



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

Public Hearing on Proposed Amendments to Regulation 6, Rule 3: Wood Burning Devices

October 21, 2015



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Air Quality Specialist

Regulation 6, Rule 3 Proposed Amendments

- Wood Smoke in the Bay Area
- Rule Amendment Process
- Wood Smoke Reduction Strategies
- Proposed Amendments & Projected Emission Reductions
- Heating Fuel Costs and Emissions
- CEQA & Socioeconomic Analysis
- Summary of Public Comments
- Recommendation



Regulation 6, Rule 3

Health Impacts of Wood Smoke

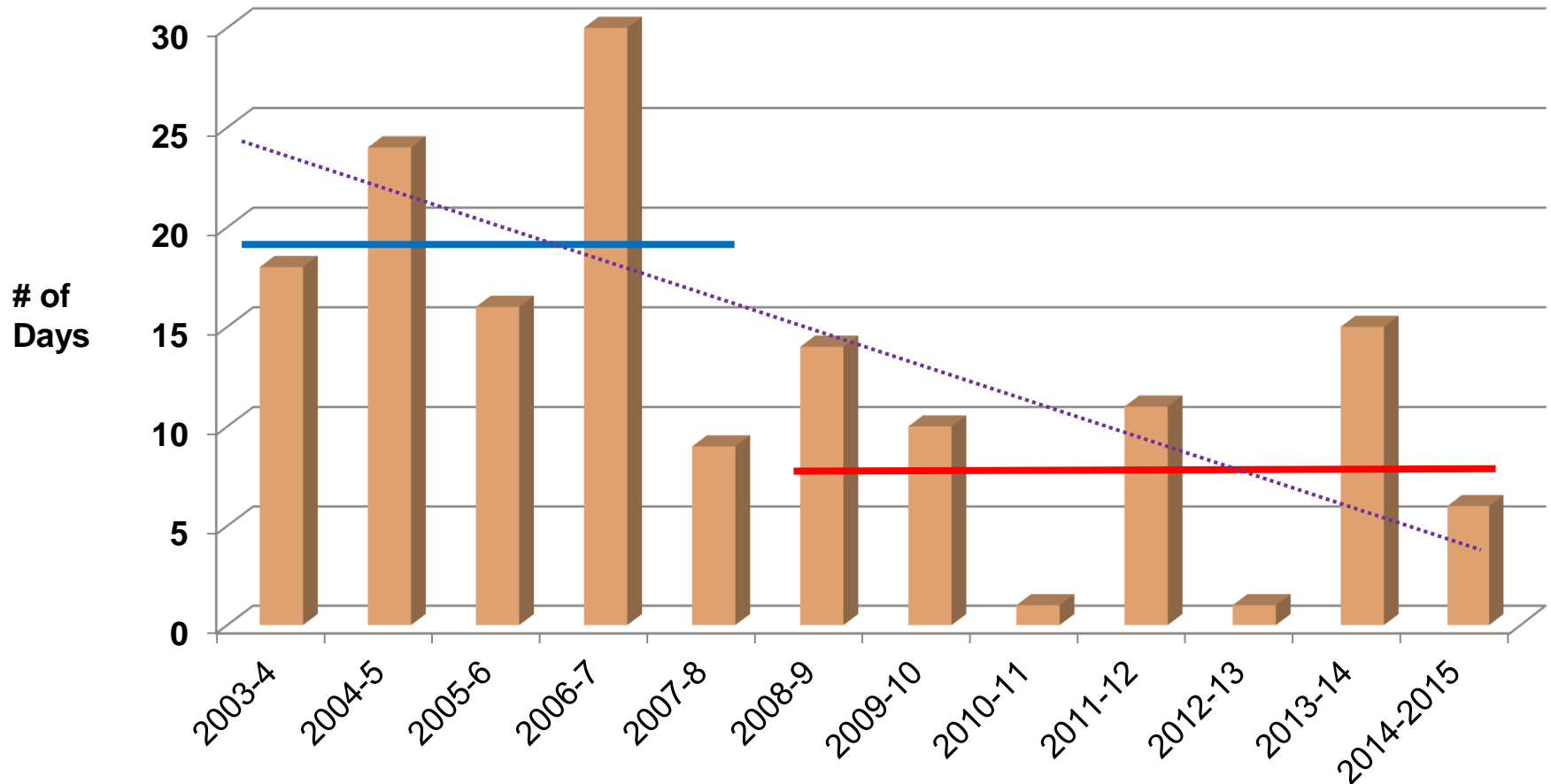


Wood burning generates fine particulate matter ($PM_{2.5}$) and carcinogenic substances that make the air harmful to breathe

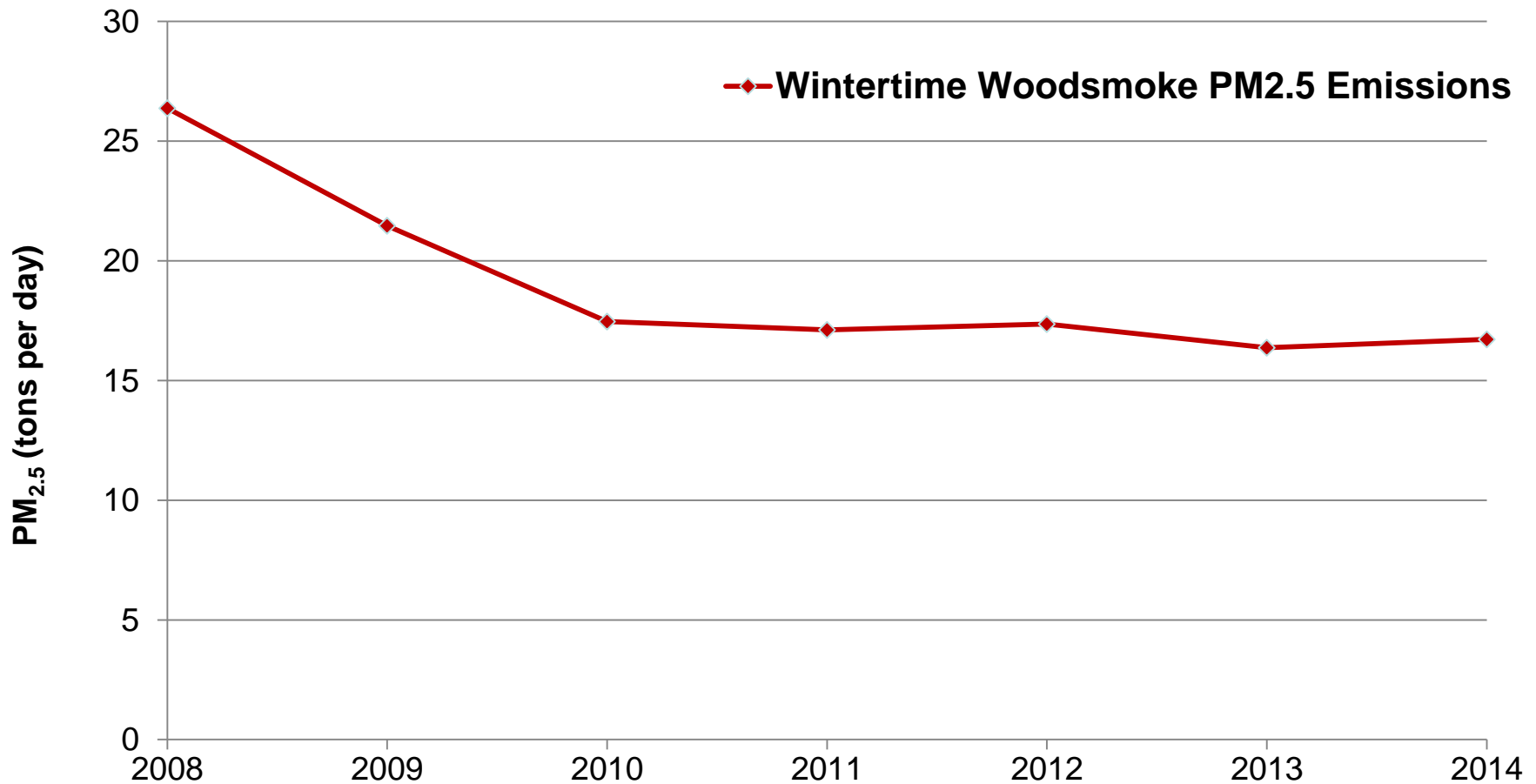
- Asthma
- Reduced Lung Function
- Heart Attacks
- Chronic Bronchitis
- Cancer
- Premature Deaths

