

Rule 4901 Wood Burning Fireplaces and Wood Burning Heaters

July 31, 2014
webcast@valleyair.org



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Purpose of Tonight's Meeting

- Continue the public rule development process for draft amendments to the District's wood-burning strategy:
 - Share draft amendments and request public feedback and recommendations
 - All changes to wood-burning strategy will be taken through a public process with opportunities for residents to provide input



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Meeting Overview

- District Emission Reduction Strategy
- Importance of Rule 4901
- Comprehensive Strategy for Residential Wood Burning
- Draft Amendments to Residential Wood Burning Program
- Clarifications to rule requirements
- Benefits
- Draft amendments to Burn Cleaner incentive program
- Next steps
- Open Discussion



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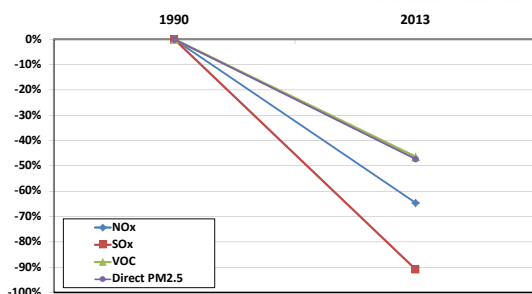
District Emission Reduction Strategy

- Toughest local air rules in the nation
 - Since 1992, numerous attainment plans and over 500 rules – billions of dollars invested by Valley businesses
 - NOx and VOC from stationary sources reduced by 80%
- Strong incentive program for expediting emission reductions
- ARB has also adopted stringent mobile source regulations

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Valley Emissions Reductions 1990-2013



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Valley PM2.5 Levels Decreasing

- 1990 - 2013, Valley counties had seen significant reductions in PM2.5 design values over last decade:
 - San Joaquin: -36%
 - Stanislaus: -36%
 - Merced: -42%
 - Fresno: -39%
 - Kings: -14%
 - Tulare: -55%
 - Kern: -35%

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Importance of Rule 4901

- Key component of Valley's efforts to attain federal particulate matter standards
 - Valley-wide "No Burn" day reduces 16 tons of emissions
 - Made a commitment to consider strengthening Rule 4901 in District's *2012 PM2.5 Plan*
- One of the most cost effective and health-protective District rules
 - Reduces emissions when and where most needed
 - Priority under District's Health-Risk Reduction Strategy

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Importance of Rule 4901 (cont'd)

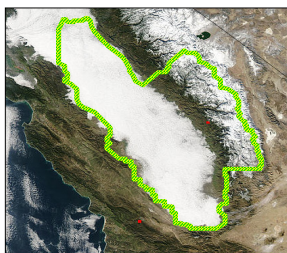
- Valley cannot attain federal PM2.5 standard without additional emissions reductions from wood burning
 - Largest source of winter directly emitted PM2.5
- Lowering curtailment level minimizes PM2.5 emissions buildup during multi-day periods of stagnation

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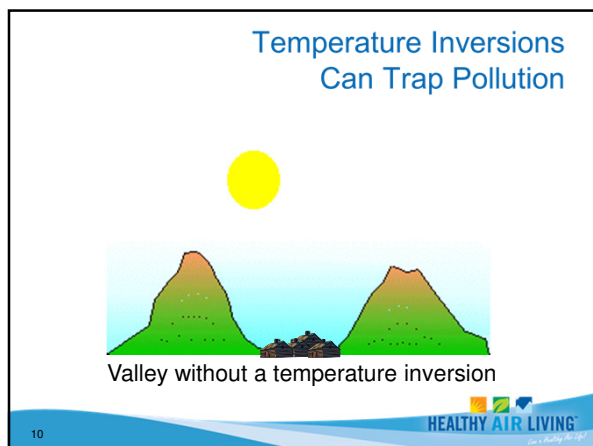
Why Does Valley Experience High PM2.5 during Winter?

