

**CITY OF OAKLAND**  
**AGENDA REPORT**

FILED  
OFFICE OF THE CITY CLERK  
OAKLAND

2005 APR -7 PM 12:18

TO: Office of the City Administrator  
ATTN: Deborah Edgerly  
FROM: Community and Economic Development Agency  
DATE: April 12, 2005

RE: **AN ORDINANCE AMENDING THE OAKLAND MUNICIPAL CODE ADDING CHAPTER 8.19.010, WOOD-BURNING APPLIANCES, TO REGULATE THE INSTALLATION, REPAIR, AND OPERATION OF WOOD-BURNING APPLIANCES SUCH AS WOOD-BURNING FIREPLACES, WOOD HEATERS, PELLET HEATERS, AND WOOD-BURNING COOKING DEVICES.**

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**SUMMARY**

City staff recommends the adoption of an ordinance amending the Oakland Municipal Code to add a new section to Chapter 8 to regulate the installation, repair, and operation of wood-burning appliances including wood-burning fireplaces, wood heaters, pellet heaters, and wood-burning cooking devices, and would restrict the burning of specific fuels. Wood smoke contains fine particulates that are harmful to health. The Bay Area Air Quality Management District, (BAAQMD) has identified wood smoke as the largest remaining unregulated point source of fine particulates. Unregulated wood-burning devices emit roughly ten times more particulates than regulated devices and more than 100 times the particulates of similar gas fired devices.

Oakland is one of the few Bay Area cities that has not adopted a wood smoke ordinance. Six of the Bay Area counties and twenty-nine cities have adopted some form of regulation. Additional cities, such as Lafayette in Contra Costa County, are covered under county regulations. This amendment is needed to improve the health of Oakland residents and others who share our air basin.

The proposed regulation would:

1. Create a section titled Wood Burning Appliances.
2. Allow existing devices installed with permits to remain in use. The ordinance would not be retroactive.
3. Only allow the installation of Environmental Protection Agency (EPA)-certified wood-burning appliances.
4. Allow relocation of wood-burning appliances only if they are EPA-rated devices.
5. Allow new wood-burning fireplaces only if the EPA approves specific designs. Gas burning fireplaces would be allowed.

Item: **5**  
Public Safety Committee  
April 12, 2005

6. Allow repair but not modification to existing wood-burning fireplaces. The conversion to gas with approved appliance would be permitted.
7. Prohibit the burning of certain fuels such as treated or painted wood.
8. Prohibit operation of wood-burning appliances on declared no-burn days called by BAAQMD.
9. Encourage education on proper wood-burning techniques to reduce pollution.

## **FISCAL IMPACT**

The proposal would have no direct fiscal impacts to the City of Oakland. Currently, wood-burning appliances must be permitted and inspected by Building Services. Costs for inspection of EPA-listed devices will be captured in the usual permitting process. Enforcement of complaints related to burning of waste or prohibited fuels will be by BAAQMD. Enforcement of no-burn days would be through the normal zoning enforcement process. Fees would be cost-covering.

Staff does not anticipate any significant additional enforcement demands. Historically there have been few no-burn days called by BAAQMD in the winter. In contrast, Spare the Air days are called by BAAQMD in the summer to reduce air pollution from automobiles and other sources. In the last three years there have been zero, no-burn days called and in the recent past there have only been a few no-burn days each year. Therefore, no new staff would likely be needed to process the anticipated applications or enforce complaints.

Overall, builders may actually pay less to build houses under the proposed ordinance. Gas fireplaces and heaters cost less than EPA-compliant wood-burning devices. The ancillary parts of gas appliances, such as flues, cost much less and are less costly to install than components for wood-burning appliances. As an alternative, builders may choose not to install any fireplace at all. Custom builders installing EPA-compliant wood-burning appliances will be able to pass the costs to the client. Individuals installing wood-burning appliances would spend anywhere from a few hundred dollars to a thousand more for EPA-approved heaters.

