



NATIONAL WEATHER SERVICE, LAS VEGAS NEVADA

The Desert Sun

SKYWARN Spotter Newsletter

Spring 2008

In This Issue

Monsoon Musings	Front
Upcoming Events	2
Dangerous Dust	3
Celebrating Constituents	3
Spotter Training Locations	4
Skywarn Trademark	4
Websites of Interest	4

This newsletter serves the following counties:

Nevada: Clark, Lincoln, Nye, Esmeralda

Arizona: Mohave

California: Inyo, San Bernardino

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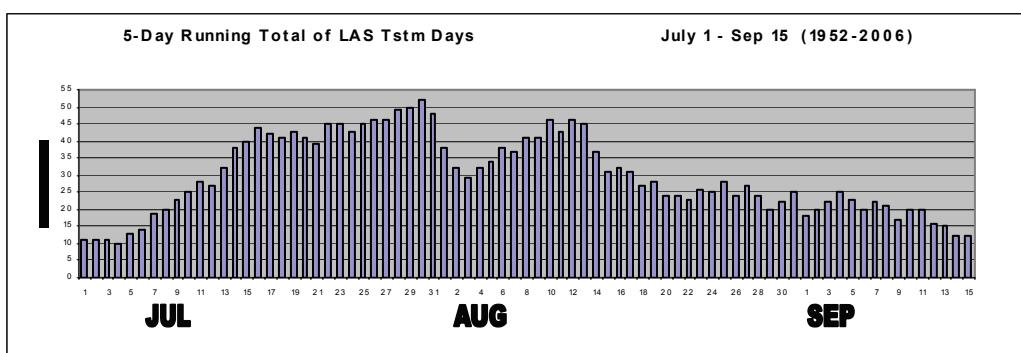
Monsoon Musings

Kim Runk, Meteorologist In Charge

The summer thunderstorm season across the Desert Southwest is sometimes referred to as the "Southwest Monsoon" or "North American Monsoon". The term "monsoon" comes from an Arabic word meaning "season". It is typically associated with a change in the prevailing wind which persists for several months, bringing with it a change in the overall character of the weather. The classic example occurs in India and Southeast Asia, where winter is dominated by a cool, dry "northeast" monsoon flow, while in summer the "southwest monsoon" leads to their rainy season.

In the southwestern United States the winds aloft shift from westerly in the winter to a more southeasterly direction in summer. This shift is also accompanied by a lower atmospheric wind reversal over the Gulf of California from the north during the winter months to the south during the summer. These prevailing wind changes and the resulting altered character of the weather qualify the general circulation as a monsoon system. Some areas are moving toward defining the North American Monsoon as a more generic season (June 15 – September 15), after the model of the "hurricane season". This time frame does encompass more than 95% of severe convective storms forming in the Southwest Monsoon regime, and it establishes a consistent time frame for facilitating inter-annual monsoon season comparisons.

The Las Vegas forecast area (southern Nevada, northwest Arizona, and southeast California) actually floats in and out of the monsoon moisture regime throughout the summer. Therefore, the historical emphasis on identifying the onset and end time of the monsoon has not been as high as it tends to be in southern Arizona. We have found it can even be counter-productive, diverting attention away from more important issues, i.e., awareness of, and preparedness for, the hazards associated with summer storms. We do use the "monsoon" terminology and we actively track the location of the monsoon moisture boundary, but the main purpose is to diagnose the character of thunderstorms which will form on a given day. When we are outside the monsoon moisture boundary, and yet conditions are sufficiently moist and unstable to support thunderstorm development, the primary threat is associated with damaging winds. This is because the moisture is concentrated aloft. As storms mature and collapse, precipitation falling through the dry air in the lower atmosphere evaporates and accelerates, creating strong, erratic downburst winds. Within the monsoon boundary the near-surface air is humid and the threat transitions into one of flash flooding associated with heavy rainfall. Thus, exposure to thunderstorms poses dangers regardless of whether those storms form within the monsoon flow regime. It is the nature of the threat to life and property which is of paramount importance to us in issuing appropriate warnings that will provide you, the public, with information you can use to make wise, safe, informed decisions.



