

Regulation 6, Rule 3: Wood Burning Devices

Responses to Public Comments

Sole Source of Heat Exemption

- *Sole Source of Heat” definition is too vague and may allow un-intended wood burning during Winter Spare the Air days. Provide clarification in the definition or exemption section.*

The “Sole Source of Heat” definition was removed from the proposed rule and Section 6-3-110.1 was modified to make clear that the exemption applies only to households that have no available permanently installed natural gas, propane or electric heating devices.

- *“Sole Source of Heat” exemption requirement has significant economic impacts on households.*

As required by State law, the Air District conducted an assessment of the proposed amendments for socioeconomic impact. The assessment indicated no significant socioeconomic impacts were expected from these rule amendments. A copy of the socioeconomic report is available on the Air District’s website.

- *Consider additional exemptions for low income households.*

The Air District’s mission is to achieve clean air for the entire Bay Area region. The intent of this rule is to further reduce local and regional fine particulate emissions in the Bay Area through health protective requirements that have both long term and short term plans to reduce PM_{2.5} in the winter. An exemption to allow the use of wood-burning devices to low income households may have long term negative impacts on air quality as it would allow additional households to burn wood during Winter Spare the Air Alerts that are not allowed to burn under the current rule.

- *Requiring EPA certified wood heaters to be installed to qualify for “Sole Source of Heat” exemption would encourage and promote the existence of wood-burning devices for 30+ years and negatively impact air quality indefinitely.*

The “Sole Source of Heat” exemption encourages the transition and replacement of uncertified wood-burning devices to cleaner and more efficient ones; EPA certified wood-burning devices are 80-90% cleaner than uncertified wood heaters. Replacement of uncertified wood heaters to EPA certified wood-burning devices will significantly reduce fine particulate emissions in high impact wood smoke areas. To encourage the replacement of uncertified wood heaters with cleaner alternatives, such as gas-fueled or electric heating devices, the Air

District is developing an incentive program to provide monetary incentives for the replacement of uncertified wood heaters.

- *A household should still qualify for “Sole Source of Heat” exemption even though propane fuel is available to a household.*

Households with propane fuel, but not propane heaters qualify for the “Sole Source of Heat” exemption. Households with propane heaters do not qualify for the exemption.

Non-functional, Permanently-Installed Heater Exemption

- *A 30-day temporary exemption for non-functional heaters does not provide adequate time for households to make repairs.*

The Air District believes a 30-day repair allowance is a reasonable and adequate amount of time to make repairs to a non-functional heater. If repairs exceed 30 days, a household no longer qualifies for the exemption and may not use a wood-burning device during a Winter Spare the Air Alert. However, household can use electric or gas-fueled heating options. If a Winter Spare the Air Alert is not in effect, a homeowner may still use a wood-burning device.

- *“Non-functional, permanently-installed heater” exemption is well-intended, however, costs associated to repair a broken heater creates economic hardships for seniors or retirees. If a furnace cannot be repaired, a new one will have to be installed and many cannot afford the cost of installing a new device.*

The Air District’s Incentive Program will provide economic incentives to low-income households to upgrade existing uncertified wood-burning devices to cleaner and more efficient gas-fueled or electric heating devices. Details of the Air District’s incentive program will be provided at a later date.

The Air District will be developing policy to address non-functional heaters that have reached the end of their useful life that can no longer be repaired to resume function.

- *Consider allowing EPA certified devices to be used on Winter Spare the Air days if a permanently installed gas furnace cannot be repaired to qualify for the “non-functional, permanently installed heater” exemption.*

All non-functional heaters must be repaired within 30 days to qualify for this exemption. For those households that are unable to repair a non-functional heater within 30 days, electric heating options should be considered and used as an alternate form of heat when a Winter Spare the Air Alert is in effect, when burning wood or solid fuel in the Bay Area is illegal.

PM_{2.5} Disclosure Requirement

- *Proposed PM_{2.5} disclosure requirement is meaningless as there are no actual requirements to upgrade or replace existing old, polluting wood-burning devices.*

The Air District is taking incremental steps to reduce fine particulate emissions in the Bay Area. Public education to inform home buyers and renters on the health hazards of PM_{2.5} is one such step. The Air District will evaluate and determine if additional measures, beyond public education, are necessary to further reduce wood smoke.

