CITY OF HAYWARD
AGENDA REPORT

AGENDA DATE 02/03/04
AGENDA ITEM 4
WORK SESSION ITEM _____

TO: Mayor and City Council

FROM: Director of Community and Economic Development

SUBJECT: Introduction of Ordinance Regarding Wood-Burning Fireplaces

RECOMMENDATION:

It is recommended that the City Council introduce the attached ordinance.

DISCUSSION:

On January 13, 2004 the City Council held a work session to discuss development of an ordinance regulating wood-burning fireplaces. It was agreed that the new rules should apply only to new residential construction, including additions to existing homes. The ordinance will not affect usage of existing fireplaces. A representative from the Building Trades Council attended the work session and expressed support for the ordinance.

For new homes or additions where a fireplace is desired, the least expensive way to comply with the new ordinance would be to install a gas fireplace. Staff found that the cost of a gas fireplace appliance when installed during new construction is approximately $700. A wood pellet stove would start at around $2,000 and a certified wood-burning stove is the most expensive option.

The proposed ordinance is Categorically Exempt from the California Environmental Quality Act (CEQA) guidelines, pursuant to Sections 15308, *Actions by Regulatory Agencies for Protection of the Environment.*

Prepared by:

Erik J. Pearson, AICP
Associate Planner

Recommended by:

Sylvia Ehrenthal
Director of Community and Economic Development

Approved by:

Jesús Armas, City Manager

Attachments: Exhibit A. City Council Work Session Agenda Report, dated January 13, 2004
Draft Ordinance

1/27/04

EXHIBIT A

CITY OF HAYWARD
AGENDA REPORT

AGENDA DATE 01/13/04
AGENDA ITEM _____
WORK SESSION ITEM WS #2

TO: Mayor and City Council

FROM: Director of Community and Economic Development

SUBJECT: Discussion Regarding Wood-Burning Fireplaces

RECOMMENDATION:

It is recommended that the City Council review and comment on this report.

DISCUSSION:

In light of a request by the Bay Area Air Quality Management District (BAAQMD), staff is presenting the issue of wood-burning fireplaces to the Council. Wood smoke has been recognized as a significant public health risk by the United States Environmental Protection Agency (EPA), the California Environmental Protection Agency and the Bay Area Air Quality Management District (BAAQMD). Wood smoke pollutes the air with carbon monoxide, nitrogen dioxide, volatile organic compounds, inhalable particulate matter (PM), and dioxin; all of which are known to have negative health effects. The BAAQMD web site states that wood smoke is the largest single stationary source of PM pollution in the Bay Area. As part of the District's attempt to attain and maintain federal and state PM standards, the District adopted a model ordinance in 1998 for cities and counties that wish to regulate wood smoke. As of September 15, 2003, 24 cities and 5 counties (including Alameda) have adopted an ordinance regulating wood smoke. The ordinances vary in stringency from jurisdiction to jurisdiction as each city and county have modified the model ordinance to address local issues. The City of Saratoga has the most lax ordinance, which allows one wood burning fireplace per dwelling unit and the City of Sebastopol has the strictest ordinance, where all non-certified fireplaces and wood stoves cannot be used after June 1, 2005.

On December 20, 2003, the Daily Review published an article entitled *Burning Issues* (copy attached) that states that the traditional wood-burning fireplace is becoming a thing of the past. This is due, in large part, to Air Districts and local jurisdictions adopting regulations that address wood smoke pollution by allowing only wood-burning appliances that are certified by the EPA to be used in new construction.

The model ordinance provided by the BAAQMD does not ban the use of existing wood-burning fireplaces. The model ordinance does allow the following:

- Natural gas fireplaces which are the cleanest air quality option. Natural gas fireplaces generate a fraction of a gram of PM per hour.

- EPA certified wood heaters which meet EPA's particulate emission standard of 7.5 grams per hour. They incorporate combustion controls -- generally a secondary combustion zone, or use catalysts akin to the catalytic converters used in motor vehicles.

