NATIONAL WEATHER SERVICE, LAS VEGAS NEVADA

The Desert Sun

SKYWARN Spotter Newsletter

Spring/Summer 2007

In This Issue

This newsletter serves the following counties:

Nevada: Clark, Lincoln, Nye, Esmeralda

Arizona: Mohave

California: Inyo, San Bernardino

Contacts:

NWS Las Vegas Admin Line (702) 263-9744

Web Address: www.wrh.noaa.gov/lasvegas

Forecast Line: (702) 736-3854

Overton Marina Move

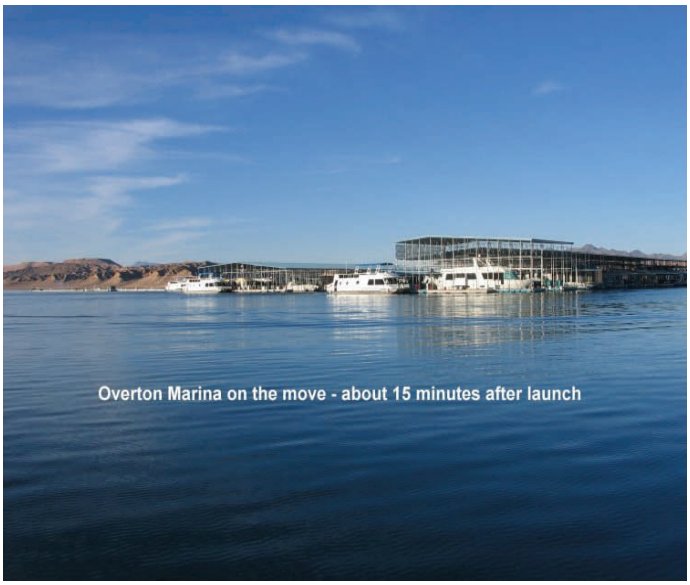
Kim Runk, Meteorologist In Charge

In January and February of 2007, the National Weather Service (NWS) office in Las Vegas was called upon to provide forecast support for four projects by the National Park Service (NPS) in which relatively benign weather conditions had potentially high impact. The most dramatic event was a complex move of two large marinas during which mission success required two full days of fair weather and light wind.

Concerns over lowering water levels on Lake Mead caused the National Park Service to determine it was necessary to move the two marinas located at Overton Beach. A total of 185 slips, some as large as 75 feet in length and many with boats still lodged in them, had to be floated more than 40 miles across the Lake Mead National Recreation Area and re-anchored at Callville Bay and Temple Bar. Two flotillas, each powered by 12 large resort boats with a combined force of approximately 6000 HP, pushed the marinas across the lake at one (1) mph.

Overton Marina - minutes before getting underway

Weather, especially wind, was a critical planning factor for the success of this move. Encountering a wind speed of as little as 10-15 mph would have rendered the flotillas uncontrollable, resulting in a multi-million dollar disaster. In order to mitigate a potentially catastrophic loss, the NPS employed the services of NWS Las Vegas to provide daily "Go To Meeting"® Internet weather briefings for a week in advance of the move. Indeed, due to a forecast of adverse wind and wave conditions, the original launch date was delayed 48 hours. The adjusted dates proved to be favorable and a successful move was accomplished.



Overton Marina on the move - about 15 minutes after launch

Overton Marina in mid-channel - about 30 minutes after launch

The prime NWS mission of "protecting life and property" is traditionally associated with providing information which enables constituents to avoid or mitigate the effects of a severe weather hazard, such as a tornado, severe thunderstorm, hurricane or flash flood. Projects like the Overton Marina move illustrate the fact that a broad spectrum exists for which important services may be offered to assist key partners and customers in making decisions that protect human safety and minimize economic impacts associated with weather, water and climate concerns. Identifying customer impacts and finding ways to adjust our course in order to better serve the public interest are among the top priorities of your National Weather Service office in Las Vegas.

View from on board the marina just prior to launch

Overton Marina - 1 hour after launch, about 3/4 mile downstream

Want to join CoCoRaHS? - www.cocorahs.org

Andy Gorelow, Forecaster

CoCoRaHS is an acronym for the Community Collaborative Rain, Hail and Snow Network. It is a unique, non-profit, community-based network of volunteers of all ages and backgrounds working together to measure and map precipitation (rain, hail and snow). The aim of CoCoRahS is to provide the highest quality data for natural resource, education and research applications. It is also an excellent tool for National Weather Service meteorologists to verify rain, snow, and hail amounts in areas that have limited data coverage. CoCoRaHS currently operates in seventeen states: Colorado, the District of Columbia, Illinois, Indiana, Kansas, Maryland, Missouri, Montana, Nevada, Nebraska, New Mexico, Oklahoma, Pennsylvania, Texas, Virginia, Wisconsin and Wyoming. If you are interested in becoming one of these specialized spotters please contact (for central and southern Clark, Nye, and Esmeralda counties) Charles Bell at 702-263-9744, charles.bell@noaa.gov) or (Lincoln and northeast Clark counties) Bob Neilson at (bob@mesquiteweather.com).

