

the california syndrome: wood-burning regulations



# The California Syndrome



California is a leader in environmental regulations. Its rulings have set precedent and/or have been adopted by many other states. Four-fifths of California's 36 million people are now subject to some form of regulation on burning wood. Are we in danger of losing wood-burning in America?

## the california syndrome: wood-burning regulations

by James E. Houck

The state is big; it's tremendously influential, and it has turned its attention to wood-burning regulations. Could this impact your life and business?

# As California Goes...

**T**here are varying opinions on the importance of California's regulations and whether we, as an industry, have done enough or should be doing more to influence them. The old adage, "Knowledge is power," comes to mind and a review of the facts is prudent.

A number of air quality jurisdictions within the state of California have promulgated regulations on the sale and use of residential wood-burning heaters and fireplaces that impact most residents of the state – **that is a fact.**

Certainly some within the hearth industry will be negatively affected by the wood-burning regulations; however, some (e.g., gas-fueled appliance manufacturers) will benefit – **that is a fact.**

California is the most populous state in the nation; it is generally considered the most progressive in terms of environmental regulations, and its lead on environmental issues often has been followed by other states – **these are facts.**



### The State of California

California's population as of 2006 was 36.4 million. Its gross domestic product (GDP) places it seventh in the world (even when compared to sovereign countries), putting it between Italy and Canada in magnitude. According to the U.S. Department of Energy, there were 2.3 million households in California that used wood as a fuel in 2001.

The state of California is divided into 35 Air Pollution Control Districts (APCD) and Air Quality Management Districts (AQMD), together referred to as simply "districts." These districts are either single counties or regional



governing authorities that have the primary responsibility for controlling air pollution from stationary sources, such as residential wood combustion.

Among the 35 districts, four key districts, when combined, contain more than 76 percent of the state's population. These are the: (1) South Coast AQMD, (2) San Joaquin Valley APCD, (3) Sacramento Metro AQMD, and (4) Bay Area AQMD. Each of these four populous districts has wood-burning regulations.

The residential wood-burning regulations are not uniform among districts and are tedious. However, they all seem to have two things in common: (1) provisions that put restrictions on the sale of new wood-burning appliances in one manner or another, and (2) provisions restricting the use of existing wood-burning appliances when air quality is poor.

### South Coast Air Quality Management District

**2006 Population:** 15.7 million

**Regulation:** Rule 445, Wood-Burning Devices

**Status:** Adopted March 7, 2008

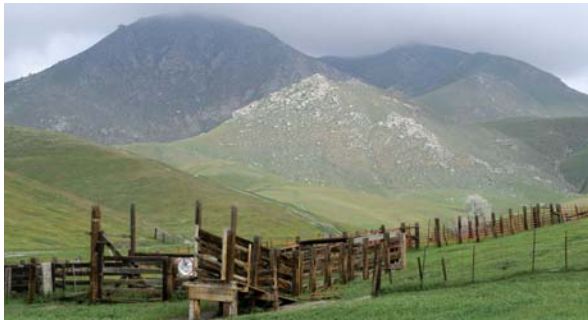
Excerpts from a South Coast AQMD press release:

**Beginning March 7, 2009,** only fireplaces fueled by gas (such as gas logs) may be installed in a new residential or commercial building . . . indoor or outdoor wood-burning fireplaces or stoves are not permitted after this date in new construction.

**Beginning March 7, 2009,** only the cleanest-burning wood stoves and heaters, and dedicated gas heaters, may be sold . . . and installed in existing homes and buildings. These include U.S. EPA Phase II-certified fireplace inserts or stoves;

pellet-fueled heaters; masonry heaters or gas heating units such as gas inserts or gas logs. (Author's note: Wood-burning fireplaces are not on the list.)

**Beginning on Nov. 1, 2011**, AQMD will issue mandatory wood-burning curtailments from November through February in specific areas on days when PM<sub>2.5</sub> levels are forecast to reach unhealthy levels. (Author's note: The South Coast AQMD staff has predicted that curtailment frequency will be fewer than 20 days per heating season.)



A farm in the San Joaquin Valley.

## San Joaquin Valley Air Pollution Control District

**2006 Population:** 3.8 million

**Regulation:** Rule 4901 – Wood-Burning Fireplaces and Wood-Burning Heaters

**Status:** Adopted July 15, 1993 and amended July 17, 2003

Excerpts from Rule 4901:

**Beginning January 1, 2004**, Limitations on Wood-Burning Fireplaces or Wood-Burning Heaters in New Residential Developments.

No person shall install a wood-burning fireplace in a new residential development with a density greater than two (2) dwelling units per acre.

No person shall install more than two (2) EPA Phase II-certified wood-burning heaters per acre in any new residential development with a density equal to or greater than three (3) dwelling units per acre.

No person shall install more than one (1) wood-burning fireplace or wood-burning heater per dwelling unit in any new residential development with a density equal to or less than two (2) dwelling units per acre.