- *Proposed effective date for real estate and rental disclosure requirement does not provide adequate time for industry to incorporate PM_{2.5} health hazards into disclosure documents.*

In response to this comment, the Air District is proposing to postpone the effective date of this requirement to June 1, 2016 to provide adequate time for all interested stakeholders to ensure compliance with this new regulatory requirement.

New Building Construction

- *Banning wood-burning devices will have negative consequences during utility service outages where no natural gas or electricity is available.*

The new building construction requirement is part of a long term plan to transition the Bay Area to cleaner, more efficient heating devices that do not burn wood for heat and use only the cleanest heating technologies.

For new building constructions that have gas-fueled inserts installed, back-up battery power may be present and a heater may still function and provide heat during a utility service outage.

- *New building construction should continue to allow the installation of EPA certified wood heaters to provide consumers the choice of heating options. The proposed new building construction provision prevents anyone from installing sustainable, renewable wood -burning device in a house. For those households with solar heating, wood heaters are often used as secondary heating. The proposed standard will eliminate EPA certified wood heaters as options and pushes people to unsustainable fossil fuels.*

The proposed amendment for new building construction ensures that only the cleanest heating technologies, such as gas or electric heating options are installed. And although EPA certified wood heaters are cleaner, they still emit PM_{2.5} emissions and therefore are not allowed per the proposed requirement. For new construction that have solar heating and no wood-burning devices installed,

the household must rely on existing gas-fueled or electric heating options if solar heating is not available.

Rental Properties in Areas with Natural Gas Service

- *Landlords should not be required to provide a non-wood burning source of heat. Some landlords may not have the money to upgrade the heat source of their rental property.*

The Air District's proposal requires that anyone who offers a property for lease or rent in areas with natural gas service must provide a permanently-installed gas-fueled or electric heating option to their tenant. The majority of homes in areas with natural gas service already have a permanently-installed heater that does not burn wood or solid fuel. California State Housing Code requires landlords provide adequate heating for tenants and this proposed requirement further ensures that all rental properties in areas with natural gas service must have a cleaner heating option that does not burn wood.

Visible Emissions Standard

- *The visible emissions standard is useless and does not effectively discourage or prevent wood smoke from occurring. The Air District should consider a "zero-emissions" requirement.*

The Air District is proposing to strengthen the visible emissions standard to be consistent with Regulation 6, Rule 1 which regulates general source of particulate matter in industry. This proposed standard will take a gradual approach to further reduce visible emissions from sources of air pollution.

Excessive smoke is an indication of a potential problem with the wood-burning device or that the fire is not efficiently burning. The Air District's visible emissions standard provides a tool that allows the Air District to determine which households are not operating cleanly and creating excessive visible emissions.

Although the Air District recognizes a "zero-emissions" requirement would go further towards protecting air quality in the Bay Area, a zero-emissions standard would not be consistent with the visible emissions standard in rules and regulations that apply to air pollution sources in industry. Studies have shown that EPA certified wood heaters, if operated properly, burn very cleanly with very little or no visible emissions after the initial start-up of the heater. The Air District does not have sufficient data to show that zero-emissions can be accomplished with any current wood heater technology during time of start-up, roughly for the first 20 minutes of lighting a fire.

Fireplace and Chimney Remodel Requirement

- *Fireplace and chimney remodel requirement would require extensive repair costs to existing chimneys or fireplaces that are not even being used.*

The requirement does not require or affect fireplaces or chimneys needing repair. This requirement pertains to any person who is conducting a substantial “remodel” to a fireplace or chimney costing greater than \$15,000 and requiring a local building permit, such that an EPA certified wood-burning, electric or gas-fueled heating device must be installed. It is likely that anyone undertaking such a project either intends to use the device themselves, or wishes to make the house more attractive to a buyer who may use it.

EPA Emission Standards for Wood Heaters

- *The Air District needs to provide information on how to verify that my wood stove is EPA certified.*

EPA certified wood stoves are required to have a label on the back of the device indicating EPA certification. In some circumstances, a licensed professional may be required to help verify that a wood stove is EPA certified.

