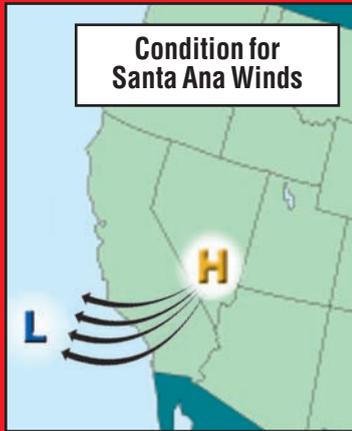


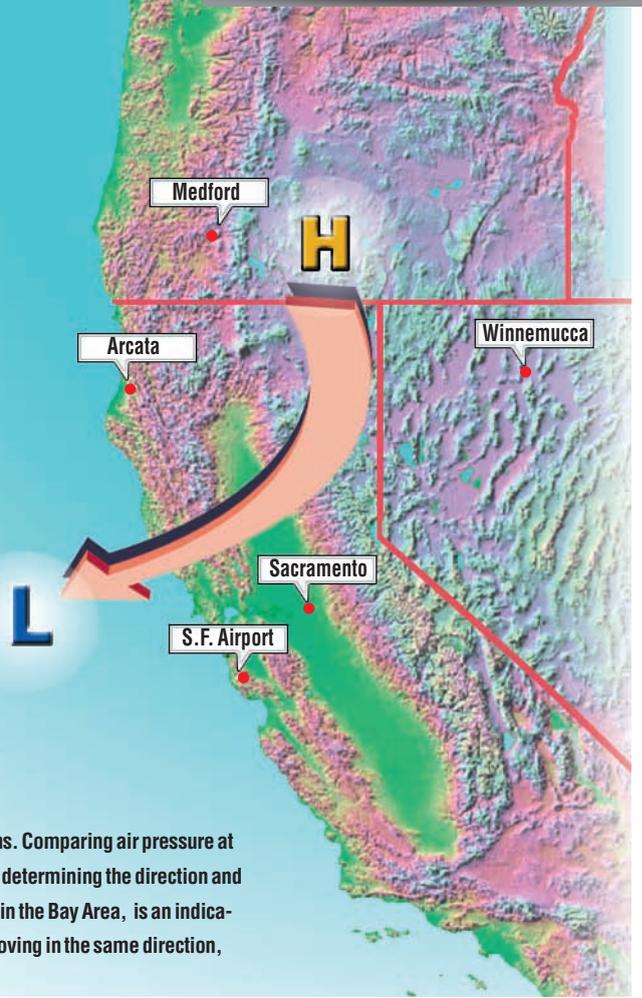
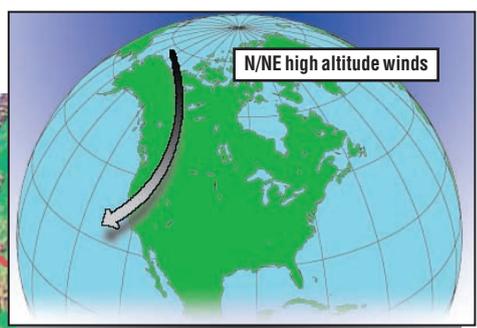
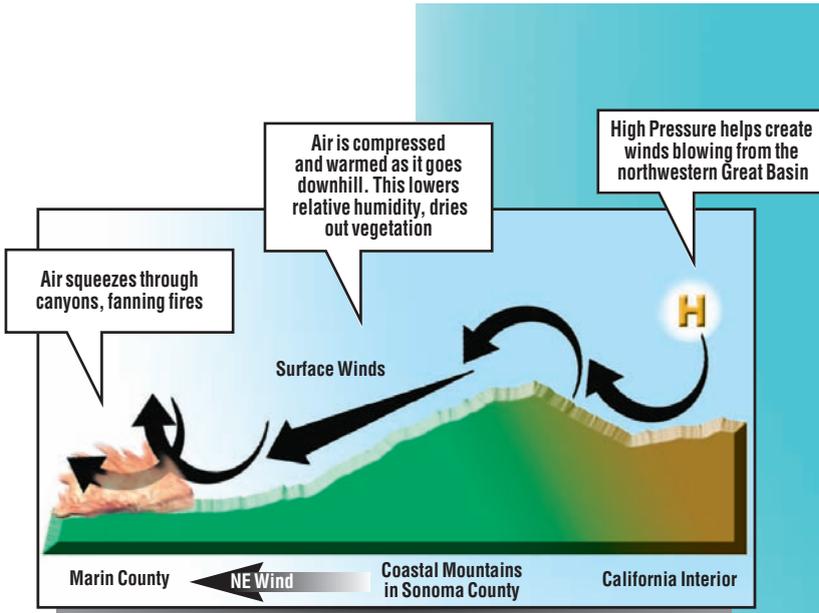
# Extreme Fire Weather and Red Flag Days