(Author's note: The preceding three paragraphs restrict the installation, particularly of fireplaces, in high-density tract housing common to California. It also should be noted that, nationally, about 20 percent of homes that have fireplaces have more than one fireplace and many homes that have a wood stove also have a fireplace; both scenarios are precluded in the regulation for high density developments.)

### Episodic Wood-Burning Curtailment

This section shall be in effect during the months of November through February.

No person shall operate a wood-burning fireplace or wood-burning heater whenever the APCO notifies the public that an Episodic Curtailment is in effect for the region in which the wood-burning fireplace or wood-burning heater is located. (Author's note: During the 2006 calendar year there were 13 episodic curtailments called for the various counties within the district.)



California State Capitol Building, Sacramento.

## Sacramento Metro Air Quality Management District

**2006 Population:** 1.4 million

**Regulations:** Rule 417 – Wood-Burning Appliances and Rule 421 – Mandatory Episodic Curtailment of Wood and Other Solid Fuel Burning

**Status:** Adopted Oct. 26, 2006 (Rule 417) and Oct. 25, 2007 (Rule 421)

Excerpts from Rules 417 and 421:

### Sale and Installation of Wood-burning Appliances:

Effective Oct. 26, 2007, no person shall sell, offer for sale, supply, install or transfer a new wood-burning appliance unless it is one of the following:

- A U.S. EPA Phase II-certified wood-burning heater,
- A pellet-fueled, wood-burning heater,
- A masonry heater, or
- An appliance or fireplace determined to meet the U.S.

EPA particulate matter emission standard set forth in Title 40 CFR, Part 60, Subpart AAA, and approved in writing by the Air Pollution Control Officer. (Author's note: It is a difficult and somewhat subjective task to demonstrate that a fireplace meets the standards of 40 CFR, part 60, Subpart AAA.)

### The impact of regulations on wood-burning appliance sales

The impact of regulations on wood-burning appliance sales goes beyond the strict interpretation of the regulations because a pall is cast on wood-burning, with the public getting the sense that they can't count on being able to use wood-burning appliances when they want and, importantly, at times when they are most needed for heat. Often, times of cold, stable air, when heat is most needed, corresponds to times of poor air quality.

**Mandatory Curtailment:** The requirements of this section shall be in effect during the burning season. No person may have a fire or operate a wood-burning device when a Mandatory Curtailment is in effect. The Air Pollution Control Officer will declare a Stage 1 Mandatory Curtailment when-

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ever he or she determines that the 24-hour average  $PM_{2.5}$  concentration may exceed 35 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) but is not likely to exceed 40  $\mu\text{g}/\text{m}^3$ . The Air Pollution Control Officer will declare a Stage 2 Mandatory Curtailment whenever he or she determines that the 24-hour average  $PM_{2.5}$  concentration may exceed 40  $\mu\text{g}/\text{m}^3$ . (Author's note: According to a September 2007 Sacramento Metro AQMD staff report, there were nine days between 35  $\mu\text{g}/\text{m}^3$  and 40  $\mu\text{g}/\text{m}^3$  and 28 days greater than 40  $\mu\text{g}/\text{m}^3$  during the winter starting in 2006.)

**Voluntary Curtailment:** The requirements of this section shall be in effect during the burning season. The Air Pollution Control Officer will declare a Voluntary Curtailment whenever he or she determines that the 24-hour average  $PM_{2.5}$  concentration may exceed 25  $\mu\text{g}/\text{m}^3$  but is not likely to exceed 35  $\mu\text{g}/\text{m}^3$ .

**Exemption – Certified Wood Heaters and Pellet Stoves:** The provisions of Section 301 [Mandatory Curtailment Section] shall not apply to U.S. EPA Phase II-certified wood-burning heaters and pellet-fueled, wood-burning heaters provided: the devices do not emit visible smoke; and a Stage 1 Mandatory Curtailment is in effect. (Author's note: fireplaces and masonry heaters are not exempt in Stage 1 Mandatory Curtailments and no wood-burning appliances can be burned at all under a Stage 2 Mandatory Curtailment.)

**Exemption – Certified Wood Heaters and Pellet Stoves:** The provisions of Section 302 (Voluntary Curtailment Section) shall not apply to U.S. EPA Phase II-certified wood-burning heaters and pellet-fueled, wood-burning heaters provided the devices do not emit visible smoke. (Author's note: Fireplaces and masonry heaters are not exempt.)



Golden Gate Bridge.

### Bay Area Air Quality Management District

**2006 Population:** 6.9 million

**Regulation:** Draft Regulation 6 – Particulate Matter and Visible Emissions, Rule 3 – Wood-Burning Devices

**Status:** Draft will go before the Board of Directors mid-summer 2008. Contact Eric Pop with the district for updates, (415) 749-5172, [epop@baaqmd.gov](mailto:epop@baaqmd.gov)).

Excerpts from Oct. 4, 2007 draft regulation:

**Mandatory Solid Fuel-Burning Curtailment:** No person shall operate (combust wood or solid-fuel products in) any wood-burning device during a curtailment period.