- Pellet-fueled wood heaters which burn cleaner because they control the mixing of fuel and air more tightly than conventional woodstoves. Virtually all pellet stoves emit far less pollution than the EPA allows.

- Fireplaces certified by EPA to have emissions no greater than those of an EPA certified wood heater. At present, EPA does not have such a certification program. However, the Northern Sonoma Air Pollution Control District has developed a protocol for testing fireplaces. As of September 2003, no fireplace manufacturers have submitted data to the Air Pollution Control District that indicates they can meet the 7.5-gram per hour PM standard.

If Council concurs that an ordinance should be prepared, staff would recommend that the ordinance allowing only certified wood-burning appliances apply to *new* residential dwellings and additions to existing residential dwellings where new wood-burning appliances are proposed. Existing commercial operations that burn wood (such as Everett & Jones Barbeque on A Street) would not be affected by such an ordinance. Several jurisdictions including San Francisco, Saratoga and Mountain View have included an exemption in their ordinances allowing wood-burning fireplaces and ovens for commercial cooking. Staff would support this type of exemption. Although the model BAAQMD ordinance is more stringent, staff believes that the notion of limiting an ordinance to new residential construction would significantly lead to better air quality in Hayward and provide an opportunity to gain more experience with such a program.

Although traditional fireplaces are becoming a thing of the past, some jurisdictions in the Bay Area do allow fireplaces that are designed to meet strict air quality standards. The US EPA only has a certification program for wood stoves and wood-fueled pellet stoves – not wood-burning fireplaces. Although the model ordinance requires that new wood-burning appliances be "EPA certified", several jurisdictions, including Sebastopol, San Francisco, Palo Alto and Mountain View, also allow wood-burning appliances or fireplaces that are certified by the Northern Sonoma County Air Pollution District (NSCAPD), which certifies fireplaces that meet the EPA's emission limit of 7.5 grams per hour. The City of Hayward could also allow wood-burning fireplaces that are certified by the NSCAPD.

The Air District has calculated that for every 1,000 new homes built in accordance with the provisions of the model ordinance, three tons of PM10 are avoided each winter. There is also a corresponding decrease in carbon monoxide and toxic air contaminants generated by the burning of wood.

Adoption of a wood smoke ordinance would give Hayward better control over the quality of life, contribute to cleaner air, and help reduce health costs for the region. It would also assist the BAAQMD in attaining and maintaining federal and state PM standards in a reasonable, cost-effective manner.

Prepared by:

Erik J. Pearson, AICP
Associate Planner

Recommended by:

Sylvia Ehrenthal
Director of Community and Economic Development

Approved by:

Jesús Armas, City Manager

Attachments:	Exhibit A.	Daily Review Newspaper article
	Exhibit B.	BAAQMD's Model Ordinance
	Exhibit C.	BAAQMD Fact Sheets
	Exhibit D.	List of Useful Websites

1/8/04

Daily Review

Burning Issues: Traditional fireplaces giving way to more efficient wood-burning, pellet and gas stoves

in the fireplace
By Barry Caine
STAFF WRITER

Saturday, December 20, 2003 - VICKI Vegis stokes the old-fashioned fireplace in her home just once a year.

"It's a special tradition to light it on New Year's Eve," the Oakland resident says.

When she gets the fire going, Vegis and her daughter Catherine, 8, roast marshmallows.

"The fireplace is an integral part of our life and an integral part of our living room," Vegis says. The rest of the year she fills the opening with large Tahoe pine cones, "just for show."

She only uses two logs to build her New Year's fire. "That's enough to get it going," Vegis says. "Also, I don't use more because of the ecological implications."

Because of the ecological implications -- long-hand for "pollution" -- traditional wood-burning fireplaces such as Vegis' are destined to become shards of history, like typewriters and record players.

Granted, they're cozy, warm, and add atmosphere and romance. But smoke from the logs clogs the air with pollutants, which are harmful to human health.

