

NATIONAL
WEATHER SERVICE

ALBUQUERQUE,
NEW MEXICO

UPCOMING
COOPERATIVE
OBSERVER AWARDS:

- **May 2008**
Kelly Ranch
Near Magdalena, NM
50 Years of Service
- **June 2008**
Alice Lobato
Glorieta, NM
40 Years of Service
- **June 2008**
Glenn and Georgia
Overlander
Moriarty, NM
10 Years of Service
- **July 2008**
Rienhardt Ranch
Near Magdalena, NM
15 Years of Service
- **August 2008**
Jerry Sanchez
Cerro, NM
30 Years of Service
- **August 2008**
Editha Bartley
Gascon, NM
45 Years of Service
- **August 2008**
Sam Hitt
Santa Fe, NM
20 Years of Service

INSIDE THIS
ISSUE:

Joe's Place/Radio Room	2
ABQ Precip/Photos	3
Severe Weather Safety	4
La Niña Impacts NM?	5
Meet Your Observers	6
SKYWARN Program	7
By The Numbers	8

New Mexico

Skywatcher

VOLUME 4, ISSUE 1

APRIL 2008

Weather Data and Your Safety

The spring season is upon us, and that means it is time to welcome you to the Spring 2008 Edition of the New Mexico Skywatcher. In this issue of the Skywatcher, we will present some severe weather safety rules, provide examples on how your observational data is used around the world, and examine the effects of the recent La Niña on the past winter season. We are also happy to introduce a new section to the Skywatcher, the Radio Room featuring Tim Shy. In addition, you will find a feature on two of our adept observers, information on the updated Skywarn program, and interesting statistics on winter temperatures and snowfall amounts.

We will be commemorating Weather Data Awareness Day on Monday, April 28th. Your observations, both from

the Cooperative Observing Program and the Skywarn Spotter Program, play a pivotal role in the operation of the local Albuquerque National Weather Service office as well as many other national agencies within the NOAA network. Check out our [webpage](#) for more information on how your observations can help serve your community.

We also want to take this time to thank our observers for their timely and accurate weather reports during the past months of the fall and winter seasons. Your data was extremely useful in determining the status of the New Mexico drought. In addition, your real-time snow reports helped save lives and valuable property.

Congratulations to those

receiving awards this spring and summer (shown in the left column). Your long history of weather observations are important in developing climatological databases, supporting weather forecasting and assisting with research projects.

We appreciate the hard work our observers provide for the National Weather Service, and we wish you the best during the spring and summer seasons!

Authors: Todd Shoemake/
Daniel Porter



Severe Weather Safety

While New Mexico lies on the western edge of "Tornado Alley," lightning and flash floods are responsible for more fatalities in New Mexico than any other weather hazard. As thunderstorms and their associated hazards often develop quickly, knowing what to do ahead of time can protect you from becoming injured.

The safest place to be during a tornado is below ground. If an underground shelter is not available, go to an interior room on the lowest floor. (Continued on Page 4)

June 9, 2007 - Santo Domingo Pueblo Tornado
(Courtesy of Don and Karen Shoemaker)



Joe's Place



Joe Alfieri
Observing Program
Leader

There are a few things to note in the coming weeks ahead. For those of you with a standard 8-inch rain gauge, it's time to place the inner measuring tube and funnel inside the gauge. This will make observing easier and keep moisture from evaporating.

On May 12, 2008 postal rates will increase. A first-class mail stamp will increase from \$0.41 to \$0.42. We will be supplying all observers with more mailing envelopes as we make our spring and summer visits. If you still have a few envelopes left with insufficient postage, please let us know, and we'll send you additional stamps to cover the cost of mailing.

Thanks to everyone who sends in their forms on time. It is extremely helpful to our staff in meeting the mailing deadline to the National Climatic Data Center (NCDC), which is the 15th of every month. Your accurate and timely reports are the backbone of our nation's climatological history.

If you are interested in switching from paper observations to electronic format (WxCoder III or IV-ROCS), contact our office and we will gladly assist you. WxCoder III is an updated system that is easier to use. If all data has been entered, observers will no longer have to mail in their paper forms. If you are an IV-ROCS user, your data is already being automatically uploaded into WxCoder III. Once the data has been entered for the month, we can print it out locally. Please call our office if you miss a day of entering data, and we will manually enter it for you. Eventually, NCDC will automatically download all data, and paper forms will be phased out. One of the great benefits of electronic observations is that we receive your data on a daily basis versus monthly, and it can be used immediately in the forecast process and for research.