## **BACKGROUND**

Currently, there are no regulations in Oakland regulating the installation, repair, or operation of wood-burning appliances beyond building codes regulating basic fire safety. The proposed regulations would affect the installation, relocation, or repair of heating stoves, cookstoves, and fireplaces, regulate when such devices could be operated and specifically prohibit certain fuels.

Most counties and twenty-nine cities in the Bay Area have adopted regulations that are similar to the proposed ordinance. These jurisdictions prohibit the installation of wood-burning devices unless they are EPA-listed. Many of these ordinances, including the model ordinance issued by

the BAAQMD, contain sections prohibiting the burning of certain fuels and limit burning wood on declared no-burn days. The proposed ordinance contains all of these key regulations.

Staff held two public meetings in fall of 2004 inviting residents, community organizations, and builders to attend. The attendees were generally in favor of regulating wood burning appliances. There have been no written comments received in opposition to the proposal.

## **KEY ISSUES AND IMPACTS**

### Health, safety, and welfare

The burning of wood has been identified as the largest point source (stationary source) of unregulated particulate pollution. Fine particulates are important to regulate because they have the greatest effect on health.

Fine particulates meeting the PM10 air quality standard penetrate deep into lung tissues. Current research indicates that such fine particles are not expelled efficiently and remain in the lungs causing damage and irritation. Such particles are also potential asthma triggers.

Fine particles are capable of remaining in the air for long periods of time. This is especially true during the winter months when still air and temperature inversion conditions allow toxic chemicals in wood smoke and fine particulates to remain airborne.

### Prohibited fuels

Currently, there are no specific regulations prohibiting burning certain materials. The proposed ordinance would prohibit the burning of garbage, plastic, treated wood, coal, paint, painted wood, paint solvents, glossy paper, rubber products, particle board, waste petroleum products, and salt water driftwood. Enforcement of this provision would only be possible where there is a severe, ongoing violation. Such instances are investigated by the BAAQMD.

### Seasonal patterns, existing devices, and need for education

The BAAQMD has tested air quality at different times during the year and has observed that the level of fine particulate matter peaks between Thanksgiving and New Year's. This appears to correspond to holiday celebrations during this time of year. Given that pollution has this cultural component and wood burning appliances have long useful lives, there is little likelihood that patterns will change in the short term without education.

Fireplaces, especially the typical masonry type, usually remain useable for the life of the house and are the most polluting of the various wood-burning devices. The cost to replace a gross

polluting fireplace with an EPA-rated appliance for a few fires every year is likely to be perceived as prohibitive by most homeowners. Improvement in air quality will require education about the health effects of wood smoke. Education might convince homeowners to reduce the number of wood fires, burn wood correctly to reduce pollution, install a less polluting device, or stop burning wood entirely.

### Education

Staff proposes producing and distributing a handout for anyone who applies for a building permit to install a wood burning appliance. Reaching the occasional wood burning public will be difficult. Council members from Districts Three and Four agreed to take the lead in education by using Council resources such as email lists, mailings, and noticing.

### Safety

Every year damaged fireplaces cause structure fires. In Oakland, an earthquake prone region, damage to fireplace chimneys is common. Staff would like to encourage repairs to prevent structural fires. If repairs are prohibited, as in Berkeley's ordinance, some people will elect to repair without permits or they will simply continue to use the damaged device. The proposal allows repair of fireplaces and flues to encourage safety.

### Costs to consumers

There will be a slight-to-moderate increase in costs to those installing wood-burning appliances. As proposed, all new or newly installed wood-burning appliances will need to be EPA-compliant devices. Such devices cost more than new or used unrated devices. A low end EPA-compliant heater is generally costs \$200-300 more than a non-rated device. Wood-burning fireplace inserts cost about the same as the top end free standing wood burning appliances and are generally EPA-compliant.