Regulation 6, Rule 3 Bay Area PM_{2.5} Exceedances

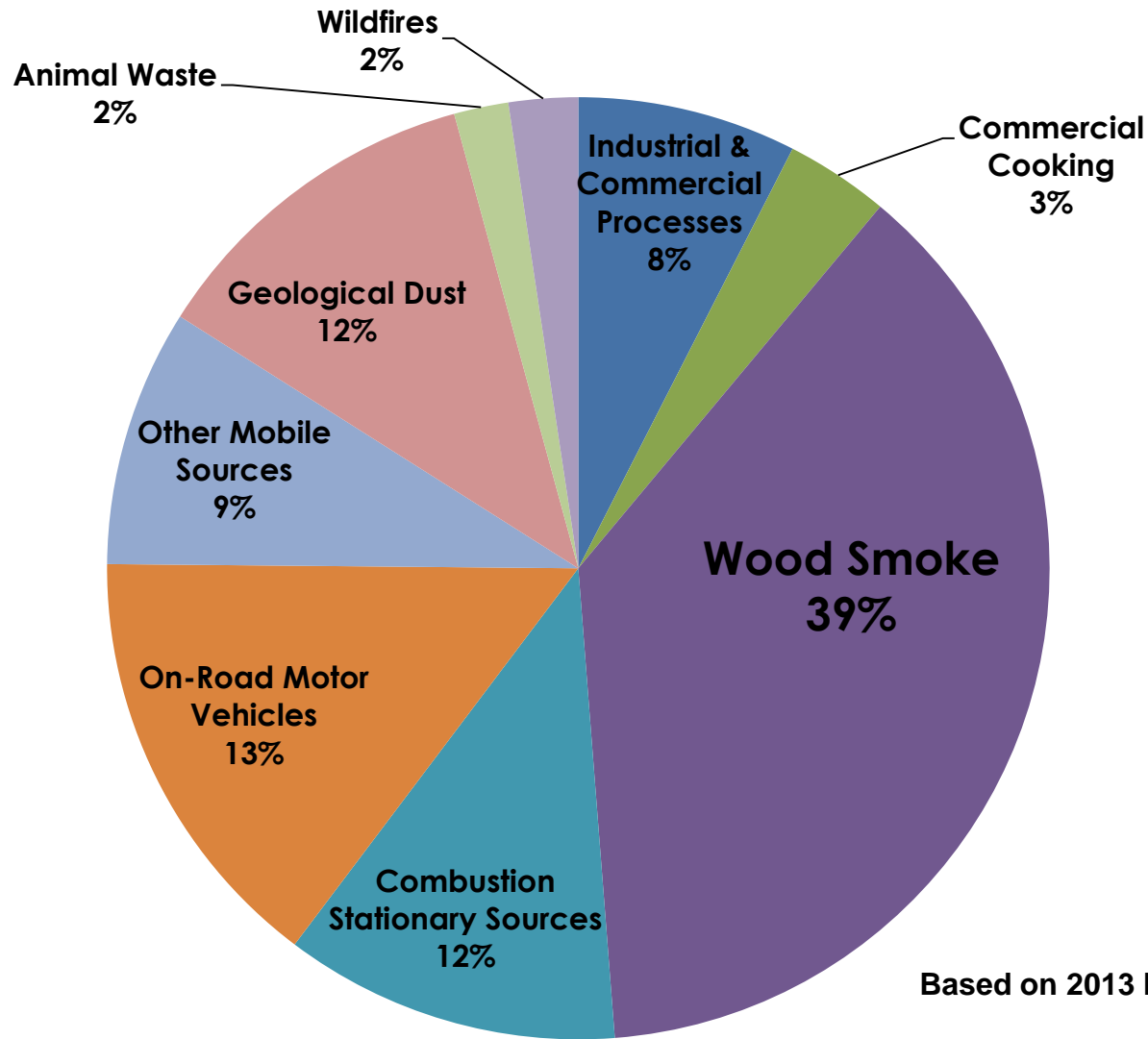
Number of Federal PM_{2.5} NAAQS Exceedance