For a current list of all EPA certified devices, please see:

<http://www2.epa.gov/sites/production/files/2013-08/documents/certifiedwood.pdf>

- *EPA certified wood heaters should be disallowed as laboratory testing does not reflect actual emissions and wood heaters are too heavily dependent on the operator and the performance of the device may be easily defeated through adjusting dampers.*

The Air District’s proposal adopts new EPA emission requirements as approved by the U.S. EPA in February 2015. The Air District recognizes that standardized laboratory emissions testing of wood-burning devices may not always depict emissions from real-world operations; however standardized tests help to provide a basis to evaluate emissions from wood heaters. Wood heaters that are certified by EPA are tested at both low and high burn rates and laboratory testing has verified that those devices meet emission standards. The Air District provides public education and outreach on wood burning to help ensure proper operation of a wood-burning device and to minimize visible emissions and fine particulates.

Registration Requirement

- *Registration requirement is useless and should be removed. People who qualify for Sole Source of Heat Exemption should not have to register their device.*

The proposed registration program will identify households that have an EPA certified wood-burning device and are allowed to burn on Winter Spare the Air

days. The requirement will therefore greatly assist the Air District in identifying households not complying with the mandatory burn ban. The registration program would also allow the Air District to quantify fine particulate emissions in those areas and help target financial incentives to replace older, uncertified wood-burning devices with cleaner, more efficient heating options.

Other Comments and Suggestions

- *Increase enforcement on Winter Spare the Air Days instead of banning wood-burning. Take enforcement action on gross polluters that do not comply with the rule rather than punish those who comply.*

The Air District recognizes the importance of our enforcement efforts on Winter Spare the Air Days and will continue to dedicate staffing resources to ensure compliance of this regulation.

- *Consider “Regional No Burn Days” versus a District-wide burn restriction.*

The Bay Area is one contiguous air basin and emissions in one area can affect the air quality in the entire air basin. Since the adoption of Regulation 6-3, the rule has been successful at reducing wood smoke regionally through a wood burning curtailment when the air quality is forecast to be unhealthy. At this time, the Air District does not plan to amend the District-wide burn restriction.

- *Consider a “Two-stage Burn Program” to help encourage households to upgrade to cleaner wood-burning devices.*

The Air District considered a two-stage burn ban during the rule development process but believes other measures to be more effective at reducing fine particulates. The Air District plans to declare Winter Spare the Air Alerts sooner and provide advance notice of unhealthy air. Two-stage burn bans have not proven to be effective in other air districts, primarily because variation in weather complicates selection of meaningful thresholds for calling a “stage 1 burn ban” and “stage 2 burn ban.”

- *The continuation and reliance on wood fuel will have negative impacts on CO₂ emissions and climate change.*

The Air District is proposing amendments that gradually transition the Bay Area to cleaner, more efficient heating options that do not involve burning wood. Fireplaces are very inefficient and they create CO₂ without yielding much heat. In certain geographical locations that do not have natural gas service and wood heaters are used, the requirement to transition to cleaner, more efficient EPA certified wood-burning devices will help to reduce CO₂ emissions. Additionally, the Air District’s incentive program is designed to further reduce emissions as the program does not provide incentives for the installation of wood heaters.

- *Special considerations or exemptions should be made for residents who reside in rural areas, especially those with large parcels of land.*

The Air District is not making any special exemptions for households in rural areas or households with large parcels of land. The Bay Area is one contiguous air basin and the air quality is influenced by wintertime atmospheric conditions where studies have shown that unhealthy air can transport from one region to another and have significant impacts on air quality in the greater Bay Area.

- *Rule 6-3 should ban wood-burning in the Bay Area.*

It is illegal to burn wood during a Winter Spare the Air Alert. However on all other days when the air quality is not designated as unhealthy, households may use their wood-burning device. The Air District is taking incremental steps to reduce air pollution rather than banning wood burning entirely in the Bay Area. The Air District plans to evaluate the effectiveness of the proposed amendments and determine if additional emission reduction measures are necessary to reduce wood smoke.