Thus the trend toward gas and pellet stoves, which can be free-standing or used as fireplace inserts. Pellet stoves burn wood pellets, gas stoves burn natural gas. Flames flicker along artificial logs to give the image of an old-fashioned fireplace.

Wood-burning stoves and fireplaces certified as clean-burning by the Environmental Protection Agency are also popular.

"Your conventional open fireplace is becoming a thing of the past," says Walt Ligon, owner of Custom Fireplace, Patio & BBQ in Dublin, one of the oldest and largest fireplace stores in the Bay Area.

The vast majority of his sales consist of gas stoves and pellet stoves

"because of the tremendous cost increases in gas and electricity (to heat homes), because of the cost of firewood in the Bay Area, and because of the confusion over government restrictions," Ligon says.

Most Bay Area cities and counties no longer allow conventional open wood-burning fireplaces to be built or installed. However, the laws vary from county to county and city to city.

Wood-burning stoves certified as clean-burning by the EPA are exceptions to the rule. Pellet stoves and gas stoves are allowed in virtually all jurisdictions, Ligon says.

"The idea behind all of this is to clean up the air in the winter months," says Ligon, who has been in the fireplace business for 32 years.

In addition to being more efficient (meaning they leave less waste) than wood-burning units, gas and pellet stoves are more economical.

"Any open fireplace ever built takes more heat out of a house when it's being used than it puts in," Ligon says. "It's an inefficient, energy-consuming, heat-consuming box."

Monica and Doug Hansen think outside of the box.

When the couple moved to the Bay Area from Oregon, they replaced the wood-burning fireplace in their small, 17-year-old Fremont home with a gas fireplace equipped with a blower, to circulate the heat out into the house.

They spend a lot of time in their living room. And although they have a gas furnace, Doug says, "We've had a lot of nights when the only thing we've run when we needed heat is the fireplace."

The flames look realistic, he says. And he and his wife like the convenience of being able to turn on the unit with a switch rather than having to spend time building a fire.

Also, Doug says, "we read a lot about pollution down here, so that was a factor."

The pollution factor

"What you and I call smoke, air-pollution people call particulate matter," says Phil Bobel, spokesman for the Bay Area Clean Water Agencies and manager of environmental compliance with the City of Palo Alto.

Particulate matter, Bobel says, is "the stuff that looks like smoke, is gray or black in color, and contains small particles that get locked in our lungs and can cause respiratory problems, especially in people who already have respiratory problems."

The size of the particle is the main culprit, the Palo Alto resident says. But the smoke also contains individual chemicals, such as dioxin, that might be toxic.

So the less wood burned, the better, in terms of human health.

"You get much less (pollution) with gas and pellet, especially because gas is clean-burning, so it (puts out) virtually no particulate matter," Bobel says.

Older wood-burning stoves and fireplaces emit 60 grams of pollution in one hour, says Luna Salaver, public information officer for the Bay Area Air Quality Management District.

In comparison, pellet stoves release four to six grams per hour.

"Natural gas is 98 percent cleaner than the old wood stoves," the Pacifica resident says. Electric fireplaces generate a little heat and look pretty, but are pollution-free.

Best wood, worst wood

Better to use old wood than something just cut, green and wet.

Clean seasoned wood, meaning no dirt and dry, burns hot and completely; that's the ideal.

"The air district's position is not to burn, period," Salaver says.

But if you must burn, use harder woods such as almond, apple, oak or walnut, she says. They burn best.

The worst wood to use is anything that's wet or has a coating, such as creosote.

Avoid eucalyptus and green pine. And don't use driftwood. Unless it's been cured, or dried, for a long time it might contain moisture. Moist wood smolders longer and smokes longer.

"If you burn wood on Christmas Eve, don't burn any that's been left in the rain," Salaver cautions.

Last year, some of the worst days for small-particle pollution in the Bay Area were the weekend before Christmas, Christmas Eve, Christmas Day and the weekend after, she says.