Regulation 6, Rule 3 PM_{2.5} Emissions from Wood Smoke



Regulation 6, Rule 3 Winter PM_{2.5} Sources in the Bay Area



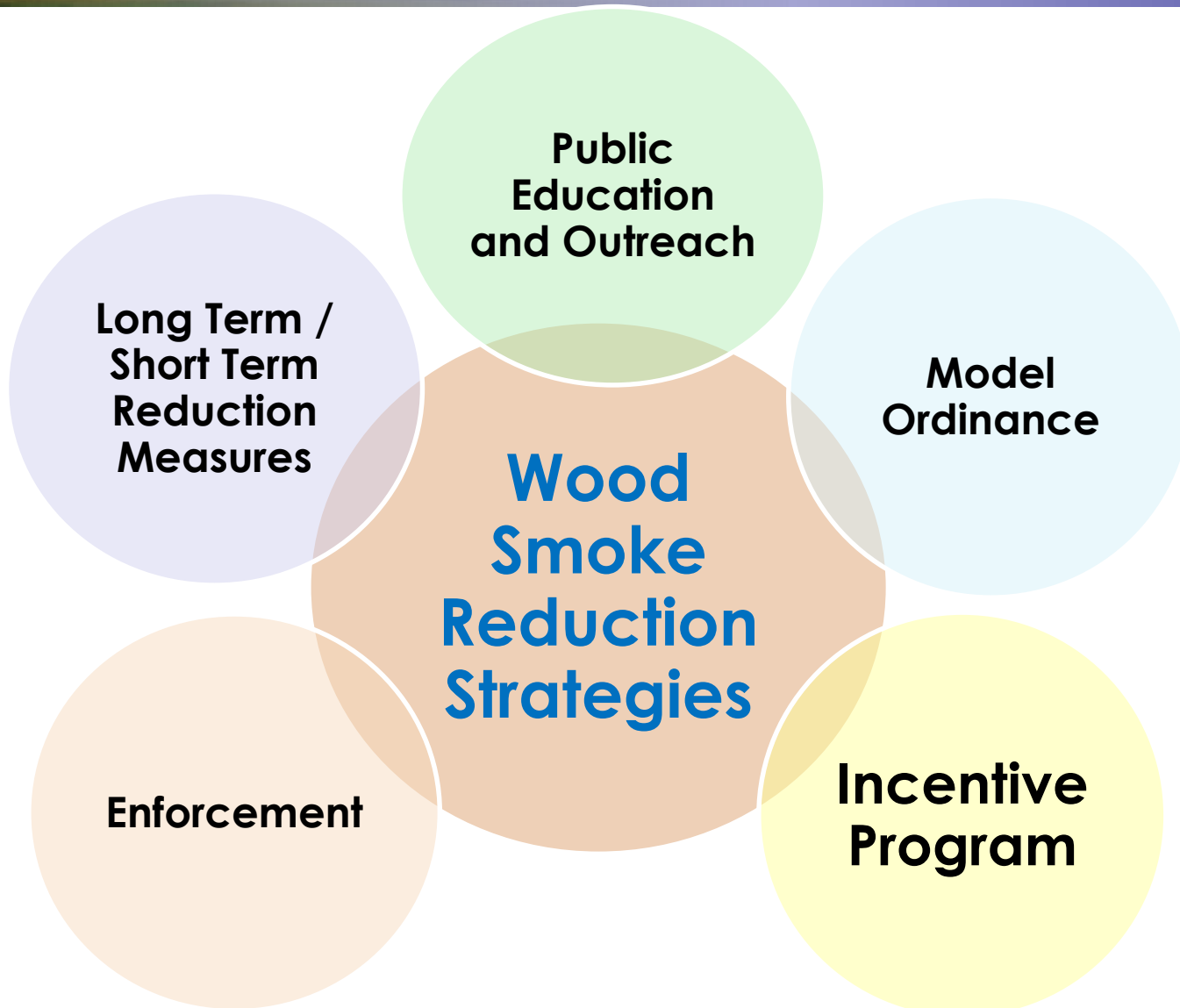
Based on 2013 Emissions Inventory



Regulation 6, Rule 3 Rule Amendment Process

- **Outreach to the Public and Interested Stakeholders**
- **9 Public Workshops in March and April**
- **2-Week Interim Public Comment Period in August**
- **30-Day Public Comment Period (Sept. 18th – Oct. 19th)**
 - Draft Rule
 - Staff Report
 - CEQA Report of Negative Declaration
 - Socioeconomic Analysis Report

Regulation 6, Rule 3 Wood Smoke Reduction Strategies



Regulation 6, Rule 3 Wood Smoke Reduction Strategy

(NO ACTION TODAY)

District Incentive Program

- **\$3 Million Program Funding**

Device Type Allocation

- Electric Heat Pump
- Natural Gas/ Propane Device
- No incentives for wood burning devices

Enhanced Funding Allocation

- Low-Income Household (full funding)
- Exempt Household
- High Wood Smoke Impacted Area





Regulation 6, Rule 3 Narrowing Exemptions

Sole Source of Heat

- Households with no alternate form of heat (i.e. no permanently-installed gas-fueled or electric heaters)
- Must be an EPA certified device & registered with Air District
- Emissions reduced : 260 tons per year (tpy)

Non-functional, Permanently-Installed Heater

- Temporary 30-day exemption
- Prompt repairs required

Loss of Natural Gas and/or Electric Power

- Natural disasters or utility service maintenance activities



Regulation 6, Rule 3 Strengthening Standards

New EPA Emission Standards for Wood Heaters