With warmer weather in sight and chances for rain and thunderstorms increasing, you can

be of great service to the National Weather Service in Albuquerque by reporting severe weather conditions in your area. Please call in any sightings of funnel clouds, wall clouds, tornadoes, damaging winds, hail or flooding to our office at 1-888-386-7637. Your information can help forecasters make vital and quick decisions, and verify issued warnings. Please don't forget to enter this information on your B91, B92, or B83a. In addition, report any snowfall, snow depth, and liquid equivalent on your form. You can find instructions and examples on these forms.

If you should need supplies or more forms, please contact our office at 1-888-386-7637.

Thanks again for your service in the Cooperative Observing Program. I hope your summer is enjoyable!

Author: Joe Alfieri

The Radio Room



Tim Shy
HAM Radio
Program Leader

I'm very happy to be writing my first "Radio Room" column, and hope it will be only the first of many more to come. I'm Tim Shy, KM4KS, and am delighted to be heading up the amateur radio program here at the National Weather Service Office in Albuquerque. Additionally, I will be taking over the trusteeship of our office station, WX5ABQ.

Having transferred recently from our Fairbanks, Alaska office, I've been very pleased to meet so many amateurs in the state, and your warm welcome on the air makes my day. I've been doing amateur radio and shortwave listening since the junior high days, and first became interested in a Weather Service career while SKYWARN spotting as a county Emergency Coordinator in eastern Kentucky. Put another way, ham radio is responsible for where I am now!

We're blessed with an upgrade in our equipment, and a snappy new dual-band 2 meter/440 MHz base station will help us cover more of New Mexico's extensive repeater network more efficiently. As the days go on, I will be seeking out operators and net controls who might help us monitor the bands and ensure that any gathered weather information gets through to us. Thanks in advance for your support and cooperation, and I look forward to many more good hours on the bands with you! 73 de Tim!

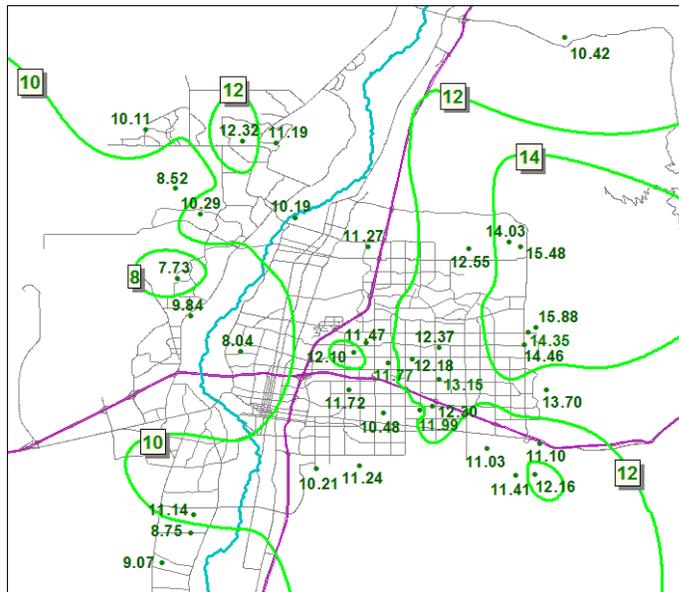
Author: Tim Shy

Albuquerque Precipitation (2007 vs. 2006)

If your recollection was that the year 2007 was drier than 2006 in the Albuquerque metro area, you'd be right on the money. Every CityNet site that checked in with a full year's worth of data recorded significantly less annual precipitation in 2007 compared to 2006. However, it is interesting to note that some sites in 2007 were still above the annual norm, demonstrating just how wet 2006 was.

As was the case in 2006, the wettest section of the metro area was the far Northeast Heights area, specifically just east of the Tramway and Montgomery intersection. The 2007 total was 15.88 inches which paled in comparison to the 23.25 inches in the previous year. The driest area both years was situated on the west side of the valley. In 2007, it was just northwest of the Montano and Golf Course intersection, where just 7.73 inches fell. In 2006, the driest location was in the South Valley, just north of the Isleta and Rio Bravo intersection, where 11.4 inches was recorded. The section of the metro area that experienced the greatest precipitation contrast between 2006 and 2007 was the far Northeast Heights where approximately seven inches more precipitation was recorded in 2006 than in 2007. A portion of the South Valley registered the least variation between the two years, just 2.43 inches, specifically near Rio Bravo, between Isleta and Coors.