- *Consider banning the sale of unseasoned wood.*

Regulation 6, Rule 3 requires unseasoned wood to be labeled. The Air District is not proposing to amend this requirement at this time and will evaluate whether additional measures are necessary to reduce emissions.

- *Amendments to this rule are unnecessary and infringe of the freedom and rights of a homeowner.*

The public workshops for these proposed amendments demonstrated how Regulation 6, Rule 3 evokes a wide range of emotions, from people who want to see the wintertime tradition of unrestricted wood-burning continue to others who want to see a burn ban because they are significantly impacted by the wood smoke that is generated. The Air District has attempted to balance the public comments with evidence from numerous health studies that wood burning presents a real threat to public health in the Bay Area.

The proposed rule amendments do not ban the use of a fireplace and a person can still enjoy their fireplace when the air quality is not unhealthy. However, when the air quality is forecast to have unhealthy levels of fine particulate, a mandatory burn ban is issued to protect public health, especially those who are sensitive to fine particulates such as children, the elderly and people with respiratory health concerns.

- *The Air District does not have the right to force homeowners to replace fireplaces upon sale or transfer of a property.*

The Air District received an overwhelming number of comments and concerns from the general public and interested stakeholders regarding a “point-of-sale” requirement. Many commenters asserted that upgrading wood-burning devices during the sale of a property may be infeasible as a practical matter. Upon further evaluation, the Air District has determined to use public education to convey the health hazards of PM_{2.5} to discourage wood burning instead of a mandatory replacement requirement upon sale of property. The “point-of-sale” proposal has been replaced with a PM_{2.5} disclosure requirement.

- *Barbecues should be banned during a Winter Spare the Air Alert as part of these proposed amendments.*

The purpose of Regulation 6, Rule 3 is to limit emissions of particulate matter and visible emissions from wood-burning devices used for primary heat, supplemental heat or ambiance. The Air District does not plan to incorporate outdoor barbecues or commercial cooking operations that use wood fires in this regulation. These sources may be considered in future rule-making efforts.

- *The Air District needs to provide financial help to those who are required to upgrade or replace existing uncertified heaters.*

The Air District has received a large number of comments requesting financial assistance to replace or upgrade heating devices as required by these proposed amendments. An incentive program is currently being developed and the details of this program will be forthcoming.

- *The Air District should not have mandatory burn bans on holidays.*

The Air District issues Winter Spare the Air alerts when air pollution is forecast to reach unhealthy levels. The highest PM_{2.5} levels occur from November to February when less frequent vertical atmospheric mixing occurs in combination with decreased surface wind speeds. Horizontal mixing and surface winds are key to dispersing particulates in the atmosphere and keeping fine particulate levels below the National Ambient Air Quality Standards (NAAQS). In order to protect public health, mandatory burn bans may occur on holidays if there are unhealthy levels of fine particulate pollution due to winter meteorological conditions.

- *There should be zero outdoor burning all year long and only a few months of indoor burning allowed.*

Open burning refers to outdoor fires that occur in the open without an enclosure or flue. Open burning is generally prohibited with the exception of certain fire types allowed by Air District Regulation 5: Open Burning. Most allowable fires are limited to “burn” days. The Air District designates each day of the year as either a “burn” or “no burn” day based on meteorological standards established

by the California Air Resource Board. These standards include requirements for expected daytime wind velocity, temperature, and atmospheric stability. “Burn” days are approved only if particulate matter concentrations are safe and weather conditions will keep smoke from creating unhealthy conditions for the general public.

In Regulation 6, Rule 3, it is illegal to burn wood or solid fuels from November 1 till the end of February when there is a Winter Spare the Air Alert in effect when air quality is forecast to be unhealthy. The rule is focused on reducing the impact of wood smoke from fireplaces and woodstoves on public health when fine particulate levels are at unhealthy concentrations in the wintertime.