In the winter, when pollution is, or threatens to be, particularly harsh, the air district issues spare-the-air-tonight alerts similar to the summer smog alerts, warning all Bay Area residents not to burn wood.

If you choose to use manufactured (also called instant) logs, the best are compressed wood products that contain no petroleum-based binders or additives. Additives that make the logs crackle or show different-colored flames are polluting.

If burned correctly, instant logs can be better than ordinary wood -- if the temperature is kept high, the damper remains open all the way and there is no restriction on the air getting into the burning area.

Weather is also a factor. The worst burning conditions are when it's cold and there's an inversion layer: a hotter layer of air on top and a cooler layer on the bottom. Instead of rising, gases tend to stay near the home.

The best conditions are sunny days when there is no inversion layer. Hot air rises and smoke travels into the upper atmosphere.

Fake logs and hot stoves

Logs in pellet stoves and gas stoves are decorative, designed to look as close as possible to a natural wood fire.

In pellet stoves, they are typically made of ceramic clay designed to withstand heat generated by the stove, says the fireplace store's Ligon.

In gas stoves, 99 percent of the logs are made out of space-age fiber material "that will last forever but will also give you glowing edges and parts to make them look more like natural wood," Ligon says.

Pellet and gas stoves provide a constant, steady heat that warms the air in the house like a central gas heater, "but also heats the mass of the home, the walls, floors, ceiling, cat, dog and humans, and gives a more comfortable heat," he says.

The ecologically correct good news is that gas and pellet inserts can be installed in the openings in existing wood-burning fireplaces.

"Having a romantic, pretty, enjoyable fire in your house is one of the greatest pleasures humans can have in their lives," Ligon says. "Developments in new kinds of fireplaces and stoves also deliver atmosphere and save us a tremendous amount of money on our heating costs. This is the way the world is going."

Information on different woods can be found on the Web at baaqmd.gov or by calling (800) HELP-AIR. For information about spare-the-air-tonight alerts visit

www.sparetheair.org

You can e-mail Barry Caine at bcaine@angnewspapers.com or call (925) 416-4806.

A MODEL ORDINANCE PERTAINING TO THE REDUCTION OF AIR POLLUTION BY REGULATING THE NEW CONSTRUCTION OR REPLACEMENT OF WOODBURNING APPLIANCES

BE IT ORDAINED BY the City or County of

[ ]:

WHEREAS, the State Air Resources Board (ARB) adopted a particulate matter (PM10) Ambient Air Quality Standard (AAQS) in December, 1982, and levels for the PM10 AAQS were selected pursuant to California Code of Regulations Title 17 Section 70200 to protect the health of people who are sensitive to exposure to fine particles; and

WHEREAS, research indicates that woodsmoke is a significant contributor to PM10 levels that pose significant health risks; and

WHEREAS, the [ ] desires to lessen the risk to life and property from air pollution from woodburning appliances; and

WHEREAS, the [ ] finds that the proposed regulation will significantly reduce the increase in particulate emissions from future installation and construction activities; and,

WHEREAS, the [ ] finds a need exists to adopt regulations which apply to woodburning combustion emissions; and

The [ ] Code shall be amended by adding the following:

APPLICABILITY: This ordinance shall apply within the limits of the [city, county] of [ ] as specified herein.

All wood burning appliances installed in new residential units or woodburning appliances being added to or replacing woodburning appliances in existing residential units shall comply with this ordinance.

All woodburning appliances installed in new commercial buildings or woodburning appliances being added to or replacing woodburning appliance in existing commercial buildings shall comply with this ordinance. Commercial buildings shall include, but not be limited to, hotels and restaurants.

Gas fireplaces shall be exempt from this ordinance. However, the conversion of a gas fireplace to burn wood shall constitute the installation of a woodburning appliance and shall be subject to the requirements of this ordinance.

