The Four Peaks Post

Winter 2013

National Weather Service — Phoenix, AZ

Inside this issue:

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Winter Edition of The Four Peaks Post Newsletter!

By Charlotte Dewey, Meteorologist Intern

Winter is in full swing across the country, and the Southwest states are seeing the effects of winter as well with a drop in temperatures and a number of snowfall and cold weather events.

We look forward to many more newsletters coming out with great information that will hopefully be helpful and informative.

Image credit Arizona Highways Magazine 2001

Cooperative Program at NWS Phoenix

By Keith Kincaid, Cooperative Program Manager

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

Today, volunteers record weather and climate data at almost 10,000 sites throughout the 50 U.S. states and its territories. The federal government provides observers with free training and equipment to set up their weather station. The National Weather Service offers additional support through equipment maintenance and site visits.

The observer's job is a great public service to local communities and to the nation. Observers check their weather instruments daily and submit the data over the phone or Internet. The data is quality controlled and then published online for everyone's use.

Historical weather averages and normals for all areas of the country are determined using observer data. Observer data help settle billions of dollars annually in insurance and legal claims, determine federal disaster declarations for federal aid to local counties and are a major factor in determining household energy costs. These data play a critical role in efforts to determine and evaluate the extent of climate change from local to global scales.

In addition, data collected by weather observers help local officials make long-term planning decisions about water resources and are used by a variety of industries on a daily basis, including medical, transportation, agriculture, engineering and communication.

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Mike Magoon, Cooperative Observer for Globe, AZ with his dog Molly, next to the weather sensor.

Cooperative Program (Continued)

Here at the NWS Office in Phoenix , we have close to 50 Cooperative Observers in our County Warning Area. Mike Magoon is our Cooperative Observer for Globe, AZ. He has been the Observer at this location since February of 2009. Each morning at 8 am Mike records the Maximum and Minimum Temperature and the 24 HR Precipitation, and enters the data into a web based data entry program called WxCoder. This data is transmitted to us here at the NWS and then sent out to the public. Mike is also one of the only COOP sites in our area that will occasionally receive snowfall so he gets to report that data as well. Each morning Mike's dog Molly runs outside with him as he checks the rain gauge. Mike is a very conscientious observer and we appreciate his service.

Mike Magoon, Cooperative Observer for Globe, AZ with his dog Molly, checking the rain gauge.

Southwest Climate Corner

By Mark O'Malley, Forecaster/Climate Science Program Manager

2012 Phoenix Climate Year in Review

2012	Value	Rank
Avg High	88.6	2nd Warmest
Avg Low	64.7	3rd Warmest
Avg Temp	76.7	2nd Warmest
Precip	4.28	15th Driest

The year 2012 ended up being one of the warmest years in recorded history for central Arizona, as well as one of the drier years. Records for Phoenix began in 1896, first taken in downtown and since moved to Sky Harbor airport since the 1950s. Only 1989 now stands as a warmer year. Only one month of 2012 (July) resulted in a below average monthly temperature, with only one month (September) in a near normal range (average of 88.4 degrees Fahrenheit). Otherwise, the remaining 10 months were above normal. Only August 2012 rainfall pushed the monthly total into above average territory, with 5 other months near average. The remaining 6 months of decidedly below average rainfall resulted in 2012 becoming the 15th driest year in Phoenix since 1896.

2012 Phoenix Precipitation Statistics

	Precip Total	Departure (from normal)	Rank (1=Wettest, 117=Driest)
Jan	T	-0.91	Tied 117th
Feb	T	-0.92	Tied 117th
Mar	0.25	-0.74	Tied 83rd
Apr	0.08	-0.20	Tied 66th
May	0.03	-0.08	Tied 47th
Jun	0.00	-0.02	Tied 117th
Jul	0.96	-0.09	41st
Aug	1.45	+0.45	27th
Sep	0.59	-0.05	44th
Oct	T	-0.58	Tied 117th
Nov	0.05	-0.60	Tied 80th
Dec	0.87	-0.01	Tied 44th

Climate Corner (Continued)

2012 Annual Rankings

Year	Avg Daily Temp
1989	76.9
2012	76.7
2007	76.4
2003	76.3
2009	76.0
2002	76.0
1981	76.0

Year	Avg Max Temp
1989	89.7
2012	88.6
1934	88.3
2002	88.0
1988	88.0
1981	88.0
2007	87.9

