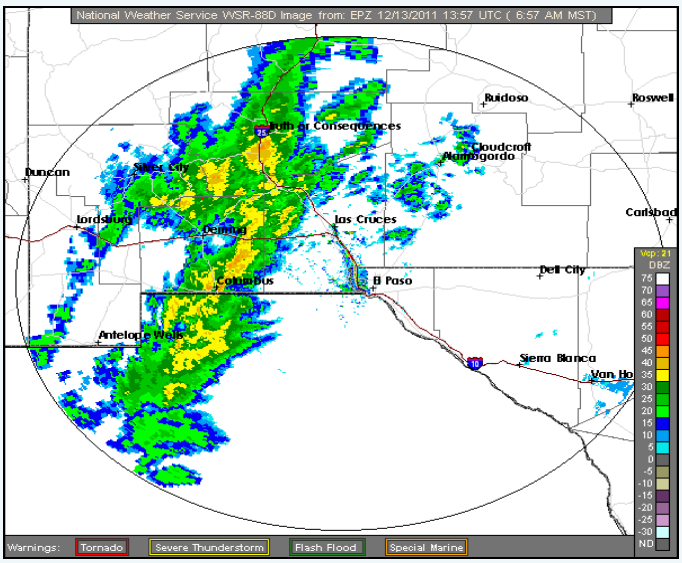
The December 5 winter storm brought 4 to 6 inches of snow to the Alamogordo area. (Joe Rogash/NWS)

December 5: Winter storm brings widespread snows across southern New Mexico and western Texas. Around 4 to 6 inches of snow fall in the vicinity of Alamogordo, Las Cruces and Deming with up to 2 inches of snow occurring over east El Paso. Very cold air also flows into the region with temperatures about 15 to 20 degrees below normal December 5-7.

December 12-13: Another deep Pacific low pressure storm system moves across the southwestern United States with southerly winds ahead of it pushing very moist air into New Mexico. Unusually heavy rains therefore fall over much of southwestern New Mexico with 2 to 3 inches of rain reported around Silver City. 2.5 inches of rain also fall near Cloverdale with almost 2.5 inches of rain at Animas and 2 inches of rain at Lordsburg. From 1 to 2 inches of rain also fall around Truth or Consequences and over an inch of rain falls near Deming.

December 18-19: Snow amounts of 4 to 8 inches fall in the Cloudcroft and High Rolls vicinity with almost 5 inches of snow near White Signal. Strong thunderstorms also move across portions of Dona Ana and El Paso Counties.

Las Cruces during the December 5 winter storm. (Jeff Passner)



Radar image showing heavy rains over New Mexico on December 13.

Snow fell over Cloudcroft during the afternoon of December 19.

December 23-24: A major snowstorm brings a white Christmas to the Borderland. Heaviest snows are over northeast Otero County as 10 to 20 inches of snow fall around Cloudcroft and Mayhill. To the west 6 to 12 inches of snow are reported in Grant County near Bayard, Silver City, Tyrone and Hillsboro. Across the lower elevations 7 inches of snow are measured in Dona Ana County near Rincon with 3 to 6 inches of snow in the Las Cruces vicinity. In west Texas 4 inches of snow fall over portions of east El Paso. The widespread snows force numerous road closures and disrupt holiday travel.

January 16: A windy day as winds gust around 50 to 60 mph across much of the region.

January 22: Windy during the morning with winds gusting to 71 mph at Organ NM and 66 mph over northeast El Paso.

February 14: Windy with winds gusting around 50 mph across the lowlands and almost 70 mph near the mountains.

February 17: Seven inches of snow fall near Mimbres.

Wind gusts over 60 mph with blowing sand and dust reduced visibilities to near 0 miles around Sunland Park and Santa Teresa NM on March 18. (Joe Rogash NWS/NOAA)

March 18: Major wind and dust storm strikes the Borderland. Winds gust over 70 mph across portions of east El Paso and near Rodeo and Red Rock NM with widespread gusts from 50 to 60 mph elsewhere. The blowing sand and dust reduce visibilities to near zero over much of the region resulting in numerous road closures including portions of Interstate 10 and Highway 180.