A woodburning appliance shall comply with this ordinance if (1) it is reconstructed, (2) additions, alterations, or repairs are made to the appliance that require opening up immediately-adjacent walls, or (3) the residential unit or commercial building in which the appliance is located is renovated, and the renovation includes opening up walls immediately adjacent to the appliance.

DEFINITIONS:

1. "Bay Area Air Quality Management District" means the air quality agency for the San Francisco Bay Area pursuant to California Health and Safety Code Section 40200.
2. "E.P.A." means United States Environmental Protection Agency.
3. "E.P.A. certified wood heater" means any wood heater that meets the standards in Title 40,

Part 60, Subpart AAA, Code of Federal Regulations in effect at the time of installation and is certified and labeled pursuant to those regulations.

4. "Fireplace" means any permanently installed masonry or factory-built woodburning appliance, except a pellet-fueled wood heater, designed to be used with an air-to-fuel ratio greater than or equal to 35 to 1.

5. "Garbage means all solid, semi-solid and liquid wastes generated from residential, commercial and industrial sources, including trash, refuse, rubbish, industrial wastes, asphaltic products, manure, vegetable or animal solids and semi-solid wastes, and other discarded solid and semi-solid wastes.

6. "Gas fireplace" means any device designed to burn natural gas in a manner that simulates the appearance of a woodburning fireplace.

7. "Paints" means all exterior and interior house and trim paints, enamels, varnishes, lacquers, stains, primers, sealers, undercoatings, roof coatings, wood preservatives, shellacs, and other paints or paint-like products.

8. "Paints solvents" means all original solvents sold or used to thin paints or to clean up painting equipment.

9. "Pellet-fueled wood heater" means any woodburning appliance that operates exclusively on wood pellets.

10. "Solid fuel" means wood or any other non-gaseous or non-liquid fuel.

11. "Treated wood" means wood of any species that has been chemically impregnated, painted or similarly modified to improve resistance to insects or weathering.

12. "Waste petroleum products" means any petroleum product other than gaseous fuels that has been refined from crude oil, and has been used, and as a result of use, has been contaminated with physical or chemical impurities.

13. "Woodburning appliance" means fireplace, wood heater, or pellet-fired wood heater or any similar device burning any solid fuel used for aesthetic or space-heating purposes.

GENERAL REQUIREMENTS: It shall be unlawful to:

1. Use any woodburning appliance when the Bay Area Air Quality Management District issues a "Spare the Air Tonight" warning and when an alternate approved heat source is available.

2. Install a woodburning 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.

3. Use any of the following prohibited fuels in a woodburning appliance.

a)	Garbage	g)	Paint solvents
b)	Treated wood	h)	Coal
c)	Plastic products	I)	Glossy or colored papers
d)	Rubber products	j)	Particle board
e)	Waste petroleum products	k)	Salt water driftwood
f)	Paints		

ENFORCEMENT: Any person who plans to install a woodburning appliance must submit documentation to the [building department of city or county] demonstrating that the appliance is a pellet-fueled wood heater, an EPA certified wood heater, or a fireplace certified by EPA should EPA develop a fireplace certification program.

Any person violating any of the provisions of this Ordinance shall be deemed guilty of a misdemeanor and upon conviction shall be punishable as provided by law.

IF ANY SECTION, subsection, sentence, clause or phrase or word of this ordinance is for any reason held to be unconstitutional by a court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this ordinance. The [ ] of

the [ ] hereby declares that it would have passed and adopted this ordinance and all provisions thereof irrespective of the fact that any one or more of said provision be declared unconstitutional.

INTRODUCED and ordered Posted/Published this [ ] day of [ ].

ADOPTED this [ ] day of [ ], by the following vote:

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

APPROVED AS TO FORM:

p:\general\boardmem\modord

Fact Sheet – Woodsmoke Model Ordinance

What is the model ordinance?

The model ordinance was developed by the Bay Area Air Quality Management District (BAAQMD) as a recommended ordinance for cities and counties that have woodsmoke problems and wish to regulate the installation of new woodburning stoves and fireplaces.