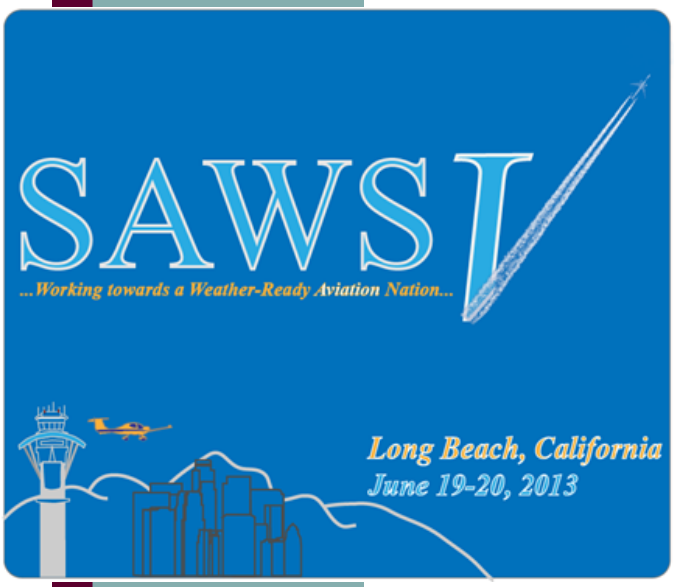
Year	Avg Min Temp
2003	64.9
2007	64.8
2012	64.7
2001	64.4
2005	64.3
2009	64.2
1989	64.1

2012 Monthly Statistics

	Avg Max Temp	Highest Temp	Avg Min Temp	Lowest Temp	Avg Temp	Rank(1=Warmest, 117=Coldest)
Jan	70.9	81 on the 1st	46.5	38 on the 13th	58.7 / +2.3	Tied 4th
Feb	72.5	81 on the 24th & 26th	48.1	42 on the 15th	60.3 / +0.6	Tied 20th
Mar	79.2	94 on the 31st	52.5	42 on the 18th & 20th	65.9 / +0.7	14th
Apr	87.6	105 on the 22nd	62.6	50 on the 14th	75.1 / +2.4	Tied 8th
May	98.2	109 on the 31st	70.9	62 on the 27th	84.5 / +2.4	Tied 8th
Jun	106.5	112 on the 18th	81.0	74 on the 6th	93.8 / +2.9	Tied 2nd
Jul	104.6	113 on the 9th	83.2	74 on the 4th	93.9 / -0.9	Tied 33rd
Aug	105.8	116 on the 8th	84.9	73 on the 23rd	95.3 / +1.7	4th
Sep	99.2	107 on the 2nd	78.1	72 on the 7th & 11th	88.6 / +0.2	18th
Oct	91.3	104 on the 2nd	66.4	57 on the 25th & 26th	78.8 / +2.1	Tied 8th
Nov	81.2	91 on the 5th & 6th	55.6	43 on the 11th	68.4 / +4.3	Tied 2nd
Dec	66.7	82 on the 5th	46.5	37 on the 29th	56.8 / +1.2	Tied 13th

Southwest Aviation Weather Safety (SAWS) V: June 2013

By Jessica Nolte, Meteorologist/Aviation Program Manager



In conjunction with the Los Angeles/Oxnard Weather Forecast Office and the San Diego Weather Forecast Office (WFO), the Los Angeles Air Route Traffic Control Center Weather Service Unit (CWSU) will host the fifth Southwest Aviation Weather Safety Workshop at the Best Western Golden Sails Hotel in Long Beach, California on June 19th and 20th.

The purpose of SAWS Workshops is to promote aviation safety and productivity through improved weather awareness and forecasting services. Besides the three California offices hosting SAWS V, the NWS Weather Forecast Offices in Phoenix, AZ and Albuquerque, NM are also helping to organize this year's event. Previous SAWS events have been hosted in both Phoenix, AZ and Albuquerque, NM. The workshop is held roughly every 18-months and hosted by different cities across the Southwest. The Workshop will follow a familiar format with one workshop day serving as an Aviator & Controller Weather workshop followed by a social dinner that evening. Attendance to the Aviator & Controller Weather workshop is intended to satisfy FAA WINGS Pilot Program accreditation. The second day of the workshop will be an Aviation Weather Forecasting workshop.

The call for presentations is now open and can be found at: http://www.wrh.noaa.gov/psr/SAWS5/ . Additional registration and agenda information will be updated to this website once it becomes available. Also for information about the Long Beach area please visit the Long Beach Convention Center's Microsite: http://www.visitlongbeach.com/microsites/index.cfm?meetingID=173 .