UPCOMING EVENTS



Wear It! - 2008 National Boating Safety Week

Promotes Life Jacket Safety

Chris Stachelski, Forecaster

The waters of Lake Mead can be inviting any time of the year as the perfect place to pass the day.

While sunny skies and light winds often make for an ideal day on the lake much of the year, it is important to remember to boat smart and boat safe no matter what the weather is like when you venture out. Each year the National Safe Boating Council sponsors National Safe Boating Week. This year May 17 - 23 has been selected as the dates for this event.

The theme of this year's National Boating Safety Week is on the importance of life jackets. Many people do not realize how just taking a short amount of extra time to place on a life jacket can significantly reduce the risk a person faces while on the open water. Life jackets can protect you from drowning if you fall off a boat or the boat you are on capsizes. It is important to not only have a life jacket on board while you boat but also to make sure you're wearing it. Purchase a life jacket that is comfortable and lightweight. Remember...an uncomfortable jacket will discourage you from even wanting to wear it.

Additionally...always remember to check the weather before you go out and while you are out. Watch and listen for signs of any rapidly changing weather conditions. The latest weather information for the lake can be found on our website at weather.gov/lasvegas, or on NOAA Weather Radio at 162.55 MHz. If a thunderstorm approaches, head for shore. Get out of the boat and away from water and seek shelter immediately. If you are unable to get to shore, go below deck if possible. Keep away from metal objects that are not grounded to the boat's protection system. Do not touch more than one grounded object at the same time.

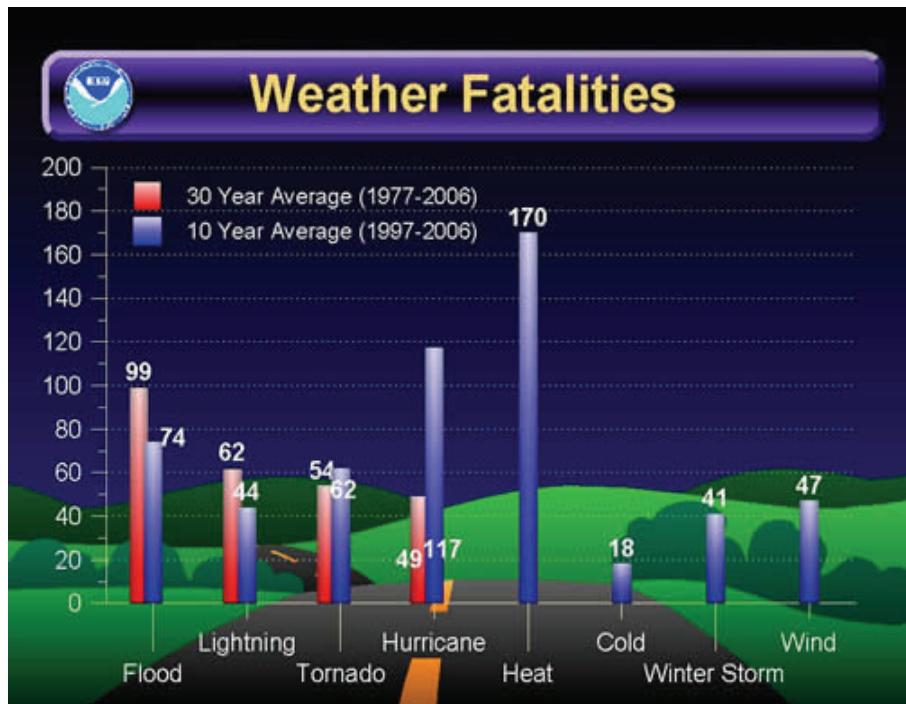
National Lightning Safety Awareness Week

Donald Maker, OPL

"When Thunder Roars, Go Indoors."