- Emission standards apply to wood heater manufacturers and retailers

Visible Emissions Limitation

- Standard consistent with Regulation 6, Rule 1: General Requirements for Sources of Particulate Matter

New Building Construction

- No solid fuel or wood-burning devices
- Emissions reduced: 44 tpy



Regulation 6, Rule 3 Strengthening Standards Cont'd

Real Estate and Rental Disclosures

- Disclosure documents to disclose health hazards of PM_{2.5}

Fireplace or Chimney Remodel

- A remodel costing > \$15,000 and requires a local building permit
- Requires a replacement to an EPA certified, gas-fueled or electric heating device

Rental Properties in Natural Gas Service Areas

- Requires installation of an alternate form of heat that does not burn wood
- Emissions reduced: 17 tpy

Regulation 6, Rule 3 Administrative Requirement

Registration Program

- Requires all claimants of Sole Source of Heat exemption to register EPA certified wood heater
- 5-year registration renewal



Regulation 6, Rule 3

Proposed Effective Dates

Proposed Amendment	Proposed Effective Date
Exemption - Sole Source of Heat	Nov. 1, 2016
Exemption - Non-functional, Permanently Installed Heater	Nov. 1, 2015
Exemption - Loss of Natural Gas and/or Electric Power	Nov. 1, 2015
New EPA Emission Standards for Wood Heaters	2015 & 2020 (per NSPS requirements)
Visible Emissions Limitation	Nov. 1, 2015
Real Estate and Rental Disclosure	June 1, 2016
Fireplace or Chimney Remodel	Nov. 1, 2016
New Building Construction	Nov. 1, 2016
Rental Properties in Natural Gas Service Areas	Nov. 1, 2018