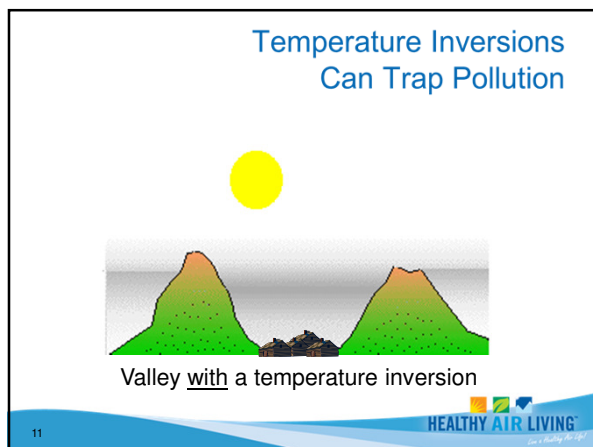
- Winter temperature inversions prevent pollutant dispersion
 - Causes PM2.5 concentrations to rise
 - Longer inversion periods combined with wood-burning and other emissions result in higher PM2.5

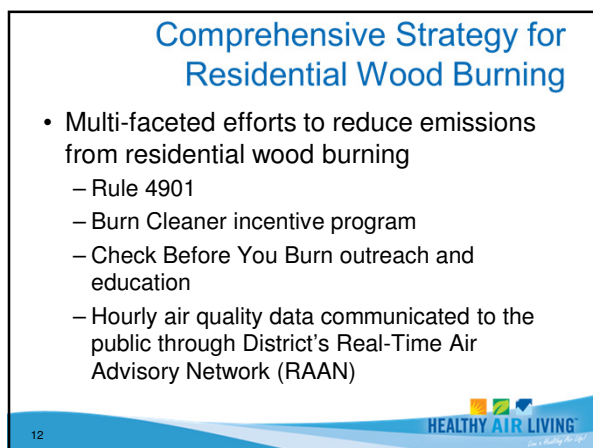


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Current Strategy - Rule 4901

- Limits emissions from residential wood burning
 - “No Burn” days based on air quality
 - Current threshold $30 \mu\text{g}/\text{m}^3$
 - Restricts the sale and transfer of wood burning heaters
 - Establishes a list of prohibited fuel types
 - Limits the installation of wood burning heaters and wood burning fireplaces in new residential developments

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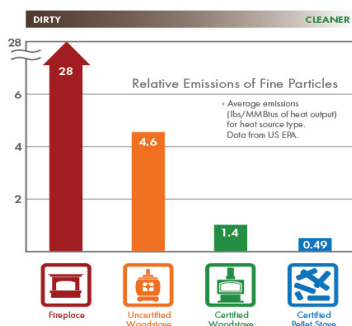

Current Strategy – “Burn Cleaner” Incentive Program

- District runs highly successful incentive program to encourage upgrade to cleaner wood burning heaters or gas heaters
- Over 30 hearth retailers throughout Valley are partnered with the District
- To date, District has helped fund the replacement of nearly 4,000 wood burning heaters
- Clean wood burning heaters reduce emissions even when burning is allowed

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Clean Heaters Reduce Emissions



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Current Strategy – Public Outreach and Education

- Multi-lingual outreach campaign
- “Check Before You Burn” Program
- Communication of burn status and air quality
 - Social media
 - Media partners
 - 1-800-SMOG INFO
 - District website: <http://www.valleyair.org/airinfo/cbyb.htm>
 - Hourly air quality data communicated to the public through District’s Real-Time Air Advisory Network (RAAN) program
- 2013/2014 Wood Burning Season
 - 51 Media interviews about extreme weather and wood burning
 - Hundreds of public calls and emails



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2014 Public Opinion Survey

- District-funded 3rd party survey of Valley residential wood burning habits. Results:
 - 32% reported having a wood-burning heater or fireplace
 - 80% aware of Check Before You Burn program
 - 78% have reduced wood-burning activity
 - 17% of those surveyed knew about the District’s Burn Cleaner incentive program
 - Motivation to upgrade to a cleaner wood burning or gas fired heater:
 - 29% if it allowed them to burn on certain “No Burn” days
 - 24% up to a 50% discount on the new unit



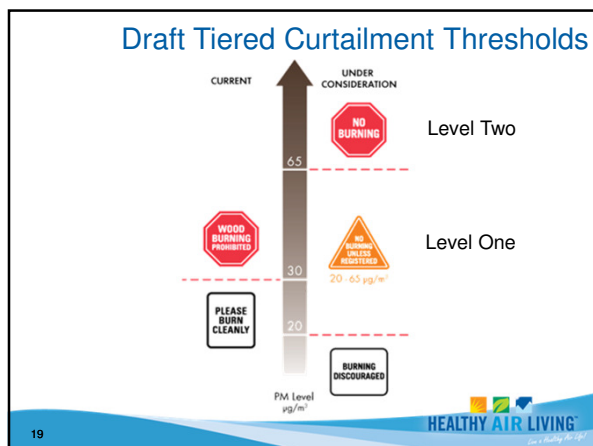
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Draft Tiered Episodic Wood Burning Curtailment Program