The near record-setting wet months of August and December, and to a lesser degree October, were largely responsible for putting 2006 well ahead of 2007 in total precipitation, despite a wetter than normal late winter and early spring in 2007. August 2006 was just astounding with two sites, both near Tramway Boulevard, reporting over eight to nine inches of



2007 Albuquerque Precipitation

rain. By sharp contrast, in February 2006, there was no measurable precipitation at 73% of the reporting CityNet sites and no site in the immediate city limits reported more than 0.04 of an inch of precipitation. Compared to 2006, no month stood out nearly as dramatically among the others in 2007 as precipitation was more evenly distributed throughout the year.

Author: Mark Fettig

2007-2008 Winter Storm Photos



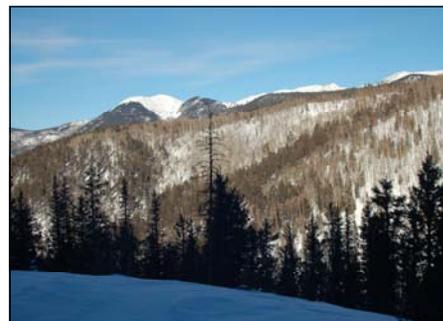
December 12, 2007
Cerro, NM

Photo Courtesy of Carolyn Gallegos



December 15, 2007
Ranchos de Taos, NM

Photo Courtesy of Bob Freese



January 20, 2008
Carson National Forest

Photo Courtesy of Mike Weaver

Severe Weather Safety (Cont.)

'It only takes a foot or two of water to float most cars...'



Flash Flooding near Glendwood, NM December 1, 2007 (Photo Courtesy of Pete Sanchez)



Wind Damage in Roswell, NM June 27, 2007 (Photo Courtesy of Jim Tucker)

Essentially, try to put as many walls between you and the tornado as possible and stay away from windows. Mobile homes and vehicles are often picked up and tossed into the air by tornadoes, so abandon these for a sturdy building or storm shelter. If you are caught outside, find a ditch or comparable low spot. Once you find shelter, get underneath a sturdy object such as a table and cover yourself with a mattress, blankets or pillows to protect yourself from flying debris.

Many tornado safety rules also apply to severe thunderstorms in which large hail and strong winds are the main threats. Indoor areas away from windows offer the best protection. However, in this case, a vehicle may be a better shelter than remaining outside. In addition, a vehicle protects you from being struck by lightning as long as you avoid contact with its metal frame. If caught outside during a lightning storm, **DO NOT** be the highest object or be near the highest point in the area. Avoid trees, power poles and towers which all attract lightning. Instead, find a low spot or ditch and crouch down like a baseball catcher to make yourself as small of a target as possible.

In order to protect yourself from flooding, remember the phrase, "Turn around don't drown." Most flash flood deaths occur in automobiles. Driving through flowing water or water of unknown depth can be deadly. It only takes a foot or two of water to float most cars and two to three feet of water to float most trucks and SUVs. Once the vehicle is swept away, it is usually carried into much deeper water where the threat of drowning is much higher. Children should stay away from flooded areas and care should be taken not to play or camp in arroyos, low spots or normally dry stream beds. If you are in an area where flooding is occurring, move to higher ground immediately.

Below are the severe weather criteria to report to the National Weather Service:

- 3/4 inch hail
- Flooding or torrential rain
- Rotating wall clouds
- Significant snow or ice
- Deaths/damage/injuries
- Winds greater than 50 mph using wind equipment or the Beaufort scale (shown below)
- Hail that creates icy roadways
- Visibility less than one half mile
- Funnel clouds or tornadoes
- Icing of road surfaces
- Wildfires

Beaufort Scale

Wind Speed (mph)	Effects on Land
8-12	Leaves, small twigs in constant motion; light flags extended.
13-18	Dust, leaves and loose paper raised up; small branches move.
19-24	Small trees begin to sway.
25-31	Large branches of trees in motion; whistling heard in wires.
32-38	Whole trees in motion; resistance felt in walking against the wind.
39-46	Twigs and small branches broken off trees.
47-54	Slight structural damage occurs; slate blown from roofs.
55-63	Seldom experienced on land; trees broken; structural damage occurs.
64-72	Very rarely experienced on land; usually with widespread damage.
73 or higher	Violence and destruction.