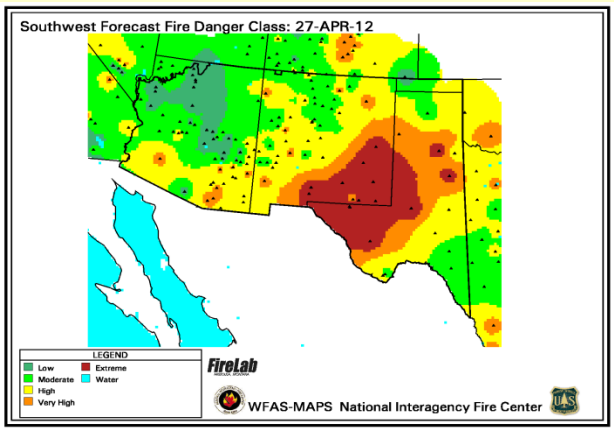
On April 22 this dust devil developed over east El Paso. (Egbert Zavala)

March 26: Very warm day across the region with El Paso, Deming, Orogrande, and Cloudcroft recording new record high temperatures of 90, 91, 84 and 68 respectively.

April 8: During the late evening a few severe thunderstorms move northward from Mexico into the Santa Teresa-west El Paso area dropping quarter-sized hail and almost an inch of rain over a small area.

April 14: Windy across the area with widespread blowing dust and lowered visibilities. Winds gust to 82 mph over San Augustine pass with gusts around 50 to 60 mph measured over much of the lowlands.

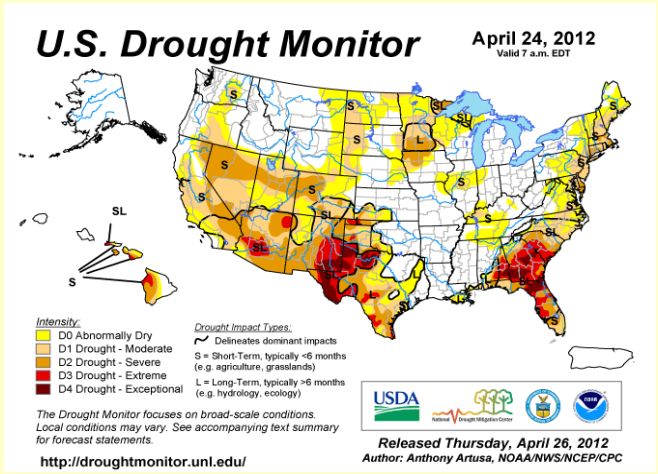
April 26: Another windy day with blowing dust and low visibilities as winds gust around 40 to 50 mph over much of the region.



The late April fire danger was high to extreme across southern New Mexico and west Texas.

From the late autumn through the winter much of the Rio Grande was completely dry in the El Paso area. (Joe Rogash NWS/NOAA)

On April 8 hail up to the size of quarters fell over Santa Teresa and west El Paso. (Mike Hardiman NWS/NOAA)



By late April severe to extreme drought conditions covered southern New Mexico and western Texas.

National Weather Service in Santa Teresa to Get Latest Radar Technology

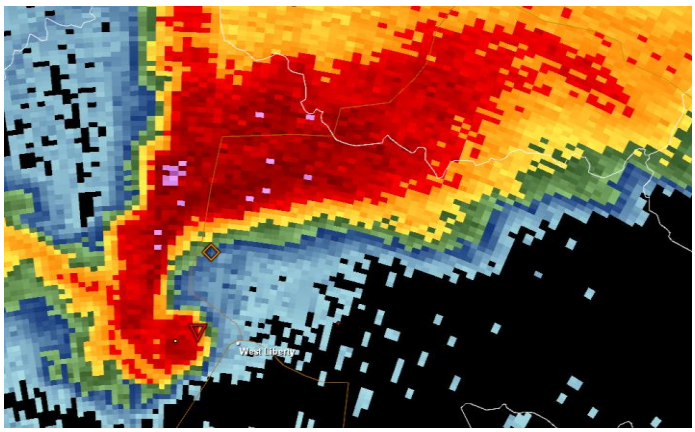
The Santa Teresa/El Paso National Weather Service Forecast Office (located in Santa Teresa NM) along with the Holloman Air Force Base in Alamogordo NM will receive the new Dual- Polarization Doppler Radar by early summer of this year. The Dual-Polarization radar is a newer more advanced technology which will allow the Weather Service to more accurately detect and warn for hazardous weather across southern New Mexico and western Texas.