Summer Weather Definitions

The National Weather Service urges residents to keep informed of local forecasts and warnings and familiarize themselves with key weather terminology. These terms are commonly used throughout the summer season and especially during Monsoon Season when flooding is a greater risk.

Severe Thunderstorm Watch: This is issued by the National Weather Service when conditions are favorable for the development of severe thunderstorms in and close to the watch area. A severe thunderstorm by definition is a thunderstorm that produces 3/4 inch hail or larger in diameter and/or winds equal or exceed 58 miles an hour. The size of the watch can vary depending on the weather situation. They are usually issued for a duration of 4 to 8 hours.

Severe Thunderstorm Warning: This is issued when either a severe thunderstorm is indicated by the WSR-88D radar or a spotter reports a thunderstorm producing hail 3/4 inch or larger in diameter and/or winds equal or exceed 58 miles an hour. People in the affected area should seek safe shelter immediately. Severe thunderstorms can produce tornadoes with little or no advance warning. Lightning frequency is not criteria for issuing a severe thunderstorm warning. They are usually issued for a duration of one hour. If the severe thunderstorm is also causing torrential rains, this warning may also be combined with a Flash Flood Warning.

Severe Thunderstorm Statement: A National Weather Service product which provides follow up information on severe weather conditions (severe thunderstorm or tornadoes) which have occurred or are currently occurring.

Flash Flood Watch: Issued to indicate current or developing hydrologic conditions are favorable for flash flooding in and close to the watch area, but the occurrence is neither certain or imminent.

Flash Flood Warning: Issued to inform the public, emergency management, and other cooperating agencies that flash flooding is in progress, imminent, or highly likely.

Flash Flood Statement: A statement from the NWS to provide follow-up information on flash flood watches and warnings in effect.

Urban and Small Stream Flood Advisory: This advisory alerts the public to flooding which is generally only an inconvenience (not life-threatening) to those living in the affected area. It's issued when heavy rains cause minor flooding of streets and low-lying areas in urban areas. Also used when small rural or urban streams are expected to reach or exceed bankfull. Some damage to homes or roads could occur.

Red Flag Warning: A term used by fire-weather forecasters to call attention to limited weather conditions of particular importance that may result in extreme burning conditions. It is issued when there is an on-going event or the fire weather forecaster has a high degree of confidence that Red Flag criteria will occur within 24 hours of issuance. Red Flag criteria is met when a geographical area has experienced an extended dry spell, the National Fire Danger Rating System (NFDRS) for the area is high to extreme, and the following weather parameters are forecasted to be met:

1). Fuels (parched or dry areas) are critical and sustained winds ≥20 mph or gusts ≥35 mph are expected for 3 hours or more.

2). Relative humidity below 15%.

3). Dry Thunderstorms with an areal coverage of widely scattered or greater in a fire weather zone.

Tornado Warning: Issued when a tornado is indicated by the WSR-88D radar or sighted by spotters. People in the affected area should seek safe shelter immediately. This warning can be issued without a Tornado Watch already in effect, and are issued for no more than one hour. A Tornado Warning is issued by your local National Weather Service Office (NWFO). It will include where the tornado was located and what towns will be in the path.

Dust Storm Warning: A severe weather condition characterized by strong winds and dust-filled air over an extensive area.

COOP Program News

Donald Maker, COOP Program Manager

This section is a new addition to the newsletter. It is intended to provide information to the 108 COOP observers for the stations I maintain, as well as make for interesting reading for the storm spotters, and just maybe inspire someone to volunteer to become a trained COOP observer in a location where a COOP station is needed (1 station every 25 miles is the national requirement). Of course there is a national COOP observer program website, www.nws.noaa.gov/os/coop if you want to know more about the program. The data gathered (temperature and precipitation [including snowfall] observations) from the entire COOP network across the Nation forms the backbone that describes our Nation's climate. The data provided by this network is used in many ways: litigation, water resources, insurance industry, medical, agriculture, public utilities, housing, to name a few. It is estimated that business is the biggest user of COOP data with 77 percent, while the general public, the government and academics make up the remaining 23 percent in requesting climate data. Currently there are 11,400 COOP stations in operation across the Nation. These stations are located at non-airport sites where people live, work, play, and grow food. On a daily basis COOP observers report the 24 hour maximum and minimum temperatures, liquid equivalent of precipitation, snowfall, snow depth, and other special phenomena such as days with thunder, hail, etc. The National Weather Service recognizes the effort and service of COOP observers by issuing various service awards & pins starting with the 10 year service award. I would like to recognize the COOP observers, in these categories, in my program that during the first quarter of 2007 have:

