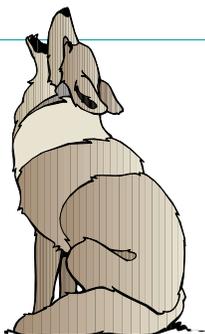




# Coyote Crier

National Weather Service, Tucson Arizona



## WHAT TO EXPECT FOR MONSOON 2008

GLEN SAMPSON, METEOROLOGIST-IN-CHARGE

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The frosty nights are starting to wane. Sunshine is starting to feel hot around midday. Both of these are indications our winter is starting to give way to spring and eventually the summer monsoon season. What type of monsoon will we have this year? We get this question many times in the spring and early summer. The monsoon is the desert Southwest's time for exciting weather, and everyone wants a preview.

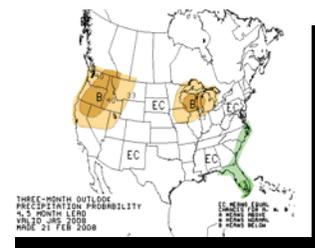
For those people familiar with the monsoon season, getting an accurate forecast several months ahead of time is a difficult endeavor. The official NWS forecast is for equal chances of above, below or near normal precipitation.

An equal chances forecast implies no strong indications are present for any particular type of monsoon to occur.

Over the last 15 years much research has gone into diagnosing the North American Monsoon and providing us more

understanding. Unfortunately much is still to be learned, but we can explore what we do know about conditions preceding various types of monsoons. First, a heavy snow pack in the southern Rocky Mountains during April favors a drier than normal monsoon. The hypothesized physical reason behind this correlation is a snow pack delays the northward movement of the summertime ridge, which in turn delays the upper level moist easterly flow coming into Arizona. During February the snow pack in this area was at 130 to 170% of normal.

Another factor observed which affects the monsoon start in Mexico is the amount of spring time activity in the intertropical convergence zone (ITCZ). This convergence zone is located 5° to 10°N in the eastern Pacific. An active convergence zone is depicted as persistent thunderstorms on a satellite picture. Active spring weather in the ITCZ appears to disrupt the land-sea interactions which are



needed to get the monsoon going. The moderate to strong La Nina present this winter is suppressing activity in early March, and this La Nina is forecast to extend into the summer. A wet monsoon start in southwest Mexico is a plus for a wet monsoon further north, although these relationships are still a topic of much research.

As with most forecasts, the closer you get to the time period being forecast the more accurate the forecast. Hence the existing conditions are not giving us a clear indication of whether the monsoon will be wet or dry, which lends itself to the current "equal chances" forecast.



These are Pictures of Storm Damage from just a Single Small Thunderstorm during the Monsoon of 2007.

This Storm Occurred on the Afternoon of July 18th 2007 in Oro Valley, at the Oro Valley Country Club.

These are Only a Few of the Pictures that were taken by Senior Fore-caster John Glueck.

### PICTURES OF STORM DAMAGE FROM A SINGLE THUNDERSTORMS DURING MONSOON 2007



## National Weather Service Tucson Office Staff

*Meteorologist in Charge.....Glen Sampson*

*Warning Coordination Meteorologist.....Tom Evans*

*Science and Operations Officer.....Erik Pytlak*

*Electronic Systems Analyst.....Jim Schmidt*

*IT Specialist.....Evelyn Bersack*

*Electronic Technicians.....Norm Phelps, Joseph Lockridge*

*Senior Forecasters.....Jeff Davis, Brian Francis, John Glueck, Jim Meyer, Greg Mollere*

*Forecasters.....Glenn Lader, Chris Rasmussen, Steve Reedy, Craig Shoemaker, Gary Zell*

*Meteorologist Intern.....Bill Turner*

*Observation Program Leader.....Angel Corona*

*Hydrometeorological Technicians.....Hans Hanson, Mic Sherwood*

## NWS TUCSON'S MONSOON WEB PAGE GETS A MAKEOVER

*ERIK PYTLAK, SCIENCE AND OPERATIONS OFFICER*

The monsoon information section is one of our most popular pieces of the NWS Tucson webpage

(<http://www.wrh.noaa.gov/twc/monsoon/monsoon.php>).