This is the slogan for this year's 7th annual National Lightning Safety Awareness Week, that will be observed June 22 – 28. Lightning is a serious danger and very powerful. In the United States an average of 62 people are killed each year by lightning (based on 1977-2006 data from the U.S. Natural Hazard Statistics). The lightning detection systems in the U.S. have monitored an average of 25 million cloud-to-ground lightning flashes each year. Each spark of lightning can reach over 5 miles in length, soar to temperatures of approximately 50,000 degrees Fahrenheit, and contain 100 million electrical volts. Lightning is most often seen in association with thunderstorms, but has also been seen in volcanic eruptions, extremely intense forest fires, heavy snowstorms, and large hurricanes. Lightning is considered the underrated killer because it usually claims 1 or 2 victims at a time, does not cause mass destruction of property, and is underrated as a **risk**. The average of 62 lightning fatalities ties the average of 62

deaths per year caused by tornadoes. A list of dos and don'ts lightning safety tips for people indoors or outdoors, & for your pets and animals is available at www.lightningsafety.noaa.gov.



Dangerous Dust

Chris Stachelski, Forecaster

You're driving along on the highway in excellent visibility when all of sudden you hear the roar of the wind. Suddenly, you can't see more than a few feet in front of you as a plume of dust swirls by. Dust storms across southern Nevada, northwest Arizona and southeast California can happen in any month of the year and under a clear or cloudy sky. Dust storms are most common in the fall and spring months when storm systems pass through with little precipitation, sometimes just a few clouds but strong enough to generate gusty winds. When more moisture laden storm systems impact the region in the "heart" of winter, the precipitation from these systems is often enough to wet the ground thereby reducing the threat of dirt being picked up and blown around easily. In years where the precipitation runs below normal, the dry nature of soil can make conditions even more favorable for dust storms to occur. Dust storms also occur in the monsoon season, usually on a much more localized scale, where strong thunderstorms develop. While strong wind gusts in a thunderstorm can easily kick up dirt and blow it around, dust storms can also occur several miles away from the storm. These are triggered by the storm's outflow boundary which is a localized rush of air forced downward toward earth and outward ahead of the storm. Typical wind speeds associated with an outflow boundary can range from 35 to 90 mph.



Dust storms are often sudden in nature. As the wind's speed increases, it lifts loose particles of dirt into the air, generating a wall or clouds of dirt that can sharply lower the visibility and produce poor air quality. These clouds or walls of dirt can expand to several thousand feet high and miles wide, with the visibility at or near zero.

In the desert, the naturally sandy landscape serves as a source for dust, however even in more "vegetative" areas where agriculture is dominant the dirt on fallow plots of land can be picked up easily by gusty winds. Be alert for areas of low visibilities on windy days. If the visibility drops low enough to where you can no longer see when driving, pull off the road and away from the pavement as far as possible. Stop your car and turn off your headlights. Remain there until visibility improves and it is safe to proceed. Leaving your headlights on could mislead other vehicles, causing them to crash into the back of your vehicle.

Here are a few additional tips:

- **Avoid entering areas where you see a dust storm in progress. Don't drive into disaster.**
- **Slow down. Leave plenty of room in between you and any vehicles in front of you.**
- **Use the lines of the road to guide you.**
- **If you continue driving turn on the headlights. Use the horn if necessary.**
- **Listen for other vehicles. Avoid crossing roads where you cannot see.**
- **Be patient! Avoid passing other vehicles.**
- **Consider not traveling until conditions improve.**

Celebrating our Constituents

Kim Runk, Meteorologist In Charge

The National Weather Service (NWS) office in Las Vegas is committed to providing our constituents with warnings and forecasts of the highest quality. To do so, we believe it is important for our customers and partners to know the opportunities and challenges ahead for the NWS, for us to seek input in discovering common opportunities and identifying ways to make our operations and services more efficient and effective. Issues identified and discussed with our constituents help us determine how to best use our resources for meeting future priorities.

In a concerted effort to reach out to a variety of partners this month, we have hosted or participated in meetings with the media, emergency managers, fire weather customers, government agencies such as the Bureau of Reclamation, the U.S. Forest Service, the U.S Fish and Wildlife Service, and representatives from the Paiute tribe. We could not do what we do were it not for the support and involvement of these dedicated people and many others like them.