SAWS is an excellent opportunity for aviators and meteorologists to get together and discuss improvements and best practices in aviation meteorology training, customer relations, and aviation decision support services. If you have questions about the Workshop, please contact the WFO Phoenix Aviation Program Manager Jessica Nolte Jessica.Nolte@noaa.gov or CWSU Palmdale Meteorologist-in-Charge Peter Felsch Peter.Felsch@noaa.gov. We are looking forward to carrying on the tradition of bringing aviation users and aviation weather service providers together from across, but not limited to, the Southwest and West Coast regions. Safe flying and hope to see you in Long Beach in June!

Student Mentorship Program Underway at NWS Phoenix

By Dan Leins, Senior Forecaster

Once again, the National Weather Service Phoenix office is hosting several college students during the spring semester to participate in our Student Mentorship Program. The mentorship program was in place at various offices across the National Weather Service in the mid 2000's, but was started at our office in Phoenix in 2010 and has grown steadily each year since. Each spring, several members of our staff volunteer to act as mentors and to give advice on a number of career-related topics. College upperclassmen within our forecast area (typically juniors or seniors, occasionally sophomores) majoring in meteorology (or a closely related field) apply for the program by submitting a resume and cover letter. Applications are reviewed and students are paired with a National Weather Service employee based on similar interests. The goal of the program is to give students insight into the duties, responsibilities, and career opportunities available to them in the National Weather Service. This year we are hosting a record number of students seven (7).

The mentor and mentee typically meet up once or twice per month at the NWS office. Activities throughout the semester usually include job shadowing, detailed meteorological discussions of the current weather in the Phoenix area (as well as other parts of the country if something significant is taking place), a discussion of forecasting techniques, re-analysis of past meteorological events using the Weather Event Simulator, and/or a research project. If the student becomes interested in a particular facet of NWS operations, the mentorship can easily shift to focus on that topic. Other career options outside of the National Weather Service, or post-graduate studies, are often put on the table for discussion. The mentor/mentee can even discuss how to put together an attractive resume/application package and how to be an effective public speaker.

While the Mentorship program does not guarantee future employment in the National Weather Service, it does help students determine if this is the right career for them. It helps them develop career goals and gain a better sense of career direction, and helps them to develop professional relationships. If you are interested in participating in the program in 2014 and are currently attending Arizona State or Mesa Community College, look for an announcement in October or November. If you are a student at another college or university and have questions about the program, feel free to email Daniel Leins (mentorship coordinator).

Skywarn Spotter Training Coming To A Town Near You!

By Austin Jamison, Journeyman Forecaster/Spotter Focal Point

Skywarn is a partnership between the National Weather Service and citizen volunteers. Spotters are volunteers that provide highly valuable information that is not available from any other source. Though we have sophisticated technology such as Doppler radar, satellites, and computer models, those have limitations. Using these tools, we can infer that hazardous weather is occurring but we don't know for sure what is happening on the ground. For instance, we can infer that a thunderstorm is producing wind damage but without a Spotter report we don't know what the extent of the damage is or even if the winds were strong enough to cause damage at all. Thus, the Spotters provide us with ground truth information. We use this information as part of the warning decision process. By issuing warnings, we alert the public to dangerous situations so they can take measures to protect life and property.

Prior meteorological training is not necessary in order to become a Spotter. The free two hour class will teach attendees everything they need to know in order to be successful. Spotters are typically adults but can be as young as high school age. People who enjoy paying attention to the weather or who are outdoors a lot are encouraged to become volunteer Skywarn Storm Spotters.

We are currently in the process of putting together a schedule of training classes in our forecast area. Several classes have been finalized already and there will be more to come. Keep checking periodically to see where we have added classes. You can find that schedule on our website, weather.gov/phoenix. It lists the dates, times, locations, and pre-registration (if necessary). You can find it by accessing the "Skywarn" link on the left hand side toward the bottom or by going directly to the URL below. The majority of classes are Standard classes and are suitable both for new Spotters and as refresher training for those that have attended a class previously. Topics covered in the Spotter classes include types of severe weather, cloud recognition, various safety topics and procedures to report severe weather to the National Weather Service. Spotters need to attend a class once every two years to stay current. If so, they are eligible to attend one of the Advanced classes which explores the underlying meteorological science of severe storms.

