

News Release

For immediate release
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Exceptional Climate Conditions Lead to Historically Poor Air Quality throughout the State

Air District Urges Compliance with Wood Burning Prohibitions

Unusual climate conditions caused by the La Niña weather pattern have resulted in historically poor air quality conditions in San Joaquin Valley and throughout the state of California.

A La Niña is preceded by a buildup of cooler-than-normal subsurface waters in the tropical Pacific. Eastward-moving atmospheric and oceanic waves help bring the cold water to the surface through a complex series of events still being studied. La Niña often results in drier than normal conditions and stagnant weather conditions in the Central Valley and most of California. In fact, December of this year has tied December 1989 as the driest December on record for the Valley.

The unusually cold overnight temperatures and warm air aloft has created strong surface-based temperature inversions (ranging from 500 feet to 2,500 feet) that have trapped particulate pollution within a very small volume of air. Combined with clear skies and afternoon sunlight, secondary particulate aerosol formation has been occurring, contributing to higher PM2.5 levels (particles smaller than 2.5 microns).

“Given these abnormal weather conditions and the resulting poor air quality, we urge Valley residents to refrain from extraneous outdoor activities when air quality reaches unhealthy levels,” said Seyed Sadredin, the Air District’s executive director and air pollution control officer. Residents can sign up to receive email notifications when air quality is poor through the Real-time Air Advisory Network (RAAN) available on the District’s website (www.valleyair.org). “It is also critical for Valley residents to adhere to wood-burning prohibitions declared by the air district.”

The Air District has stepped up enforcement of wood-burning prohibitions, which is critical in protecting the public health and minimizing particulate air pollution. During wood-burning prohibitions, the use of outdoor chimineas and fire pits is also prohibited and violations will result in fines. A Valley-wide curtailment of word burning results in air pollution reductions equivalent to taking 140,000 trucks off of the road.

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UNUSUAL CLIMATE CONDITIONS

AFFECT AIR QUALITY

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“We regret the necessity of declaring wood-burning curtailments during the holiday season, but the public health is of overriding importance,” Sadredin said, “Folks won’t enjoy their holiday if they can’t breathe.”

These extreme conditions have not been seen since 2000. Due to the La Nina weather pattern, the Valley has experienced four times as many days at or below freezing during this year’s winter season compared to last year. So far this winter, Valley counties have experienced 21 Unhealthy days as compared to five Unhealthy days during the entire 2010-2011 winter season. There has also been a substantial change in the number of exceedances of federal health standards so far this winter season relative to last season. Last year, Valley counties had a total of 72 combined exceedances of the federal standard, with this year’s total already at 120 combined exceedances.

These conditions have resulted in nearly an entire month of unbroken wood-burning prohibitions in parts of the air basin and numerous curtailments earlier in the season. And around the state, other air basins with similar regulations are reporting the necessity of repeatedly curtailing wood burning, as well.

The Bay Area Air Quality Management District and the Sacramento Metropolitan Air Quality Management District joined the Valley Air District in calling wood-burning restrictions over the Christmas Holiday weekend due to poor air quality lingering over much of the state.

During Check Before You Burn season, which runs from November through February each winter, residential wood burning, which includes burning any solid fuel such as manufactured fire logs and pellets, is prohibited when air quality is forecast to exceed federal health-based standards for dangerous particulate matter (PM). PM has been shown to cause respiratory disease, heart attacks and stroke. Levels of PM in the Valley during December have exceeded the federal standard since the beginning of December, with high PM levels expected to continue into the new year.

But despite this winter’s uncharacteristically stagnant weather, since its adoption in 2003, the Check Before You Burn program has resulted in some of the cleanest winters in Valley history. During the 1999-2000 winter season, Valley urban areas experienced peak PM_{2.5} levels a third higher than levels seen during this winter’s stagnation episode. The daily 24-hour average PM_{2.5} levels across the Valley regularly exceeded 100 micrograms per cubic meter during the 1999-2000 winter season, with Fresno and Bakersfield well over that level at times. In contrast, daily average PM_{2.5} levels during this winter’s extended stagnation episode have been peaking in the 70 microgram per cubic meter range.

In fact, the winters of 2009-10 and 2010-11 were the cleanest on record with Valley counties showing seven and five “Unhealthy” days for each season, respectively, compared to this year’s 21 Unhealthy days thus far. The number of “Good” days was 183 during the same time period for the 2010-11, whereas 2011-2012 has had 101 good days so far.

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“In the midst of the lifestyle disruptions that poor air quality may be causing, please remember that your efforts have had, and continue to have, tangible results in a better quality of life for all of us,” Sadredin said.

Daily wood-burning forecasts are issued at 4:30 each afternoon and available at <http://www.valleyair.org/aqinfo/WoodBurnpage.htm>, by calling 1-800 SMOG INFO (766-4463) or by subscribing to the Air District’s daily air quality forecast at <http://www.valleyair.org/lists/list.htm>.

So far this season, the Valley’s eight counties have had the following number of prohibitions and notices of violations [NOVs]:

Episodic Wood Burning
Prohibition Days

	Fresno	Kings	Kern	Madera	Merced	San Joaquin	Stani- slaus	Tulare	Total
11/1/11 to 12/28/11	36	24	28	22	18	15	27	29	199
11/1/10 to 12/29/10	23	19	20	15	9	4	14	17	121
Δ Days	+13	+5	+8	+7	+9	+11	+13	+12	+78
% Diff.	57%	26%	40%	47%	100%	275%	93%	71%	64%

Notices of Violation Issued

	Fresno	Kings	Kern	Madera	Merced	San Joaquin	Stani- slaus	Tulare	Total
11/1/11 to 12/28/11	152	19	63	32	80	40	78	14	478
11/1/10 to 12/28/10	76	3	15	6	12	8	19	13	152
Δ NOVs	+76	+16	+48	+26	+68	+32	+59	+1	+326
% Diff.	100%	533%	320%	433%	567%	400%	311%	8%	214%