

CITY OF OAKLAND
AGENDA REPORT

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.**

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, 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 woodsmoke 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 woodburning fireplaces only if the EPA approves specific designs. Gas burning fireplaces would be allowed.

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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

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 for enforcement would be cost covering though the normal enforcement process, which is well established.

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-complaint wood-burning devices. The ancillary parts of gas appliances, such as the flue, cost much less and are less costly to install than components for woodburning 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. All these jurisdictions appliances 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 affect 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 in allow toxic chemicals in wood smoke and fine particulates to remain airborne and concentrate.

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 not to people who heat with wood continuously through the heating season. 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 woods smoke. Education might convince homeowners to reduce the number of wood fires, burn right 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 district 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 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,



CLAUDIA CAPRIO
Director of Development

Prepared by:
Chris Candell, Planner II
Planning and Zoning

APPROVED AND FORWARDED TO THE
PUBLIC SAFETY COMMITTEE:



OFFICE OF THE CITY ADMINISTRATOR

Attachments:

- a. Draft Ordinance

Item: _____
Public Safety Committee
April 12, 2005

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CITY ATTORNEY

INTRODUCED BY COUNCILMEMBER _____

ORDINANCE No. _____ C.M.S.

AN ORDINANCE AMENDING THE OAKLAND MUNICIPAL CODE ADDING CHAPTER 8.19.010, WOOD BURNING APPLICANCES, 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.

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

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

WHEREAS, the City of Oakland desires to lessen the risk to life and property from air pollution from woodburning appliances; and

WHEREAS, the City of Oakland finds that the proposed regulation will significantly reduce the levels of fine particulates from woodburning appliances; and

WHEREAS, the City of Oakland recognizes that education is an important part of the reduction of fine particulates from existing woodburning appliances which may remain in operation for many years; and

WHEREAS, the City of Oakland the proposed regulation will require educational materials be distributed to those applying for permits to install wood burning appliances and recommends that anyone burning wood in the City of Oakland avail themselves of the abundant information provided by the Bay Area Air Quality Management District (BAAQMD) and additional material provided by their council representative; and

WHEREAS, the City Council subsequently conducted a duly noticed public hearing on April 12, 2005;

Now, therefore, the Council of the City of Oakland does ordain as follows:

SECTION 1. The City Council finds and determines the forgoing recitals to be true and correct and hereby makes them a part of this ordinance.

SECTION 2. The City Council finds and determines, that the adoption of this Ordinance is exempt from CEQA under Sections 15061(b)(3) of the State CEQA Guidelines and authorizes the filing of a Notice of Exemption with the Alameda County Clerk.

SECTION 3. Section 8.19.010 Wood-Burning Appliances and Devices is added to the Oakland Building Code to read as follows:

Section 8.19.010 Wood-Burning Appliances

A. Purpose

The purpose of this section is to reduce the health risks from airborne particulates and other pollutants deriving from the products of combustion of wood and similar cellulose and lignin-based substances under the climatic conditions applicable to Oakland and the San Francisco Bay Area air basin.

B. Definitions

For purposes of this section the following terms shall be defined as set forth below:

1. **EPA** is the United States Environmental Protection Agency.
2. **EPA Certified** is any wood-burning appliance or device that is listed and labeled “EPA Certified” in accordance with the standards in Title 40, Part 60, Subpart AAA, of the Code of Federal Regulations in effect at the time the appliance is installed.
3. **Wood** is the tough, fibrous cellular substance constituting the xylem of trees and shrubs consisting largely of cellulose and lignin.
4. **Wood-burning** is an enclosed appliance means that burns wood or any wood-based solid fuel, including but not limited to wood pellets and charcoal.
5. **Wood Heater** is an enclosed, wood burning appliance capable and intended for space heating or domestic water heating that meets the criteria in Title 40, Part 60, Subpart AAA, Section 60.531 of the Code of Federal Regulations amended October 17, 2000.
6. **Pellet heater** is a wood heater that burns pellet fuel exclusively and is either EPA-certified or exempted under EPA requirements set forth in Part 60, Title 40, Subpart AAA, of the Code of Federal Regulations, February 26, 1988.
7. **Wood-Burning Cooking Stove** is any wood-burning device that is designed or primarily used for cooking or baking that meets the criteria Title 40, Part 60, Subsection .531 of the Code of Federal Regulations.
8. **Wood-burning Fireplace** is in site-build masonry construction or factory-built, either open or with doors in front of the combustion chamber, which is neither a Wood Heater as defined in Title 40, Part 60, Subsection .531 of the Code of Federal Regulations nor a Wood Burning Cooking Stove as defined herein.