1. A complete WxCoder form. All the required entries were made for each day.
2. Near complete WxCoder form. Less than 3 days of data is missing.
3. Mailed (or faxed) a completed B-91 or B-92 form within the first 5 days of the following month.

So for the First Quarter of 2007

Category 1: **Thank you!!** Barstow, Beaver Dam, Brian Head, Bullhead City, Diamond M Ranch, Enterprise, La Verkin, Overton Power, Mt. Charleston, Mesquite, New Harmony, Mountain Pass 1SE, and Zion National Park.

Category 2: **We Recognize!!** Death Valley, Deep Springs College, Hiko, Lake Havasu City, Pipe Springs NM, Shoshone, Searchlight, Trona, Yucca

Category 3: **A Big Thank You!!** Silver Peak, Minersville, Beaver Canyon PH, Elgin, Spring Mt. State Park, Pahrump, Dyer, Overton Power, Diamond M Ranch, Meadview, Lake Havasu City, Desert National Wildlife Reserve, Cedar City, Colorado Springs, Cathedral Gorge SP, Enterprise

For the quarters when the newsletter isn't issued I will email or snail mail the COOP Program News to the observers only. We are still trying to make this newsletter a quarterly rather than a semi-annual issuance.

Before I close let me give a big **COOP WELCOME!!** to the ***Allan Bible Visitor Center***, which became an official COOP site March 14, 2007. It's where 300 – 500 travelers per day come for a wide range of information about the Lake Mead National Recreation Area. Also, the ***Canyon Breeze Ranch*** in New Castle, Utah will become an official COOP site in May 2007. And Thanks to all COOP observers for your enthusiasm, service & dedication to weather and climate.

Refresher Training for Storm Spotters

Donald Maker, Storm Spotter Coordinator

The times, dates and locations (in some instances) for storm spotter refresher training will be highlighted on our web page by Friday, May 18, 2007. The methods will either be in person or interactive online. All pertinent information will be made available on our web site.

Spring/Summer Normals for Selected Locations

Andy Gorelow, Climate Focal Point

Las Vegas, NV				
	High	**Low**	**Average**	**Precipitation**
April	**78.1**	**53.9**	**66.0**	**0.15**
May	**87.8**	**62.9**	**75.4**	**0.24**
June	**98.9**	**72.3**	**85.6**	**0.08**
July	**104.1**	**78.2**	**91.2**	**0.44**
August	**101.8**	**76.7**	**89.3**	**0.45**
September	**93.8**	**68.8**	**81.3**	**0.31**

Caliente, NV				
	High	**Low**	**Average**	**Precipitation**
April	**67.4**	**34.3**	**50.9**	**0.71**
May	**77.1**	**42.3**	**59.7**	**0.74**
June	**88.3**	**50.1**	**69.2**	**0.37**
July	**94.7**	**56.8**	**75.8**	**0.72**
August	**92.6**	**55.4**	**74.0**	**1.05**
September	**84.4**	**46.4**	**65.4**	**0.78**

Pahrump, NV				
	High	**Low**	**Average**	**Precipitation**
April	**75.0**	**43.6**	**59.3**	**0.31**
May	**83.9**	**52.0**	**68.0**	**0.29**
June	**94.7**	**60.4**	**77.6**	**0.09**
July	**100.3**	**67.2**	**83.8**	**0.39**
August	**98.8**	**65.2**	**82.0**	**0.40**
September	**91.8**	**56.7**	**74.3**	**0.31**

Bishop, CA				
	High	**Low**	**Average**	**Precipitation**
April	**72.1**	**36.0**	**54.1**	**0.24**
May	**81.2**	**43.7**	**62.5**	**0.26**
June	**91.5**	**50.7**	**71.1**	**0.21**
July	**97.9**	**55.7**	**76.8**	**0.17**
August	**95.8**	**53.7**	**76.8**	**0.13**
September	**87.6**	**46.9**	**67.3**	**0.28**