- Tiered Episodic Wood Burning Curtailments
 - Reduce wood-burning emissions during stagnation episodes beyond the “No Burn” days in existing rule
 - Encourage transition to clean wood burning heaters by allowing their use during new level
- Clean wood burning heaters reduce emissions even when burning is allowed
- Registration program



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Draft Level One Episodic Wood Burning Curtailments

- When PM_{2.5} concentrations forecast to potentially exceed 20 $\mu\text{g}/\text{m}^3$ but is not likely to exceed 65 $\mu\text{g}/\text{m}^3$
- Wood burning heaters registered with the District may be operated
- All other wood burning heaters and all wood burning fireplaces are prohibited from use
- Slows or even stops the buildup of PM_{2.5} concentrations

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Draft Level Two Episodic Wood Burning Curtailments

- When PM_{2.5} concentrations are forecast to be greater than 65 $\mu\text{g}/\text{m}^3$ or when PM₁₀ concentrations are forecast to equal or exceed 135 $\mu\text{g}/\text{m}^3$
- All residential wood burning is prohibited
- PM_{2.5} concentrations exceed the federal Environmental Protection Agency's (EPA) 1997 PM_{2.5} standards

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Projected No Burn Days*

County	Current Average No Burn Days (≥30 µg/m³)	Level 1 (20 – 65 µg/m³) 	Level 2 (above 65 µg/m³) 	TOTAL NO BURN Days for Non- Registered W.B.Heaters (L1 + L2)
San Joaquin	24	53	0	53
Stanislaus	36	70	2	72
Merced	19	55	0	55
Madera	29	66	1	67
Fresno	49	79	6	85
Kings	39	64	6	70
Tulare	36	65	4	69
Kern	44	73	6	79

* Projected No Burn days based on the 2009-10, 2010-11, 2011-12, 2012-13, and 2013-14 wood burning seasons

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Draft Wood Burning Heater Registration Concept

- Voluntary program
- Ensures wood burning heater owners understand the tiered episodic wood burning curtailment program and Rule 4901 requirements
- Ensure wood burning heaters are operated and maintained as intended by the manufacturer
- Registrations can be disqualified if the wood burning heater is operated in violation of District rules
- District has authority to inspect registered wood burning heaters to verify compliance with District rules

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Draft Wood Burning Heater Registration Concept (cont'd)

- Wood burning heaters eligible to register
 - EPA Phase II Certified, or has a more stringent certification as currently enforced under the federal New Source Performance Standards (NSPS) at the time of purchase or installation, or
 - A pellet-fueled wood burning heater that is exempt from EPA certification pursuant to requirements in the NSPS at the time of purchase or installation

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Is Your Wood Burning Heater Eligible?

- District resources available:
www.valleyair.org/rule4901/
 - Links to EPA lists of certified and exempt wood burning heaters
 - Link to EPA Proposed NSPS
 - Rule language
 - Additional educational materials
- Contact the person/business who sold/installed the heater in your home

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Draft Wood Burning Heater Registration Concept (cont'd)

- Registration Process
 - Submit registration application to District with supplemental documentation
 - Verification that wood burning heater qualifies for registration
 - Verification that wood burning heater is in good working condition and is appropriately cleaned (if wood burning heater is older than one year)
 - \$12.50 registration fee per wood burning heater
 - AFTER District has verified and approved the application a registration will be issued to the applicant (one per wood burning heater)
- Operate wood burning heater in compliance with rule requirements
 - Comply with tiered program
 - Operate with no smoke
 - Do not burn prohibited fuels

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Draft Wood Burning Heater Registration Concept (cont'd)

- Interim Registration (2014/2015 Wood Burning Season)
 - Simplified registration from
 - No fee
 - No supplemental documentation
 - Registration issued immediately
 - Valid until end of 2014/2015 season only
 - Must operate wood burning heater in compliance with rule requirements
- Will need to go through full registration program to participate in program after 2014/2015 wood burning season

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Draft Wood Burning Heater Registration Concept (cont'd)

- Registration Renewals
 - Enables the District to verify that wood burning heater is maintained and cleaned so it operates as cleanly as intended by the manufacturer
 - Registration is valid for up to 3 wood burning seasons
 - Submit renewal application with verification of inspection and renewal fee of \$12.50

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New Rule 3901 (Fees for Registration of Wood Burning Heaters)