C. Applicability

1. This ordinance shall apply within the limits of the City of Oakland.

2. All wood-burning appliances installed in new residential units or wood-burning appliances being added to or replacing wood-burning appliances in existing residential units shall comply with this ordinance.
3. All wood burning appliances installed in new commercial occupancies or wood-burning appliances being added to or replacing wood-burning appliances in existing commercial occupancies shall comply with this ordinance.
4. Exemptions: 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 pellet-fueled wood heater is not subject to this ordinance.

Historic buildings are exempt from the requirements of this ordinance. "Historical buildings" means those buildings designated as historic resources in the General Plan, buildings on any other City-adopted listing of historic resources, buildings which have been identified after appropriate analysis as being eligible for the State or National Register of Historic Places, or buildings recognized by the Landmark Preservation Board.

D. Installations

All new, replacement, reconstructed, and relocated Wood-Burning installations shall be EPA certified, whenever such certification exists.

E. Repairs

Existing masonry fireplaces may be repaired in accordance with the applicable codes in effect at the time of the proposed repair and shall be limited to resurfacing the combustion chamber, replacement of dampers, installation or replacement of spark arrestors, and repair to flue pipe or chamber. Repair of the fireplace that may alter its drafting capabilities, including but limited to reduction of the overall length of flue, is not permitted. Repairs to the combustion chamber must, in any case, be in accordance with Title 40, Part 60, Subsection .531 of the Code of Federal Regulations.

F. Mechanical Permits

As a condition for issuing a mechanical permit for a Wood-Burning installation or a Wood-Burning Fireplace repair, the applicant shall provide approved documentation that the appliance, device, or method of repair conforms to the requirements of this section.

G. Fuels

Fuel used in Wood-Burning installations shall be limited to dry and seasoned wood and wood based products manufactured for such use. Garbage, plastic, treated wood, similarly adulterated wood and wood based products (pressure-treated, painted, stained, creosoted, etc.), coal, paint solvents, glossy paper, rubber products, particle board, waste petroleum products, and salt water drift wood shall be not be used as fuel.

H. Airborne Particulates

Wood-Burning installations shall not be used at any time the San Francisco Bay Area Air Quality District (BAAQMD) has declared a moratorium on burning or a no-burn day with the exception of an existing woodburning appliance that is the only source of heat.

I. Education

All citizens burning wood are encouraged to learn how to minimize air pollution. Educational materials will be available in City Council offices and through the BAAQMD offices. Upon the application for a building permit for installing a woodburning appliance, Building Services shall provide an informational handout outlining ways minimize pollution from woodburning appliances.

J. Enforcement

The City Administrator, or his or her designated representative, is empowered to enforce the provisions of this section. The provisions as set forth in Chapter 15.08 and Chapter 1.28 of this code shall apply to any such abatement. Fees, charges, penalties, and interest assessed for any abatement action performed by or on behalf of the City including shall be recovered by the City in accordance with the provisions set forth in Chapter 15.08 of this code.

SECTION 7. If any section, subsection, phrase, word or provision of this ordinance or the application thereof to any person or circumstances is held invalid, the remainder of this ordinance and the application of such provisions to other persons or circumstances shall not be affected thereby.

IN COUNCIL, OAKLAND, CALIFORNIA, , 2005

PASSED BY THE FOLLOWING VOTE:

AYES-Brooks, Brunner, Chang, Nadel, Quan, Reid, and President De La Fuente

NOES-

ABSENT-

ABSTENTION-

ATTEST: _____
CEDA FLOYD
City Clerk and Clerk of the Council
of the City of Oakland, California