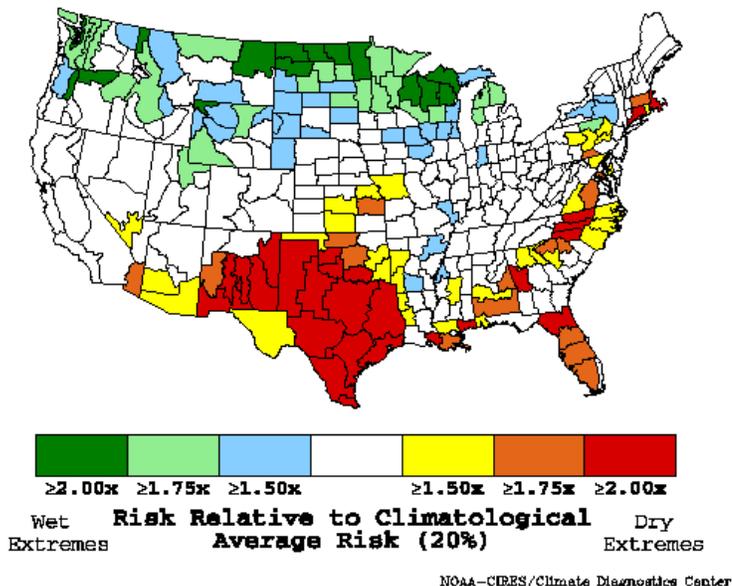
Author: Ken Drozd

Did La Niña Impact New Mexico?

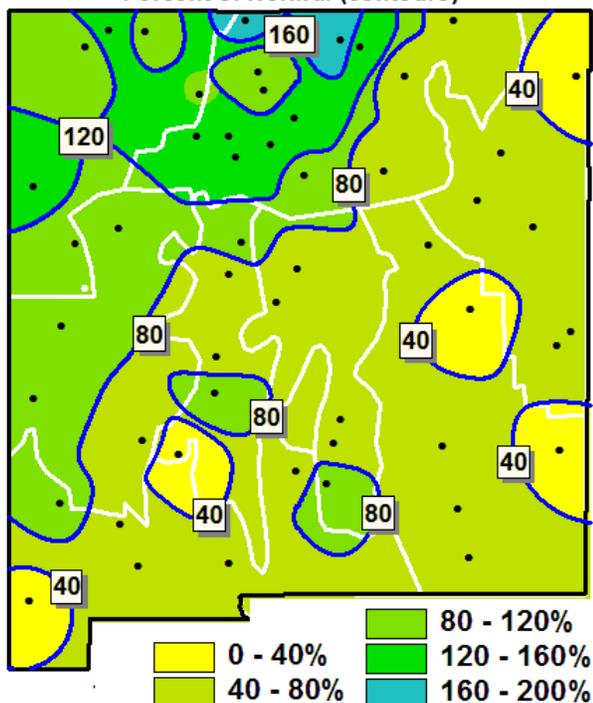
Sea surface temperatures in the equatorial Pacific Ocean can have a profound effect on the seasonal precipitation across much of the United States, including the southwestern states. These changes in sea surface temperatures across the equatorial Pacific are related to large scale pressure patterns and the cycle is referred to as the El Niño/Southern Oscillation, or ENSO. The ENSO cycle is a known source of year-to-year variability in temperature and precipitation across the globe.

In very simple terms, when sea surface temperatures in the equatorial Pacific are warmer than average, the event is referred to as an El Niño, while a period of cooler than normal temperatures is referred to as a La Niña. Using long periods of weather observations, including cooperative reports, research scientists have been able to establish variability related to the ENSO cycle. By the fall of 2007, it was determined that a moderate La Niña had developed and would likely persist through the winter. The figure to the right depicts the effects of La Niña on winter precipitation (December through February).