- Associated with Rule 4901
- Establishes fee structure
- \$12.50 for registration and renewals
- Recovers a small portion of the District incurred administrative costs
- Commits the District to provide individuals with an invoice for the renewal fee 60 days before the registration expires

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Disqualification of Registration

- Any registration can be disqualified if the District finds the wood burning heater is operated in violation of the requirements of the rule
 - Tiered curtailments
 - Burning unauthorized fuels such as trash
- Wood burning heater is not qualified then registration is invalid

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Draft District Registered Wood Burning Heater Professional Concept

- Registration of qualified individuals to perform inspections of wood burning heaters
 - Free registration program
 - List maintained on web page
 - Registration must be renewed every twelve months

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Draft District Registered Wood Burning Heater Professional Concept (cont'd)

- Authority to issue two types of verifications to the District
 - Wood burning heater qualifies for registration
 - Wood burning heater has been inspected and is in proper working order and appropriately cleaned

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Draft District Registered Wood Burning Heater Professional Concept (cont'd)

- Certifications that qualify to register with District
 - Fireplace Investigation Research and Education (FIRE) certified inspector
 - Chimney Safety Institute of America (CSIA) certification
 - National Fireplace Institute (NFI) certification
 - Others individuals/businesses as determined qualified by the District

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Proposed Clarifications to Rule 4901

- General language clean up to remove expired or redundant language
- Clarifications to definitions and applicability throughout the rule
- Clarification to sale and transfer of wood burning heaters
- Remove "Phase II Certified" language from rule language
 - New NSPS from EPA (link available at www.valleyair.org/rule4901/)

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Proposed Updates to Density Requirements

- Current language provides for:
 - 5.3.1.1: >2 dwellings/acre: no wood burning fireplaces
 - 5.3.1.2: ~~2~~3 dwellings/acre: max of two certified wood burning heaters per acre
 - 5.3.1.3: ≤2 dwellings/acre: max of one wood burning fireplace or wood burning heater per dwelling



- Draft language provides for:
 - 5.3.2.2: >2 dwellings/acre: max of two certified wood burning heaters per acre



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Benefits – Health Impacts

- Health benefits related to
 - High level of population exposure to urban residential wood burning emissions compared to other sources
 - Relative effectiveness of burning curtailments in reducing per capita PM2.5 exposure levels in urban areas where the Valley population is concentrated
 - Relative toxicity of chemicals in PM2.5 from wood burning
 - Overnight penetration of PM2.5 into neighboring homes
- Wood burning curtailments on high pollution days
 - Reduced annual exposure by 12.9-13.6% in daily PM 2.5
 - Resulting in 30 to 70 avoided cases of annual premature mortality

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Benefits – Emission Reduced

- Directly emitted PM2.5 emissions
- 4.06 tpd anticipated reduction from transition to cleaner burning wood burning heaters (based on Survey results)
 - Rule amendments
 - Increased incentive amounts
- 1.99 tpd claimed in SIP
 - Directly attributed to the increased number of No Burn days
 - Remaining emission reductions may be claimed in SIP through R9610 at later date

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Economic Analysis

- Virtually a “no cost” rule
- Average of 34 additional No Burn days per county per season
- Costs associated with using central heating 34 days in lieu of wood burning heater is offset by savings from not purchasing wood or pellet fuel
 - Free seasoned wood is a rarity
- Socio impacts significantly reduced by increased incentive amounts for more efficient wood burning heaters

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Burn Cleaner Incentive Program

- Incentive program plays a key role in overall strategy by encouraging residents to upgrade to cleaner wood burning heaters
- Potential enhancements to incentive program:
 - Increased funding levels for clean wood burning heaters and gas fired wood burning heaters
 - Increased funding levels for low income applicants
 - Streamlining to improve the process for participants

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Draft Amendments to Incentive Program

- Draft increased incentive amounts
 - Gas, Pellet, or wood fueled: up to \$1,500 per unit
 - Additional funding for installation of gas: up to additional \$500 per unit
 - Low income applicants: up to \$2,500 per unit
- Extend low income provisions to residential property owners with low income tenants provided specific criteria are met
- Draft amendments will be presented to the Governing Board along with the rule

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Next Steps...

7/31 – 8/14: Public comment period

8/19 – 9/2: Public comment period

8/19: Publication of proposed rule package to District web page

9/18/14: Governing Board Public Hearing

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Comment Period

Please submit comments by 5:00 August 14, 2014

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Open Discussion

Please come to podium
State name and affiliation

Webcast@valleyair.org

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