- *I live next door to neighbors who burn wood all winter in their fireplace. They use it to heat their home. I have asthma and allergies, and the days that they burn I have problems breathing. These new regulations are not enough for my health.*

The Air District uses a multi-strategy approach to reduce wood smoke in the Bay Area. The “mandatory burn ban” component of this regulation is focused on reducing the impact of wood smoke on public health when fine particulate levels are at unhealthy concentrations. Strengthening the “visible emission standard” will apply all year long and enhances the Air District’s enforcement tool to ensure households are burning properly. Other requirements to replace or upgrade existing uncertified heating devices will help gradually transition the Bay Area to cleaner heating options and are a long term strategy to further reduce regional and local fine particulate emissions.

- *I live in a historic home and I have only one source of heat, a wood-burning device. I may not be able to replace my fireplace or uncertified wood-stove due to building and modification restrictions on historic homes.*

Homes that have a wood-burning device as an only source of heat may qualify for the Sole Source of Heat exemption if the wood-burning device is EPA certified and that device is registered in the Air District’s registration program. The Air District plans to address the exemption of historic homes (e.g., situations where it is literally impossible to comply with both the county building code and Regulation 6, Rule 3) on an individual case-by-case basis via policy instead of providing permanent, long-term exemptions to all historic homes in the Bay Area.

- *Regulation 6, Rule 3 is an example of an overstepping government. The proposed amendments are again far too overreaching and the Board should vote against it.*

The Air District mission’s is to protect public health, air quality and the global climate and the District has promoted a voluntary burn restriction through the Spare the Air Tonight program since 1991. However, this approach has only had limited success in reducing fine particulate. Since adoption of Regulation 6, Rule

3 in 2008 and through increased participation of Bay Area residents to comply with the regulatory requirements, wintertime air quality in the Bay Area has improved. While the Air District has seen a reduction in fine particulate emissions on a regional level, there are still high impact wood smoke areas at the local level, which can affect the air quality of the greater Bay Area.

Public education and outreach efforts will continue to help reduce elevated levels of fine particulate matter. The proposed amendments are necessary to reduce the contribution from wood smoke to fine airborne particulate pollution, improve public health, and meet EPA ambient air quality standards for fine particulate matter. They will help to reduce fine particulates at the local level while helping the Bay Area gradually transition to cleaner, more efficient heating options.

- *The government should provide economic incentives to help people replace old, non-certified wood-burning devices.*

The Air District's Board of Directors approved incentive program funding of 3 million dollars to help households transition to cleaner heating technologies. The incentive program is designed to encourage eligible Bay Area residents to replace and upgrade to cleaner and more efficient heating options. This program will have the flexibility to focus on neighborhoods that experience unhealthy air quality as a result of wood smoke, as well as provide assistance to low-income households. The Air District plans to begin implementing this incentive program in the spring of 2016.

- *The air quality in my neighborhood is good and I should be allowed to burn using an EPA certified device when there is a Winter Spare the Air Alert in effect.*

Fine particulate air pollution can stay in the air for prolonged periods and can be transported from one area to another in the Bay Area. While EPA certified devices burn more cleanly, these devices still emit fine particulate air pollution and when the wintertime air pollution reaches unhealthy levels, any burning contributes to excessive air pollution. Therefore, in order to protect the health of Bay Area residents, the Air District must reduce fine particulate air pollution by banning burning in all types of wood-burning devices on these days.

- *Instead of concentrating on regulating wood-burning devices, concentrate on industry, open fires, garbage burning and wood-burning devices that are not up to current EPA standards.*

The Air District has many different regulations that regulate sources of air pollution in the nine Bay Area counties. Regulations cover a wide variety of industry sources, including open burning. For a list of Air District regulations, please visit www.baaqmd.gov.

- *Require best available control technology for wood-burning fireplaces.*

In February 2015, the U.S. EPA adopted new, more stringent emission standards for wood heaters requiring new wood heaters that are sold and manufactured to use and continue to develop, clean heating technologies in order to obtain EPA certification. The Air District is proposing to adopt those new requirements as part of amending Regulation 6, Rule 3.

Best Available Control Technology, or “BACT,” generally applies only in situations where a source of air pollution is being newly constructed or substantially modified. In requiring that only EPA-certified devices be used in new construction or when existing wood-burning devices are being modified, the proposed amendments essentially implement BACT in the same way as that concept is used elsewhere in federal and State clean air legislation.