**DJF Precipitation Extremes During La Niña
Risk of Extreme Wet or Dry Years**



**October 2007 - February 2008 Precipitation
Percent of Normal (contours)**



When a La Niña episode is in progress, the winter precipitation across New Mexico is often less than normal. Climate division average precipitation during winter for 21 recent La Niña events ranged from 77 percent of normal in the Southeastern Plains (division 7) to 88 percent of normal in the Northern Mountains (division 2). While all climate divisions averaged less than normal winter precipitation, there are years during which a La Niña was in progress but the winter season had above normal precipitation.

The percent of normal precipitation using airport observations and approximately 40 cooperative sites for the period October 2007 through February 2008 is shown to the left. While the statewide average precipitation for this period is very close to normal (92%), the variation across the state is noteworthy. La Niña appears to have affected much of the state, however, a persistent storm track swept several winter storms across northern and western New Mexico. In general, the dividing line between wet and dry since last October has set up from about Raton to Silver City, with much drier than normal conditions south and east of that line, and moisture laden winter storm systems favoring the western mountains, northwest plateau and northern mountains. The moisture deficit has resulted in a “moderate” drought status across much of eastern New Mexico, and “extreme” conditions in the southeast corner of the state.

Authors: Deirdre Kann and Ed Polasko

Meet Your Observers

Within each issue of your New Mexico Skywatcher, the National Weather Service in Albuquerque will highlight cooperative observers from across our forecast area (which includes the northern two-thirds of New Mexico). We are proud of the service you provide our nation, and we want to acknowledge your hard work.

Author: Maxine Pacheco

Northern New Mexico



Dave Cordova
Taos Observer

Dave Cordova has been the weather observer in Taos, New Mexico for over 30 years, monitoring and reporting the weather to the National Weather Service Forecast Office in Albuquerque. Dave Cordova started observing weather while working at the now-defunct KKIT-AM radio station in Taos, back in 1977. While everyone else was leaving work for the day, Dave stayed behind to take the late-afternoon and sometimes hourly aviation weather observations, especially during bad weather.

One of his many memorable experiences was observing science as it happened. This is how he described it: “One such occurrence was learning that it took heat by caloric burn to make ice. On a very cold afternoon, I was recording my observation temperatures. While getting the dew point temperature by dipping the wet-bulb wick into water then aerating it, I noticed that the temperature had dropped to 27 degrees. At the point when the wick froze, the temperature then shot up 5 degrees to 32. It wasn’t that I didn’t believe that it took heat to make ice, but seeing it was really amazing.”

The radio station is long gone, but Dave still has his office in the same building that has been home to Taos’ official cooperative weather reporting station. Local newspapers still call Dave for the high and low temperatures for the past week. Dave Cordova’s many years of dedicated support to the National Weather Service and his community make him an outstanding representative of the cooperative observer network.

Central New Mexico



Robert DeBlassie
Albuquerque South
Valley Observer

For over 27 years, Robert T. DeBlassie, Albuquerque’s South Valley cooperative weather observer, has earned a reputation for providing detailed, accurate, and timely weather information to the National Weather Service. Robert has always been very interested in weather, and became a cooperative weather observer in October 1980. Since that time, not a single observation has been missed. This is due in part to his wife’s help, family members, and neighbors who take observations whenever Robert is away from home.

Robert T. DeBlassie was born and raised in Albuquerque, and retired from the Air Force Weapons Lab in 1967. He worked as a mathematician for 34 years. One of his hobbies is observing weather. He enjoys keeping daily observations and comparing them to past observations. He is currently working on tables comparing the South Valley daily maximum and minimum temperatures for the past 28 years. Besides weather, Robert enjoys spending time with his grandchildren. They are all interested in weather as well. In the summer, they enjoy painting the cotton region shelter.

Robert DeBlassie’s daily observations are critically important to the NWS Forecast Office in Albuquerque, as well as farmers and ranchers throughout the area. In October 2005, the National Weather Service presented a length of service award to Mr. DeBlassie, recognizing 25 years of dedicated service. His many years of dedicated support of the National Weather Service and his community, make Robert DeBlassie an outstanding representative of the cooperative observer network.

SKYWARN Program



One of the best ways for members of the general public who are interested in learning more about the weather and helping the National Weather Service (NWS) is by becoming a SKYWARN spotter. SKYWARN is a national program whereby trained volunteers relay reports of severe weather to local NWS offices. This life-saving information is then used to either issue severe weather warnings for tornadoes, severe thunderstorms, and flash floods, or to verify previously-issued warnings.