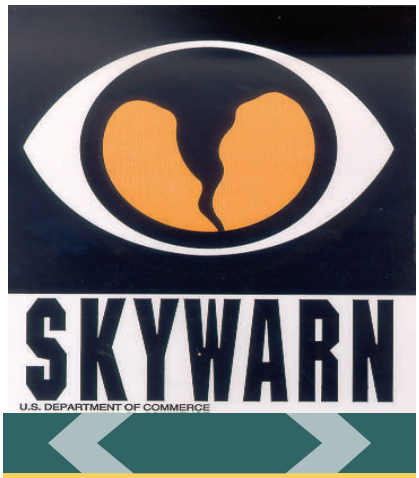
Daggett, CA				
	High	**Low**	**Average**	**Precipitation**
April	**79.1**	**49.4**	**64.3**	**0.18**
May	**88.1**	**57.4**	**72.8**	**0.08**
June	**98.7**	**65.3**	**82.0**	**0.11**
July	**104.5**	**71.3**	**87.9**	**0.45**
August	**102.3**	**70.4**	**86.4**	**0.39**
September	**94.7**	**64.1**	**79.4**	**0.33**

Death Valley, CA				
	High	**Low**	**Average**	**Precipitation**
April	**89.3**	**61.6**	**75.5**	**0.12**
May	**98.7**	**70.9**	**84.8**	**0.10**
June	**108.8**	**80.1**	**94.5**	**0.05**
July	**114.9**	**86.3**	**100.6**	**0.11**
August	**113.2**	**84.3**	**98.8**	**0.14**
September	**105.3**	**74.9**	**90.1**	**0.19**

Kingman, AZ				
	High	**Low**	**Average**	**Precipitation**
April	**70.9**	**44.5**	**57.7**	**0.47**
May	**80.3**	**53.0**	**66.7**	**0.31**
June	**91.1**	**62.6**	**76.9**	**0.19**
July	**95.6**	**69.3**	**82.5**	**0.98**
August	**94.0**	**67.8**	**80.9**	**1.41**
September	**87.8**	**61.3**	**74.6**	**0.66**

Temple Bar, AZ				
	High	**Low**	**Average**	**Precipitation**
April	**81.6**	**53.4**	**67.5**	**0.16**
May	**91.6**	**63.2**	**77.4**	**0.12**
June	**103.1**	**73.8**	**88.5**	**0.04**
July	**108.0**	**80.4**	**94.2**	**0.52**
August	**105.7**	**78.8**	**92.3**	**0.33**
September	**97.8**	**69.8**	**83.8**	**0.27**

SKYWARN REPORTING CRITERIA



Tornado: circulation in contact with the ground

Funnel Cloud: circulation not in contact with the ground

Rotating Wall Cloud

Downburst (visually identified)

Wind: causing damage (such as broken tree limbs or downed power lines) or estimated speeds greater than 40 mph

Hail: greater than pea-size or covering the ground, specify size of largest stone

1/4 inch.....pea size

1/2 inch.....marble size

3/4 inch.....dime, penny size

1 inch.....quarter size

Rainfall: 1/4 of an inch or more per 1/2 hour, or any cumulative total over 1/2 inch

Flooding: of ANY kind! Are waters rising or falling?

Visibility: under 1/2 mile, caused by anything

Snowfall: accumulating one inch or more per hour, or any depth on desert floors

Icing: of road surfaces caused by anything

Important Note:

When you observe weather conditions that meet or exceed the criteria listed on this page, call in your report to our office *Immediately !!*

Reports received in a timely fashion are very helpful to us when it comes to protecting life and property!

Also when in doubt, Call.

Spotter Hotline: 1-800-240-4932

SOME WEBSITES OF INTEREST

www.weather.gov	National Weather Service Homepage
www.weather.gov/lasvegas	NWS Las Vegas Homepage
www.weather.co.mohave.az.us/perl/DWReports.pl	Mohave County ALERT Flood Warning System
www.az511.com/hcrsweb/hcrsweb.jsp	Arizona Road Conditions (with access to neighboring states)
www.ccrfcd.com	Clark County Regional Flood Control District
www.skywarn.org	National Skywarn Homepage
www.wxqa.com	Citizen Weather Observer Program
www.cocorahs.org	Community Collaborative Rain, Hail, and Snow Network
www.wrcc.dri.edu	Western Region Climate Center
http://quake.wr.usgs.gov	Near Real Time Earthquake Information
www.nws.noaa.gov/nwr/allhazard.htm	NWS All Hazards Web Page
www.cloudappreciationsociety.org	For cloud lovers & admirers
www.spotternetwork.org	Near Real Time spotter reports across the U.S.

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