Regulation 6, Rule 3 Estimated PM_{2.5} Emission Reductions

Projected PM_{2.5} emission reductions with rule amendments:

~321 tpy

(November – February)

Projected PM_{2.5} emission reductions per day:

~15 tpd

(~21 Winter Spare the Air Alerts)

Regulation 6, Rule 3

Heating Fuel Costs and Emissions

	NON-CERTIFIED WOOD BURNING DEVICES		EPA-CERTIFIED WOOD HEATERS		GAS-FUELED HEATERS		ELECTRIC HEATERS	
Type of Appliance	Fireplace	Uncertified Stove/Insert	Certified Stove/Insert	Pellet Stove/Insert	Gas Furnace	Propane Heater	Baseboard Heater/ Room Heater	Electric Heat Pump
Heat Efficiency	10%	50%	70%	78%	78%	78%	100%	300%
Cost to Heat	\$6504/yr	\$1300/yr	\$929/yr	\$777/yr	\$585/yr	\$1404/yr	\$2190/yr	\$748/yr
	\$542/mo	\$108/mo	\$77/mo	\$64/mo	\$48/mo	\$117/mo	\$182/mo	\$62/mo
PM _{2.5} Emissions	300 lbs/yr	60 lbs/yr	7 lbs/yr	5 lbs/yr	0.2 lbs/yr		0.5 lbs/yr	



Regulation 6, Rule 3 CEQA and Socioeconomic Analysis

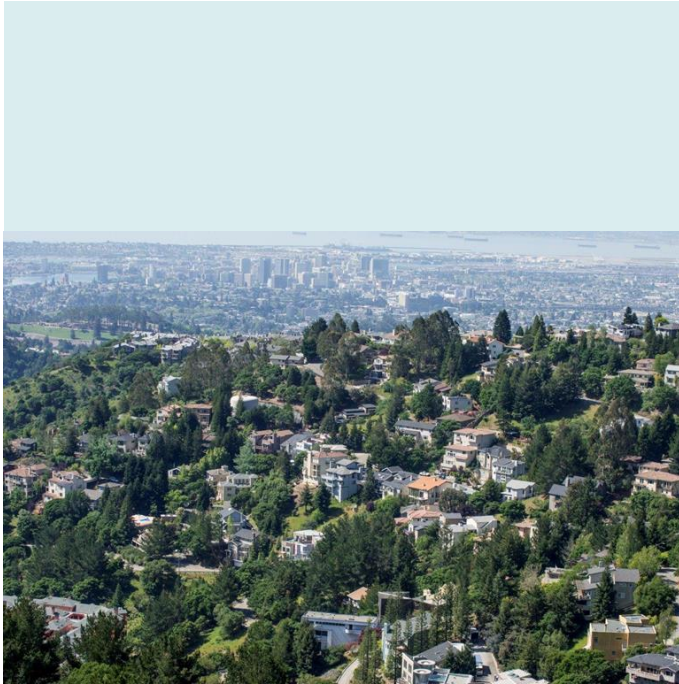
California Environmental Quality Act (CEQA) analysis

- Report by Environmental Audit, Inc.
- Finding of no adverse environmental impacts

Socioeconomic analysis

- Report by Bay Area Economics
- Finding of no significant economic impacts on a household, landlord or renter
- Estimated 20% reduction in wood burning may cause a significant economic burden to small businesses selling firewood

Regulation 6, Rule 3 Summary of Public Comments



- Sole Source of Heat Exemption
- New Building Construction
- Ban wood burning
- Wood is a free, renewable fuel
- Rural areas / large parcels of land
- Economic hardships



Regulation 6, Rule 3 Recommendation

- Adopt proposed amendments to Regulation 6, Rule 3: Wood Burning Devices
- Approve the CEQA Negative Declaration for the proposed amendments
- Within 5 years, evaluate the effectiveness of the District's wood smoke reduction strategy and consider a ban on wood burning during Winter Spare the Air days