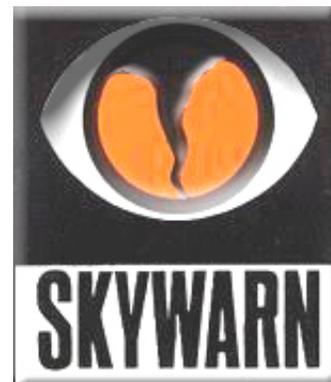
Originally written back in 1997, the page not only provided information on precipitation and dewpoint, it also offered readers a wide range of facts and information on the North American Monsoon. It also provided a comprehensive read-

ing list on monsoon research, and how we use that research to make weather forecasts during the monsoon season.

Since then, though, monsoon research has advanced by leaps and bounds. Dozens of new papers have been published, especially since the North American Monsoon Experiment in 2004. New forecasting techniques have also been de-

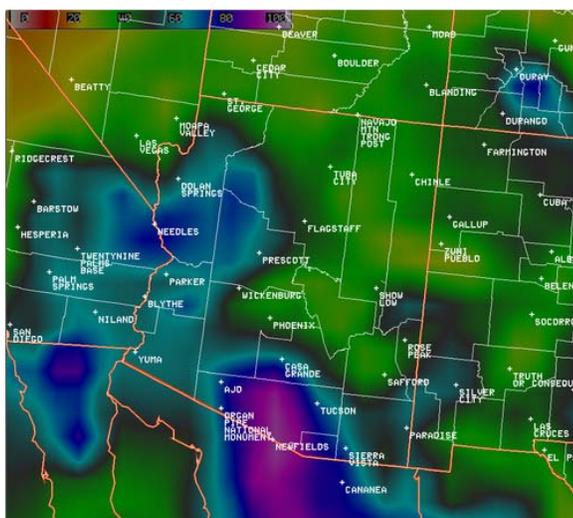
veloped since the late 1990s. Meteorologist now have a better understanding of how Gulf of California moisture surges work, and how upper level features play a key role in causing large-scale thunderstorm outbreaks. Even more research is in the works, so the webpage is likely to be updated again in the coming months and years.

One of the big additions this summer will be a greatly expanded Monsoon Tracker. It is now well known that surface dewpoint, which had been used for decades to determine when the monsoon arrived in Arizona, is not a complete indicator of when the monsoon arrives and departs. Meteorologists actually use a wide array of indicators, including surface dewpoint, the total amount of moisture in the atmosphere, changes in the winds aloft, and even how fast vegetation is greening in Mexico and pumping more moisture into the atmosphere. All of these indicators will be displayed on our updated webpage, and most of the maps will "loop" so that you can track the monsoon more completely, along with us. The new pages will be up and running by early June.



Please keep your personal information up-to-date. Do we have your correct mailing address, location, phone number and e-mail address? If not, please update us so that our database is as current as possible. The best way to update your information is by e-mail, or to call and speak with Greg Mollere or Tom Evans. Thanks!

[Greg.Mollere@noaa.gov](mailto:Greg.Mollere@noaa.gov)



An example of a large area of moisture (blue and purple shades) over south central and southeast Arizona on the afternoon of August 11<sup>th</sup>. This moisture, which was surging north at around 10,000 feet above the surface, helped to fuel severe thunderstorms and flash floods.

### Phone Numbers to call for spotter reports:

**1-800-238-3747**

or

**(520) 670-5162**





Greg Mollere,  
Senior Forecaster

**National  
Weather Service**

**520 N. Park Avenue  
Suite 304  
Tucson, AZ 85719**

**Phone: 520-670-5162  
Fax: 520-670-5167  
E-mail:  
greg.mollere@noaa.gov**

**Any and all are  
welcome at the spotter  
training sessions. So if  
you know someone  
interested in weather  
bring them along! We  
look forward to seeing  
you all there.**

## THE SPOTTER PROGRAM GETS A NEW LEADER

*GREG MOLLERE, SENIOR FORECASTER*

My name is Greg Mollere, and I am a Lead Forecaster at the Tucson National Weather Service Forecast Office. I am currently in charge of the Spotter Program at the Tucson office. As some of you may already know, Pam Elslager, the former Spotter Program Leader, left us last August leaving a void in the program. I decided to take over the program since it would be nice to meet some of the people that provide the valuable service of being trained weather spotters.

Allow me to tell you a little about myself. I grew up in Tempe, Arizona after having moved there from New Orleans, Louisiana at the age of 13. My interest in weather probably began when I witnessed many monsoon thunderstorms, and the dust storms that typically hit the Phoenix metro area every summer, not to mention experiencing a couple of infamous hurricanes that struck the Gulf Coast during my early childhood.