**Curtailment Period:** Any period so declared to the public by the Air Pollution Control Officer (APCO) when a negative impact upon public health, resulting from levels of

particulate matter of 2.5 micrograms in size or less ( $PM_{2.5}$ ), is forecast. (Author's note: During the 2007/2008 heating season there were seven instances that, according to district staff, would probably be considered curtailment periods had the draft regulation been in place.)

**Criteria for Sale, Transfer or Installation of Wood-Burning Devices:** Effective six months after rule adoption, no person shall sell, offer for sale or resale, supply, install or transfer a new or used wood-burning device unless it is one of the following:

- A U.S. EPA Phase II-certified wood-burning device
- A pellet-fueled device
- A masonry heater
- A low-mass fireplace of a make and model that meets EPA low-mass fireplace emission targets and has been approved in writing by the APCO. (Author's note: The ASTM/EPA fireplace testing protocol and standards may come into play here.)

**Criteria for Wood-Burning Devices in New Building Construction:** Effective for construction permits issued six months after rule adoption, no person or builder shall commence construction of a new building or structure designed to contain a wood-burning device unless the device meets the requirements of Section 6-3-303. (This is the list in preceding paragraph.)

In addition to the new draft regulation 6, in 1998 the Bay Area AQMD implemented a model wood smoke ordinance for fireplaces and wood stoves as a guidance document for cities and counties that wish to regulate sources of particulate matter in their communities. As of September 2005, 37 out of 101 Bay Area cities and seven of the nine Bay Area counties had adopted some version of the wood smoke ordinance.

#### Excerpts from the model ordinance:

##### It shall be unlawful to:

- Use any wood-burning appliance when the Bay Area Air Management District issues a "Spare the Air Tonight" warning and when an alternate approved heat source is available.
- Install a wood-burning appliance that is not one of the following: (1) a pellet-fueled wood heater, (2) an EPA certified wood heater, or (3) a fireplace certified by EPA should EPA develop a fireplace certification program.

### Other California Districts and Jurisdictions

Residential wood-burning regulations have proliferated among the smaller California districts and other jurisdictions keeping awareness and restrictions in front of the public throughout the state. They include:

- **Butte County AQMD, Rule 207**
  - Residential Wood Combustion
- **Feather River AQMD, Rule 3.17**
  - Wood Stove Heating
- **Glenn County APCD, Article 4, Section 99.2**
  - Fireplace & Solid Heating Device Usage
- **Great Basin Unified APCD, Rule 431**
  - Particulate Emissions (There are special regulations for the high-end ski resort of Mammoth Lakes.)
- **Kern County APCD, Rule 416.1**
  - Wood-burning Heaters and Wood-burning Fireplaces

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- **Mendocino County AQMD, Regulation 4.1**
  - Particulate Emissions Reduction Measure for Wood-burning Appliances
- **Northern Sonoma County APCD, Rule 140**  
**Definitions and Rule 400 Standards and Limitations.**
- **Placer County APCD, Rule 225**
  - Wood-burning Appliances (There are regulations for the highly acclaimed ski resort of Squaw Valley.)
- **Shasta County AQMD, Rule 31:23**
  - Fireplace and Solid Fuel Heating Device Usage
- **San Luis Obispo County APCD, Rule 504**
  - Residential Wood Combustion
- **Tehama County APCD, Rule 4:27**
  - Fireplace and Solid Fuel Heating Device Usage
- **Yolo-Solano AQMD, Rule 2.40**
  - Wood-burning Appliances
- **Tahoe Regional Planning Agency (TRPA), Chapter 91**
  - Air Quality Control
- **City of Sebastopol, Municipal**
  - Code Section 15.70

### Tallying Up the Facts

- Regulations restricting the sale and use of wood-burning heaters and fireplaces have been promulgated widely in California. Thirteen air quality districts and two other jurisdictions have them (or soon will), covering approximately 80 percent of the state's population.
- California represents a substantial market for hearth products in its own right, as it is the most populous state with more than two million households using wood fuel.

California is considered a leader in environmental regulations and its regulations have set precedent and/or have been adopted by other states. Case in point – California attempted to make a greenhouse gas vehicle emission standard stricter than that of the EPA. Until it was blocked by EPA in December 2007, 12 other states – Connecticut, Maine, Maryland, Massachusetts, New Jersey, New Mexico, New York, Oregon, Pennsylvania, Rhode Island, Vermont and Washington – had adopted the standard, and the governors of Arizona, Colorado, Florida and Utah had said they also plan to adopt it at a future time.

Wood-burning regulations benefit some factions of the hearth industry such as the manufacturers, distributors and retailers of gas-fueled appliances. They obviously negatively impact other factions of the industry such as those that manufacture, distribute or sell wood-burning appliances and solid fuels. Manufacturers, distributors and retailers handling both gas-fueled and wood-burning appliances are more flexible and are less impacted, such as was seen when Maricopa County, Arizona, passed wood-burning regulations.

Some California jurisdictions have regulations that are in the review process at this time; regulations in other jurisdictions can be amended in the future.

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