Weather radar works by transmitting electrical radio wave pulses which strike an object such as a rain drop or ice crystal. The pulse bounces off the objects and returns to an antenna where the signal is processed by computers before being displayed for analyses by meteorologists.

The modernized Dual-Polarization Doppler Radar transmits radio waves that have both horizontally and vertically oriented pulses which allow the radar to better determine the presence of such elements as rain drops, ice, hail, snow and even debris picked up by high winds. The radar will also continue to measure the wind velocities associated with atmospheric disturbances such as thunderstorms and tornadoes.

The advantages of Dual Polarization Radar will include more accurate measurements of rainfall amounts, more reliable detection of large hail, and an improved capability to differentiate between rain, hail and snow. Thus the radar will lead to improvements in flash flood and severe thunderstorm warnings and short term winter weather forecasts.

The National Weather Service Doppler Weather Radar located in Santa Teresa NM.



Dual-Polarization Radar reflectivity image of a deadly and destructive tornadic thunderstorm which struck West Liberty Kentucky (below).

(National Weather Service Louisville KY)

Got Rainfall?
Join CoCoRaHS!

CoCoRaHS is the **Co**mmunity **Co**llaborative **Ra**in, **H**ail, and **S**now Network -- a non-profit, community-based, high-density network of volunteers who take daily measurements of rain, hail, and snow in their backyards.

The data is sent to the National Weather Service, and is used to help improve river forecasts, and flash flood guidance. It also helps meteorologists understand local rainfall and snowfall patterns.

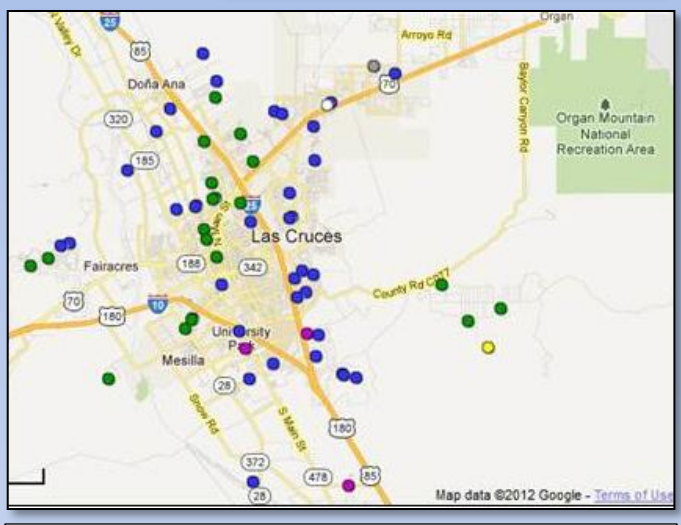
All you need is a standard 4-inch rain gauge, an interest in weather, and an internet connection!

CoCoRaHS has been a nationwide network for many years, and there are several observers in the El Paso/Santa Teresa County Warning Area… especially around Las Cruces and Deming. However, there are only a handful of observers in the El Paso area, and there are plenty of gaps in Sierra, Hudspeth, and Hidalgo counties.