Why did the BAAQMD develop the model ordinance?

Burning of wood is a significant source of fine particulate pollution. Fine particles are those with a diameter of 2.5 microns or less (about 1/20th the diameter of human hair). In the Bay Area, this pollution, known as $PM_{2.5}$, is primarily a problem in the winter months, particularly on cold, clear nights.

Studies of U.S. cities show that areas with higher particulate pollution have higher death rates. Other studies for many areas, including Santa Clara County, show that when particulate pollution is higher, deaths increase and hospital admissions and emergency room visits related to respiratory illness also increase.

In 1997, the mounting scientific evidence of a link between particulate pollution and increased mortality and other health risks prompted the U.S. Environmental Protection Agency to adopt a national $PM_{2.5}$ air quality standard. Beginning in 2004 or 2005, those localities with $PM_{2.5}$ levels above the standard will have to take steps to reduce $PM_{2.5}$ emissions. It is not yet known whether the Bay Area will achieve the new health standard, but several studies show that higher death rates and other health effects persist even at $PM_{2.5}$ levels below the national standard.

Why regulate woodburning?

Woodsmoke is the largest single source of $PM_{2.5}$ pollution in the Bay Area. On an average winter day, about 40% of Bay Area $PM_{2.5}$ pollution comes from woodsmoke. At locations in the South Bay and North Bay, the woodsmoke contribution is over 50% on an average winter day.

How would the model ordinance work?

If adopted by a Bay Area locality, the model ordinance would prohibit the installation of a woodburning device unless it is a pellet stove or an EPA-certified woodstove. Natural gas fireplaces and inserts are not affected by the ordinance, and the BAAQMD encourages their installation as the clean alternative to woodburning stoves or fireplaces. Traditional woodburning masonry fireplaces and factory-built fireplaces, which have much higher $PM_{2.5}$ emission rates than pellet stoves and certified woodstoves, would not be allowed. These restrictions are easily enforced through the local building permit process, since the installation of a stove or fireplace already requires a permit.

The model ordinance also includes two optional provisions that would require an enforcement mechanism other than the local building department. One is a restriction on

woodburning when the BAAQMD calls a Spare the Air Tonight alert. Under this voluntary program, the BAAQMD asks Bay Area residents to refrain from burning wood on nights when particulate levels are expected to exceed the health-based standards. Adoption of this provision of the model ordinance by a community would make these voluntary restrictions mandatory in that community. The BAAQMD's current voluntary program may be changed in the future to include mandatory restrictions, but such a change would require adoption of a regulation by the District's Board of Directors. A second optional provision prohibits the burning of certain fuels, such as garbage and plastics.

What devices would be legal to install?

In a community adopting the ordinance, any fireplace or fireplace insert that burns natural gas would be permitted; many models are available from hearth product dealers. In addition, pellet stoves and EPA-certified wood stoves would be permitted. Although open masonry and factory-built woodburning fireplaces would not be permitted, EPA-certified woodburning inserts (often called "EPA fireplaces") would comply with the ordinance.

Would the ordinance affect existing fireplaces and stoves?

No. The ordinance applies to new installations. However, it would apply to the conversion of an existing gas-burning fireplace to burn wood. Such a conversion would be treated as a new installation under the ordinance.

Would the ordinance impose any costs on consumers?

The ordinance would impose minimal costs since it applies only to new installations. Builders would probably install natural gas fireplaces and would pass on the minor costs of additional gas plumbing to new home buyers.

What other areas have restrictions like these?

Petaluma has had an ordinance like the model ordinance since 1992. Los Gatos imposes similar restrictions. Outside the Bay Area, many areas of California – including Placer County, Shasta County, and most of the counties in the Central Valley – prohibit the installation of any woodstove not certified by EPA (EPA only prohibits sale of non-certified woodstoves). In at least two areas – San Luis Obispo County and northern Sonoma County – installation of conventional fireplaces is also prohibited. Outside California, localities in Arizona, Nevada, Oregon, and Washington impose various restrictions.