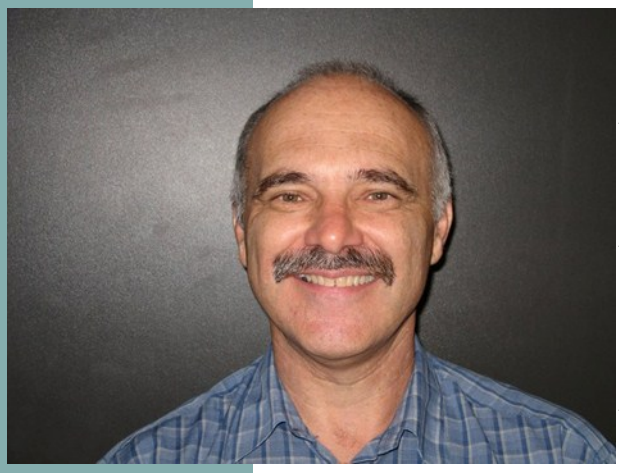
For more information, and a schedule of our upcoming classes please visit:

http://www.wrh.noaa.gov/psr/general/skywarn/index.php

For any questions about the program, send an email to austin.jamison@noaa.gov or ken.waters@noaa.gov or call 602-274-0073 (option 5).

Doug Green, Science & Operations Officer, Retires

By Charlotte Dewey, Meteorologist Intern; Information provided by Doug Green, retired Science and Operations Officer



In January 2013 Doug retired as the Science and Operations Officer (SOO) here at the Phoenix National Weather Service office. As a SOO, Doug was responsible for training and keeping the staff up to date with the newest forecast procedures. Doug was the first SOO hired in Western Region during the Modernization and Restructuring era of the NWS, and had nearly 30 years of service. He was an expert in radar meteorology, but was most enthusiastic about the science and art of weather forecasting. The following is a brief summary of Doug's life and career.

Born in Battle Creek, Michigan. October 1951. Married to Theresa since 1989; one daughter, Veronica (16 in early February). Two younger sisters, Debbie and Jana, and my Mother, Janet, live in Sedalia, Missouri.

Pastimes/things Doug likes to do: play the piano, participate in music trivia contests, listen to music, work on crossword puzzles, travel, get together with old and new friends, help Veronica with her drum lessons, dine at various restaurants, attend rock concerts, participate in church choir, hike/walk nature trails, view fall foliage, compose end-of-year letter for friends and relatives, visit National Parks/Monuments, watch Jeopardy and Wheel of Fortune, help others any way I can.

Country boy: grew up on a farm in western Missouri. According to family and friends, I was always a weather nut/geek. Hated to miss the local weather report on TV or radio. Huge St. Louis Cardinals baseball and football fan back in the 1960s: listened to many baseball games on a little transistor radio late at night.

Graduated from Smithton R-VI High School, 1969. Class Valedictorian. Outfielder on Smithton's inaugural high school baseball team; played trombone in the band.

Attended University of Missouri, Columbia, MO, 1969-1974. Earned B.S. in Atmospheric Science, 1974. Member, Marching Mizzou, 1969-1970; participated in Orange Bowl Parade, December 1969. Member, scientific field trip that traveled from Missouri to the East Coast and viewed the total solar eclipse of 7 March 1970 at Wallops Island, Virginia.

(continued)

Doug Green, Science & Operations Officer, Retires

(Continued)

Research Assistant at the Illinois State Water Survey, Urbana, IL, 1975-1982. Hired by Stan Changnon. First task: generated hand-drawn rain cell analyses based on data collected from the METROMEX field project; member, CHILL Doppler radar team, 1979-1982 (field projects included a lake-effect snow study 1979-1980, with radar positioned near Muskegon, Michigan, and CCOPE, a severe thunderstorm project centered over far southeast Montana (summer 1981). Outfielder on several slow-pitch softball teams.

Attended University of Illinois, 1980-1985. Teaching Assistant, 1982-1983. Earned M.S. in Meteorology, 1985.

First permanent government job: Instructor, Chanute AFB Technical Training Center, Rantoul, Illinois, 1983-1986. Base Instructor of the Year, 1985. Participated in satellite interpretation training trips to Germany (1985) and Hawaii, Guam, and Okinawa Japan (1986).

Instructor, National Weather Service Training Center, Kansas City, MO, 1986-1989. Member, radar branch; developed/updated lesson plans and taught Severe Convective Storms, Flash Floods, Radar Principles, Fundamentals of Doppler Radar, etc.

Instructor, NEXRAD Operational Support Facility, Norman, OK, 1989-1992. I was one of the original 6 civilian NEXRAD instructors. Developed lesson plans and taught several sections, especially Doppler Radar Principles and Storm Structure/Dynamics. Co-authored infamous 'Basic Convection II' workbook.

Science and Operations Officer, WFO Phoenix, AZ, 1992-2013.

Doug, you will be greatly missed by all. You've been a big part of many people's careers and a wonderful mentor and teacher. Thank you for all you've done and contributed to!