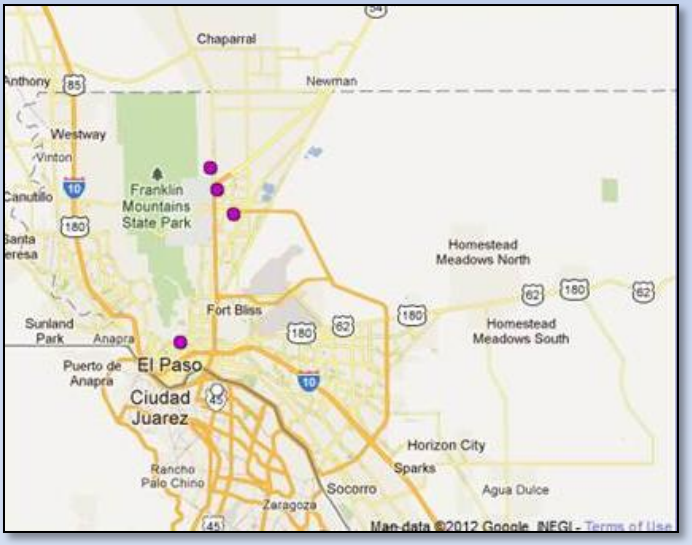
CoCoRaHS is volunteer-friendly. Unlike the NWS COOP Observer Program, the emphasis is on understanding areal distribution of precipitation for specific events – not on building a continuous record for a specific point location. If you're away, you can easily send a "multi-day precipitation" report, or just report "Missing" precipitation. During dry stretches, you can report "daily zeros" *en-masse* rather than remembering to do it every day.

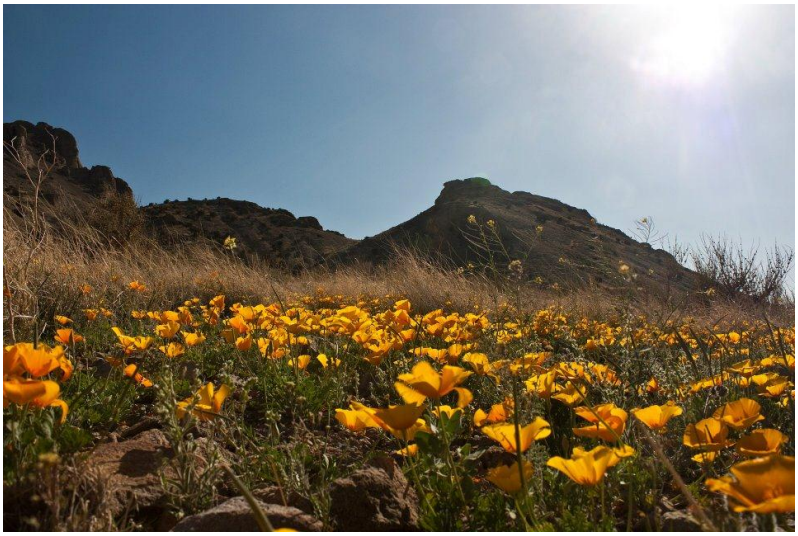
For more information on CoCoRaHS, visit the NWS El Paso Volunteer Portal at:

www.weather.gov/elpaso/?n=volunteer



There's plenty of CoCoRaHS observers in Las Cruces, but very few in El Paso. Help us fill-in the gaps!





By the early spring the poppies were in bloom over the Florida Mountains near Deming. (John Fausett NWS/NOAA)

Cactus flower in bloom at Santa Teresa. (Charlotte Rogash)

Spotters…Please call the National Weather Service If You Observe:

Tornado or Funnel Cloud…Report Time, Location and Movement

Hail…1/2 Inch or Larger

Damaging Winds…Damage To Buildings, Motor Vehicles, Trees, Power Lines And Other Structures

Flash Flooding…Flooding Of Streets and Buildings , Or If Rivers, Streams And Arroyos Flood Or Overflow

Heavy Rains…1/2 Inch of Rain In Less Than 30 Minutes Or At Least 1 Inch Of Rain In Less Than 2 Hours

Blowing Dust…Whenever Blowing Dust Reduces The Visibility To Less Than 2 Miles.

Snow Amounts Greater Than An Inch