I went on to graduate from Arizona State University with a B.S. in Geography with a concentration in Meteorol-

ogy. I started my career as a Meteorologist Intern in the late 80's at the Tallahassee, Florida office. At that time the modernization had not yet begun, not to mention that the 88D doppler radars had not yet been put into service. During the modernization process, Tallahassee was one of the first of many small offices which became a Weather Forecast Office. Prior to that time the office was mainly an observing and severe weather warning office. I am somewhat of an anomaly in the National Weather Service, since most forecasters spend their careers at several offices during their careers. However, I became quite fond of the slower pace of the relatively small town life of Tallahassee, which at that time had a population of around 220,000. I was promoted to a General Forecaster position at Tallahassee, and I spent 16+ years in Tallahassee before being promoted to a Lead Forecaster at the Tucson office in early 2003. This promotion brought me back to the beautiful desert southwest, and closer to family members that still reside in the Phoenix metro area.

During my career I have worked many memorable events in the Florida Panhandle, including over a dozen tropical storms and/or hurricanes, as well as severe weather outbreaks associated with cold fronts that are too numerous to mention. However, my most memorable event is the "Storm of the Century", or sometimes referred to as the "93 Superstorm", which occurred March 12-15, 1993.

I look forward to chatting with you in the future when you call in your severe weather or rainfall reports, or perhaps meeting some of you in person at the upcoming spotter training sessions.

**For all your weather  
Information needs,**

**Visit us on the web at:**

**[weather.gov/tucson](http://weather.gov/tucson)**

### *What you should report?*

<i>Tornado:</i>	<i>A tornado or a funnel cloud aloft</i>
<i>Heavy Rain:</i>	<i>A half an inch or more, if it fell in less than an hour</i>
<i>Hail:</i>	<i>Pea size (1/4 inch) or larger</i>
<i>High Wind:</i>	<i>Estimated or measured 40 mph or greater</i>
<i>Flooding:</i>	<i>Any kind of flooding</i>
<i>Snow:</i>	<i>One inch or more (2 inches or more if above 5000 ft.)</i>
<i>Visibility:</i>	<i>Less than one mile for any reason (fog, dust, snow)</i>
<i>Death/Injury:</i>	<i>Any weather-related reason</i>
<i>Damage:</i>	<i>Any weather-related reason (most often from wind)</i>

(520) 670-5162 or 1-800-238-3747



**When you see this sign this monsoon,  
Be safe and take the extra time to find an  
alternate route to your destination**