Becoming a SKYWARN spotter is easy. All it takes to participate is attending a three hour training course conducted by an expert NWS Meteorologist. The training is free and covers all of the basics that are needed in order to become a SKYWARN spotter. The sessions are normally conducted during the spring and summer months all across the state of New Mexico. However, additional training sessions can be scheduled in communities or for organizations on an "as needed" basis.

What is taught at a SKYWARN training session? Students learn about how incredibly vital a role they play in helping the NWS complete its mission of protecting life and property from weather-related hazards. They learn about the distribution of severe weather across the United States and a bit about New Mexico's unique weather history. The basics of thunderstorm development and severe weather features such as tornadoes, downbursts, flash flooding, and lightning are also discussed as well as safety tips to keep the SKYWARN spotter safe during the storm.

But, most importantly, SKYWARN spotters learn how to identify important features within a storm that serve to highlight a storm's potential to produce severe weather. The training program that is used to teach our spotters was recently modified to become more interactive and is highly inclusive of appropriate multimedia materials. These changes have resulted in training sessions that are educational, easy to understand, and highly enjoyable for both teacher and student.

If you are interested in becoming a SKYWARN spotter, you are more than welcome to participate provided that you are a year-long resident of New Mexico, 18 years of age or older, and fully able to observe severe weather in your community. SKYWARN spotter training sessions are being held all the time, and it is only a matter of time before we are in a community near you! For more information about the SKYWARN program, please feel free to contact the people below or you may reach us at our business address located at the end of this publication.



Golf ball sized hail
October 5, 2004
 (Photo Courtesy of Steven Johnson)

Author: Jesse Haro

Ken Drozd
 SKYWARN Training and Recruitment Coordinator
 NWS Albuquerque
 Email: Kenneth.Drozd@noaa.gov

Timothy Shy
 HAM Radio Program Leader
 NWS Albuquerque
 Email: Timothy.Shy@noaa.gov

Jesus Haro
 Warning Coordination Meteorologist
 NWS Albuquerque
 Email: Jesus.Haro@noaa.gov



Rio Rancho Lightning
August 14, 2006
 (Photo Courtesy of Chris Armijo)

By The Numbers

While the 2005-2006 winter season was quiet, and the 2006-2007 snowfall was close to normal, the 2007-2008 winter season brought well above normal snowfall to the northern mountains but below normal conditions to the southern and eastern areas of the state. Storms in December, January and February all brought heavy snow to the northern mountains. However, farther south, snowfall totals dropped sharply, as did precipitation. If you draw a line from Raton to Silver City, northwest of this line precipitation was generally above normal this past winter, while southeast of this line it was below to well below normal. The top four snowfall totals of the winter are listed below.



Taos Snow
December 9, 2007
 (Photo Courtesy of
 Paula Valentine)

Location	Snowfall (Oct-Mar)	Co-op Observer
Chama	155.6 inches	U.S. Bureau of Reclamation
Angel Fire	146.0 inches	Lisa Sanchez
Wolf Canyon	107.1 inches	Betty Curry
Tierra Amarilla	99.5 inches	Mundy Ranch

As is typical during the winter months, a few cold outbreaks sent temperatures plummeting to well below zero over the higher elevations. The most notable cold spells were in late December and especially mid-January. The table below lists the coldest temperatures this past winter.

Author: Chuck Jones

Location	Coldest Temperatures	Date	Co-op Observer
Eagle Nest	-26 degrees	Jan 17	Ernest Sutliff
Wolf Canyon	-26 degrees	Jan 17	Betty Curry
Angel Fire	-23 degrees	Jan 17	Lisa Sanchez
Eagle Nest	-22 degrees	Jan 18	Ernest Sutliff

National Weather Service
Albuquerque,
New Mexico

2341 Clark Carr Loop SE
 Albuquerque, NM 87106-5633
 Phone: 505-243-0702

E-mail: sr-abq.webmaster@noaa.gov



Working Together to Save Lives.

How would you like to receive future issues?

The New Mexico Skywatcher will be available on your NWS website at <http://www.srh.noaa.gov/abq>. If you do not have access to the internet or would simply like a copy in the mail, return this portion to the NWS at the address on the left. We can notify you when the newest version of the newsletter is updated on the NWS website via email. If you would like to be notified via email, submit your request to sr-abq.webmaster@noaa.gov (make sure to state your name and email address).