Similar to the well known Santa Ana winds in southern California, Marin occasionally experiences hot, dry, fast moving, offshore winds during the late summer and early fall. These events create our most extreme fire danger.



This new Remote Automated Weather Station (RAWS) will be used for fire weather monitoring by Marin County Fire Department and was recently provided through the National Fire Plan. There are two other RAWS stations in the county. The weather data from these stations can be viewed at [www.met.utah.edu/mesowest](http://www.met.utah.edu/mesowest).



### From Great Basin High to Ocean Low... Fire Weather Watch Out

Air under high pressure is more dense and naturally flows toward areas of lower pressure where it can expand. High pressure over the Great Basin can force dry air toward lower pressure over the Pacific Ocean. The greater the difference in pressure, the faster the surface winds will be. When air descends, it compresses and increases in temperature. Winds moving from the high elevation interior to sea level at the coast, get warmer as they flow.

Wind speed increases when air is channeled through mountain passes or flows down canyons at night, under the influence of gravity. In the late summer and early fall, air over the Great Basin and vegetation on the California coast are both at their driest. Fast moving dry air after months without rain creates an extreme fire weather situation.

Fire weather forecasters watch for these events by comparing conditions at different locations. Comparing air pressure at the San Francisco Airport with Arcata, Medford, Winnemucca, and Sacramento, is important in determining the direction and magnitude of a wind event headed for Marin. Air pressure in Redding 4-6 millibars greater than in the Bay Area, is an indication that an offshore wind event will occur in Marin. If winds aloft at 5- to-10, 000 feet are also moving in the same direction, these offshore wind events have even greater force.

Low	Moderate	High	Very High	Extreme
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**FIRE DANGER RATINGS** are determined daily during fire season. These ratings are based on the probability of ignition; the effects of wind, slope and fuel; and the potential energy released by a fire in the given weather and fuels. A daily rating of Low to Extreme fire danger is determined based on the worst case fire weather scenario during the hottest, driest part of the day on an open, south facing slope.

Fire danger ratings may vary throughout the county and are used to determine whether land use restrictions will go into effect as well as how many firefighters should be available in case a wildfire does occur. **Fire Danger Ratings** describe the potential for fire to spread rapidly in a local area. **Red Flag Warnings** predict a weather event in which fire will be difficult to control.

**RED FLAG WARNINGS** are issued by the National Weather Service to notify fire agencies in advance of critical weather patterns that will contribute to extreme fire danger and/or extreme fire behavior. A **Red Flag Warning** is issued for the San Francisco Bay Area when there is a strong chance that Red Flag conditions will occur within the next 24 hours. When a Red Flag warning is issued, Marin County Fire Department notifies public land owners who determine if land use restrictions will go into effect. These restrictions may include temporary road closures or suspension of special use permits. For information on Red Flag Land Use Restrictions, call public lands before visiting or call the Marin County Fire Department public information line at **(415) 449-7191**.

**RED FLAG CONDITIONS** are wind events lasting at least 8 hours when vegetation is dry. Annual grasses are cured; no rain has occurred in the last 24 hours; and fuels 1/4 to 1/2 inch in diameter have less than 6% moisture. Relative humidity and wind speed during these events are as follows:

Relative Humidity	Wind Speed
Day, 29-42% and/or Night, 60-80% . . . .	30+ mph
Day, 19-28% and/or Night, 46-60% . . . .	21+ mph
Day, 9-18% and/or Night, 31-45% . . . . .	12+ mph
Day, <9% and/or Night, <31% . . . . .	6+ mph

Note that hot, dry days will not have a **Red Flag Warning** unless sustained wind is also present.