# NEW "GRAPHICAST" ON OUR WEB PAGE

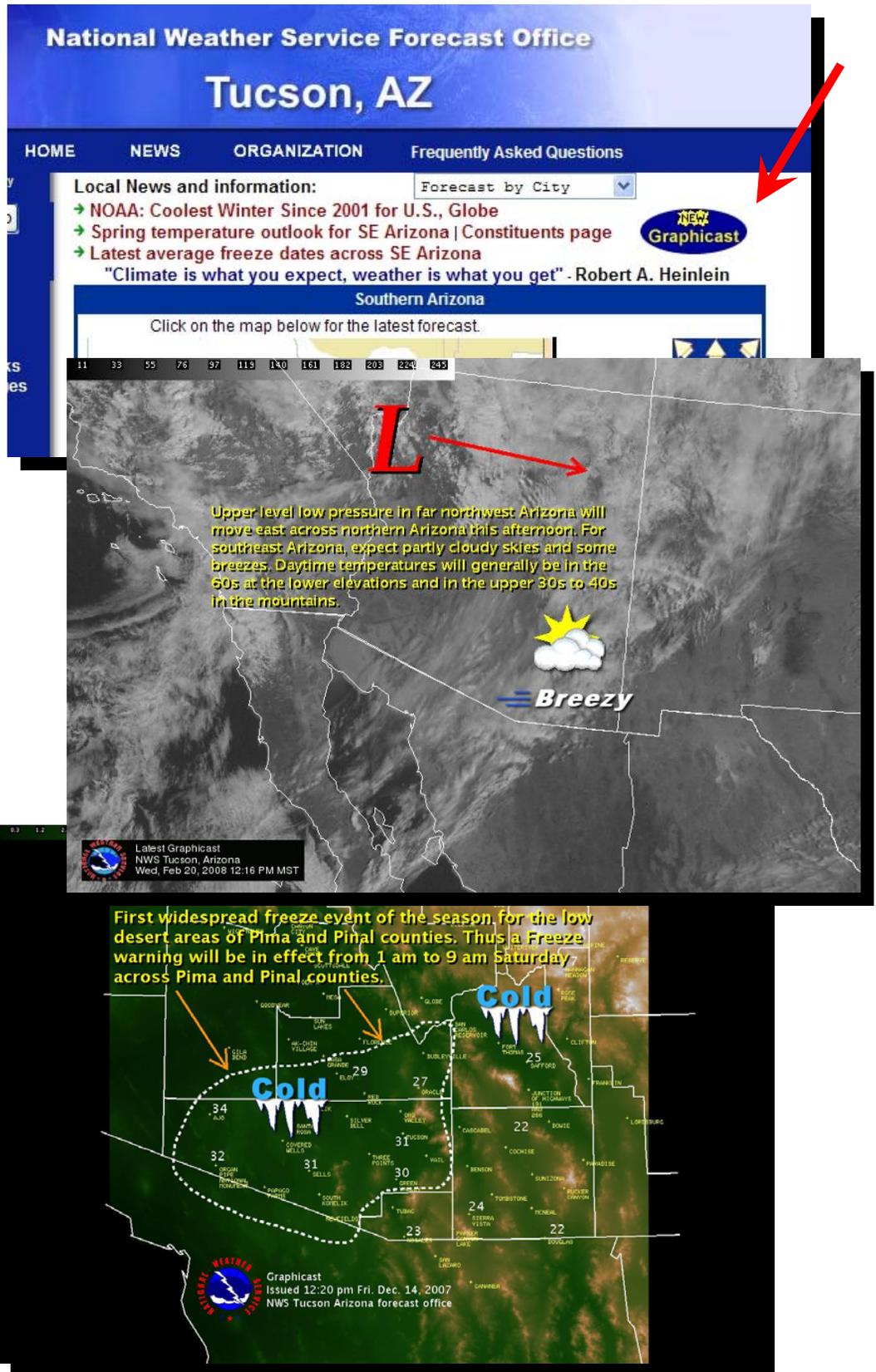
GREG MOLLERE, SENIOR FORECASTER

For about a month now the forecasters at the Tucson office have been posting a new product on the main page of our web site. If a graphicast is currently in effect you will see a blue oval shaped icon at the top middle of the page with the words "New Graphicast".

The purpose of the graphicast is to sum up the main weather concern for Southeast Arizona in a graphical format. This allows a user of our web page to get an idea of what to expect weather wise in a quick and easy format. The graphicast are issued at a minimum of once per day, usually on the night shift between midnight and dawn. The graphicast conveys the thoughts of the forecasters, and can pertain to that day's weather, or any significant event that is expected to affect Southeast Arizona during the next 7 days. This is just one more way to get the forecast information to our users, and we hope you will stop by and check it out soon.

Thanks to John Glueck, Senior Forecaster, and Chris Rasmussen, General Forecaster for providing the Graphicast training to all of the forecasters.

The following are just a couple of examples of recent graphicasts.



*NOAA Weather Radio Transmitters*

*Tucson WXL-30  
162.400 MHz*

*Safford KXI-24  
162.550 MHz*

*Nogales WNG-703  
162.500 MHz*

## SPOTTER TRAINING DATES, TIMES AND LOCATIONS

<u>Date</u>	<u>Time</u>	<u>Location</u>
May 5, 2008	6:30 pm	U of A Campus, ENRB Room 253 520 N. Park Avenue, Tucson
May 10, 2008	2:00 pm	U of A Campus, ENRB Room 253 520 N. Park Avenue, Tucson
May 13, 2008	6:30 pm	Safford General Services Building 921 Thatcher Blvd., Safford
May 20, 2008	6:30 pm	Oro Valley Town Hall 11000 N. La Canada Dr., Oro Valley
May 27, 2008	6:30 pm	Oscar Yrun Community Center 3020 E. Tacoma Street, Sierra Vista
June 3, 2008	6:30 pm	Santa Cruz County Bldg. 2150 North Congress Dr. Nogales
June 14, 2008	1:00 pm	Cabeza Prieta National Wildlife Refuge 1611 North second Avenue Ajo, Arizona 85321