Where can I get more information about the model ordinance?

Contact the BAAQMD public information office at (415) 749-4900.

PARTICULATE MATTER (PM_{10}) EMISSION REDUCTIONS FROM MODEL ORDINANCE

Residential Woodburning Fireplaces in New Homes

	Emissions in tons per winter season		
Number of Fireplaces	1 Winter	5 Winters	10 Winters
50	0.15 tons	0.75 ton	1.5 tons
100	0.3 tons	1.5 tons	3 tons
500	1.5 tons	7.5 tons	15 tons
1,000	3.0 tons	15 tons	30 tons
2,000	6 tons	30 tons	60 tons
5,000	15 tons	75 tons	150 tons
10,000	30 tons	150 tons	300 tons

<u>Assumptions:</u>

1. PM_{10} Emission Factors:
   In the Bay Area, the typical fireplace emits 31.8 lbs/ton of wood burned.
2. A typical residence burns 0.28 cords of wood/winter season. A cord of wood weighs approximately 2 tons.
3. It is assumed that 90% of new homes contain woodburning fireplaces.
4. In the Bay Area, an average of 38% of the homes containing fireplaces burn wood during the winter season.
5. Negligible PM_{10} emissions occur from burning natural gas.

Bay Area 1996 winter season PM_{10} emissions from fireplaces = 5,000 tons per winter

(1999 Emission Factors)

Fact Sheet

Comparing Particulate Matter (PM) Emissions From Fireplaces, Woodstoves, and Gas-Burning Fireplaces

To compare particulate emissions from fireplaces, woodstoves, and gas-burning fireplaces, it is important to know how they are typically used in the Bay Area. Very few homes in the Bay Area rely solely on wood as a heating fuel. According to the 1990 census, 41,696 Bay Area units, or less than 2% of all units, rely on wood for heat. However, given an estimated 300,000 woodstoves in the Bay Area, most woodstove use in the Bay Area is for recreation and auxiliary heating. Though the District has no survey data on this point, it is reasonable to assume that typical woodstove use is heating a living area for an evening starting at 5:00 p.m. and ending at midnight.

Conventional fireplaces are not heaters, and, in most cases, actually rob heat from a house. They are generally used for aesthetic and recreational purposes. There are an estimated 1 million to 1.5 million fireplaces in the Bay Area. Although there is also no survey data specifically for Bay Area fireplace use, surveys elsewhere indicate that the typical fireplace fire lasts for 4 hours.

Based on the above assumptions, the table below compares emissions from fireplaces, woodstoves, pellet heaters, and gas burning fireplaces in typical Bay Area use.

Device	Avg. PM Emission Rate (grams/hr)	Length of Use	PM Emissions in Typical Evening of Use
Wood-burning fireplace	50	4 hours	200 grams
Conventional woodstove	30	7 hours	210 grams
Certified woodstove	7.5	7 hours	53 grams
Pellet heater	1	7 hours	7 grams
Gas fireplace	0.07	7 hours	0.5 grams

List of Useful Websites

For more information on the topic of wood burning and air pollution, the following web sites provide a wealth of information:

BAAQMD: http://www.baaqmd.gov/pio/woodburning/woodburning.asp?Grp=8

EPA: http://www.epa.gov/compliance/monitoring/programs/woodstoves/

San Luis Obispo County Air Pollution Control District:
http://www.slocleanair.org/programs/woodstoves.asp

San Joaquin Valley Air Pollution Control District: www.valleyair.org

DRAFT

ORDINANCE NO._____

mre
1/29/04

ORDINANCE ADDING ARTICLE 6 TO CHAPTER 9 OF THE HAYWARD MUNICIPAL CODE RELATING TO REGULATING WOOD-BURNING APPLIANCES

THE CITY COUNCIL OF THE CITY OF HAYWARD DOES ORDAIN AS FOLLOWS:

Section 1. FINDINGS AND PURPOSE. The State Air Resources Board adopted a particulate matter (PM10) Ambient Air Quality Standard (AAQS) in December, 1982, and levels for PM10 AAQS were selected pursuant to California Code of Regulations Title 17, Section 70200 to protect the health of people who are sensitive to exposure to fine particles. Research indicates that wood smoke is a significant contributor to PM10 levels that pose significant health risks. Studies have determined that medical treatment of respiratory illnesses increases when there is a higher concentration of particulate pollution in the air. The City Council of the City of Hayward desires to lessen the risk to life and property from air pollution from wood-burning appliances and finds that regulating the future installation of wood-burning appliances will significantly reduce the increase in particulate emissions. This ordinance is categorically exempt from environmental review under the California Environmental Quality Act, pursuant to Section 15308 of the CEQA Guidelines, *Actions by Regulatory Agencies for the Protection of the Environment.*

Section 2. The following provisions are hereby adopted and added to Chapter 9 of the Hayward Municipal Code as Article 6:

"ARTICLE 6

WOOD-BURNING APPLIANCES

Section 9-6.100. DEFINITIONS. For purposes of this Article, the following words and phrases shall have the meaning ascribed to them as defined by this section:

(a) "EPA" means the United States Environmental Protection Agency.

(b) "Gas fireplace" means any device designed to burn natural gas in a manner that simulates the appearance of a wood-burning fireplace.

(c) "Pellet-fueled wood heater" means any wood-burning appliance that operates exclusively on wood pellets.

(d) " Wood-burning appliance" means fireplace, wood heater, or pellet-fired wood heater or any similar device burning any solid fuel.

Section 9-6.101 LIMITATIONS. Only gas fireplaces, EPA-certified wood heaters, pellet-fueled wood heaters and fireplaces certified by the Northern Sonoma County Air Pollution District to meet the EPA's emission limit of 7.5 grams of particulate matter per hour, may be installed in new residential construction or in existing residential structures undergoing renovation or expansion where a new wood-burning appliance is proposed. Nothing in this section is intended to prohibit the repair or maintenance of any wood-burning appliance installed prior to the effective date of this Article.

Section 9-6.102 ENFORCEMENT AND REMEDIES. Any person who plans to install a wood-burning appliance must submit documentation to the City demonstrating that the appliance satisfies the requirements of this Article. Any person, firm or corporation violating any of the provisions of this Article shall be subject to the enforcement procedures provided in Chapter 1, Article 3 of this Code.

Section 9-6.103 PROHIBITED FUELS. No person shall cause or allow the burning of any of the following materials in a wood-burning appliance: garbage; plastic products; rubber products; waste petroleum products; paints or paint solvents; coal."

Section 3. SEVERABILITY AND VALIDITY. If any section, subsection, paragraph or sentence of this ordinance, or any part thereof, is for any reason found to be unconstitutional, invalid or beyond the authority of the City of Hayward by a court of competent jurisdiction, such decision shall not affect the validity or effectiveness of the remaining portions of this ordinance.

Section 4. EFFECTIVE DATE. This ordinance shall become effective thirty (30) days after adoption by the City Council.

INTRODUCED at a regular meeting of the City Council of the City of Hayward, held the

____ day of _____, 2004, by Council Member_____.

ADOPTED at a regular meeting of the City Council of the City of Hayward

held the____ day of _____, 2003, by the following votes of members of said

City Council.

AYES: COUNCIL MEMBERS:
MAYOR:

NOES: COUNCIL MEMBERS:

ABSTAIN: COUNCIL MEMBERS:

ABSENT: COUNCIL MEMBERS:

APPROVED: _____
Mayor of the City of Hayward

DATE: _____

ATTEST: _____
City Clerk of the City of Hayward

APPROVED AS TO FORM:

_____
City Attorney of the City of Hayward