For more information on our Constituents Outreach, including a recorded message by NWS Director Jack Hayes, point your Internet browser to: <http://www.wrh.noaa.gov/forecasts/constituents.php?wfo=vef>.

Storm Spotter Training Locations

Andrew Gorelow, Storm Spotter Coordinator

As we continue to improve our spotter network throughout our area of responsibility the efforts of our spotters is greatly appreciated by the entire operational staff at WFO Las Vegas. Last year most of the training sessions were conducted in the more rural areas of our CWA (County Warning Area), in addition to the online training that was provided throughout the year. The result was more than 100 new spotters joined the ranks to help us protect lives and property. This year's training will be conducted in locations we visited in 2006. Thus far, 6 cities have been selected and more may be added. The dates in June 2008 have not been determined as yet. This will be a combination of initial and refresher training. There will be new and different information to share with you. The exact dates and times will be provided in the May issue of the Desert Sun. Here are the cities selected so far...in NV: Laughlin, Mesquite...in CA: Needles, Bishop...in AZ: Bullhead City, Lake Havasu City. By the way there is an online initial spotter training session scheduled for April 8th between 600-800 pm PDT/MST. We have room for 10 more interested persons. So if you know of someone that wants to become a storm spotter, have them to contact me (andy.gorelow@noaa.gov) or Faith Borden (faith.borden@noaa.gov) at 702-263-9744 by Thursday, April 3rd. They will need to complete an online application before attending the training, and time to receive the training packet.

SKYWARN Trademark

Donald Maker, OPL

Late last year the Department of Commerce's (parent agency of the NWS) Office of the General Council filed to register SKYWARN as a U.S. service mark, in Class 41, which covers NOAA's use of the term on educational services (i.e. the conduct of classes, like on storm spotting, forecasting, safety, etc.). NOAA's use of the term (and logo) dates back as far as 1968. Another application filing of the term in Class 16 is expected in the near future. This will cover the use of the SKYWARN term in print media. It is expected that the logo will also be registered in both classes.

So what this means is SKYWARN will look like SKYWARN™ or Skywarn™ on all of our print media, presentations, website etc. This also means that once SKYWARN™ becomes registered anyone or organization that wants to use the term will need to be issued a permit or license first. Otherwise it could be considered infringing, taking liberties, or claiming ownership, and the DOC Office of General Council may look to prosecute.



National Safe Boating Week, May 17-23, 2008

Donald Maker, Observing Program Leader

The National Safe Boating Council has marked May 17 – 23 as this year's National Safe Boating Week. During this week WFO Las Vegas will broadcast over NOAA Weather Radio a different safe boating weather awareness topic each day. Weather safety tips for boaters in the Desert Southwest range from strong winds, waves and lightning to excessive heat and cold. According to the National Park Service, weather is a factor in 5 to 10 fatalities per year on Lake Mead. This fatality rate is higher than the number of people killed by tornadoes each year in Oklahoma. The biggest weather-related danger to boaters along the Colorado River is strong winds. Strong winds have the potential to generate large waves which can capsize or swamp small boats, and carry away swimmers. Weather conditions on area lakes can differ dramatically from nearby cities such as Las Vegas. Also, weather conditions are likely to change throughout the day.

The National Weather Service in Las Vegas issues Wind and Lake Wind Advisories for Lakes Mead, Mohave and Havasu when sustained winds of 25 mph or greater are expected for 3 hours or more. By knowing what to expect ahead of time and remaining alert for changing weather conditions, you can keep yourself and your family safe while enjoying a day at the lake. For more information go to www.safeboatingcouncil.org.

Websites of Interest

www.spc.noaa.gov - National Weather Service's Storm Prediction Center

www.spotternetwork.org - Weather related website for spotters

www.ncar.ucar.edu - National Center for Atmospheric Research

www.flash.org - Federal Alliance for Safe Homes

DISCLAIMER: Reference to any website (other than .gov websites) does not constitute an endorsement or recommendation by the National Weather Service or any of its field offices or employees.