- *Burning of Manufactured logs should be allowed.*

During a Winter Spare the Air Alert, when a mandatory burn ban is in effect, it is illegal to burn wood, manufactured fire logs, or any solid fuels in a fireplace, wood stove or outdoor fire pit. Manufactured logs do not generate any less wood smoke than other solid fuels and also contribute to fine particulate emissions in the Bay Area.

- *I attended the public workshops but now cannot find the “point-of-sale” requirement forcing homeowners to replace their fireplaces upon sale of property. Buyers should be forced to make any changes to the fireplace and not the seller.*

The proposed “point-of-sale” requirement presented at the workshops has been replaced with a proposed PM_{2.5} disclosure requirement instead. There is no proposed real estate requirement that forces sellers to replace or upgrade a fireplace upon sale or transfer of property.

- *The Air District should work with other Bay Area local governments to institute tax incentives for home and building owners to retrofit wood-burning devices.*

The Air District is developing an incentive program to help low income households and those in high wood smoke impacted areas upgrade and replace to cleaner heating devices. The Air District always welcomes a partnership with other local governments to provide additional incentives to homeowners to reduce wintertime air pollution in the Bay Area.

- *There are many different heating options available, but no single source is entirely adequate. The rule needs to continue to allow households to select their own heating option depending on the needs of a family.*

The majority of households in the Bay Area heat their homes with a natural gas furnace during the cold winter months; however homes with only a wood-burning device installed or areas that do not have natural gas service predominately heat their homes with a wood. The Air District recognizes that no one source of heat is entirely adequate for the entire Bay Area and the proposed rule amendments take into consideration the many variables which influence the type of device or heating fuel that is used. The Air District's proposed amendments allow a household to select a cleaner heating option that best suits their needs while continuing to gradually transition the Bay Area to cleaner and more efficient heating devices.

- *Reduced firewood use could create an accumulation of fuel in Bay Area forests.*

This issue was raised and addressed in the 2008 Environmental Impact Report done for the initial development of Regulation 6-3, and for a modification of Regulation 5: Open Burning. The commentary at that time was:

The analysis at that time indicated the rule was not expected to reduce the amount of brush cleared in wildfire hazard areas as the brush clearing is generally required for compliance with fire codes. The burning of brush in wood burning devices under proposed Rule 6-3 could still be accomplished, as long as the brush is seasoned and not burned on curtailment days. The proposed rule does not prevent the California Department of Forestry and Fire Protection (CAL FIRE) or fire districts from conducting controlled burns on non-curtailment days. CAL FIRE is subject to the limitations in Regulation 5: Open Burning. The only change to Regulation 5 would limit recreational fires on curtailment days. Curtailment days only occur about 20 days a year so burning would be allowed on most days (about 345) of the year. In addition, wood can be disposed of in other manners other than burning, such as mulching or chipping. Most wood brush from private property that would be burned is seasoned before burning to produce a desirable (hot) fire. As Rule 6-3 would only provide minor and sporadic delays in burning, no significant impacts are expected.

- *Locally grown wood will decay or burn if not burned for domestic heating.*

This issue was also raised and addressed in the 2008 Environmental Impact report. Analysis of GHG impacts from burning wood are very complex, but the conclusion at that time was:

Based on the Australian study (cited in the EIR) discussed above and the available information about firewood used in the Bay Area, the imposition of no-burn requirements in the Bay Area is not expected to result in an increase in GHG emissions. Bay Area survey data shows that approximately two-thirds of the wood burned in the Bay Area is burned in fireplaces. According to the Australian study, GHG emissions from fireplace burning of wood gathered sustainably from remnant woodlands are more than double the GHG emissions

from burning natural gas. Because oak firewood used in the San Francisco Bay Area comes largely from land clearing activities, GHG emissions from Bay Area wood burning would be expected to be even higher than those from the remnant woodland production system analyzed in the Australian study. This result should not be surprising because when a tree is harvested and not replaced, carbon dioxide is generated by burning the wood and, at the same time, an ongoing means of sequestering carbon is removed.