Heating with wood is generally more expensive than heating with any other source of fuel unless the consumer harvests their own wood. However, EPA-rated wood heaters are generally much more efficient in converting wood to heat. In the long run, replacing an old non-compliant stove with a new one generally saves fuel costs. Because new stoves burn cleaner, consumers would realize additional savings by reducing flue cleaning costs as well.

## **POLICY DESCRIPTION**

The purpose of the proposed ordinance is to decrease air pollution to improve health for residents of Oakland and other communities within our shared air basin. The ordinance will achieve this by regulating the largest point source of unregulated fine particulates. The regulation will:

- Allow only EPA-rated devices to be installed or relocated
- Prohibit burning certain fuels
- Prohibit burning on no-burn days declared by the BAAQMD
- Allow repair of existing fireplaces to make them safe protecting residents from catastrophic damage, injury, or death from fires caused by faulty fireplaces.
- Educate residents to reduce the use of wood-burning appliances and to make cleaner fires when they do.

## **SUSTAINABLE OPPORTUNITIES**

### Economic

The increased cost for those installing wood burning appliances will be balanced by a lowering of overall health costs for all residents in our shared air basin. Healthy people are economically sustainable and productive. The ordinance will not have a significant negative effect on building costs or restrict development because fireplaces are not required and gas fireplaces are cheaper to purchase and install.

### Environment

This ordinance will have a direct impact on improving the environment. The proposal has the potential to reduce pollution levels significantly. Wood can be a sustainable source of fuel but is polluting. Natural gas is not currently a sustainable source of fuel but is more efficient and produces far less pollution. True long range sustainability will rely on incorporating nonpolluting renewable sources of energy such as solar heating.

### Social Equity

As noted above, heating with wood in this area is the most expensive way to heat. All of Oakland has access to utilities, so alternatives to heating with wood exist. The ordinance allows for the retention of existing appliances and is not retroactive.

## **DISABILITY AND SENIOR CITIZEN ACCESS**

In general, staff does not anticipate that the restrictions on the installation of wood burning appliances or operation of wood burning appliances will affect senior citizen access because the regulations are not related to access issues. As discussed above, the ordinance will not be retroactive so will it not impact senior citizens who currently heat with wood and for whom conversion to alternative sources of heat might be expensive. Activities permitted by the ordinance will be subject to all applicable accessibility standards under Title 24 and the

Americans with Disabilities Act and Older Americans Act. Such standards will be addressed by building inspection services during plan check and building inspection by Building Services.

### **RECOMMENDATIONS AND RATIONALE**

Staff recommends that the City Council approve the attached ordinance regulating wood-burning appliances. The requested controls are needed to protect health of all citizens from the long and short term impacts of toxics and fine particulates found in wood smoke

The costs of these potential health problems are borne by all residents. Therefore, it is reasonable to expect that those individuals that choose to burn wood shoulder the extra costs of installing cleaner equipment and the responsibility of burning responsibly.

### **ACTION REQUESTED OF THE CITY COUNCIL**

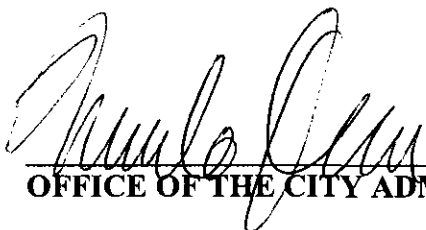
Staff recommends that the City Council approve the attached ordinance regulating wood burning appliances.

Respectfully submitted,

  
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**CLAUDIA CAPPIO**  
Director of Development

Prepared by:  
Chris Candell, Planner II  
Planning and Zoning

APPROVED AND FORWARDED TO THE  
PUBLIC SAFETY COMMITTEE:

  
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**OFFICE OF THE CITY ADMINISTRATOR**

Attachments:  
a. Draft Ordinance

Item: **5**  
Public Safety Committee  
April 12, 2005