

APPENDIX F

Response to Comments: Proposed Amendments to Regulation 6, Rule 3 and Regulation 5

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Response to Comments: Proposed Amendments to Regulation 6, Rule 3 and Regulation 5

Introduction

The Bay Area Air Quality Management District (“Air District”) is proposing amendments to one rule, Regulation 6, Rule 3: Wood-Burning Devices (“Rule 6-3”), and one regulation, Regulation 5: Open Burning (“Regulation 5”). The proposed amendments are intended to reduce public exposure to harmful woodsmoke emissions by limiting woodsmoke-related air pollution and to support wildfire risk reduction through improved use of prescribed burning.

The Air District values input from members of the public, community organizations, regulated entities, and partner agencies. During the public review period (July 14, 2025 through August 13, 2025), the Air District received letters from 14 commenters.

This document provides the Air District’s responses to comments, organized by general topic. Following the topic-based responses, all comments received are reproduced in full. Responses are intended to address the substance of the comments, clarify regulatory requirements, and, where appropriate, provide additional resources or information.

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Rule 6-3 Topics

General support for Rule 6-3 amendments

Summary of comment: Several commenters expressed support for the proposed amendments to Rule 6-3, citing the importance of reducing woodsmoke emissions and protecting public health.

Commenters: Tasha, Catherine Hutton, Karen Gray, Ann Harvey, Sandra Mariner, Ellen Golla/Susan Goldsborough (Families for Clean Air), Kristel Rietesel (Bay Area Clean Air Coalition), Ingrid Behrsin, Tony Fisher (Coalition For Clean Air)

Response: The Air District appreciates the expressed support for the proposed amendments to Rule 6-3.

General opposition for Rule 6-3 amendments

Summary of comment: General opposition was expressed for the proposed amendments to Rule 6-3.

Commenters: Rgkozel

Response: The Air District acknowledges this comment. Staff carefully considered a range of perspectives in developing the amendments and remain committed to reducing public exposure to harmful woodsmoke while ensuring the rule is practical to implement.

Incentives to encourage people into cleaner alternatives

Summary of comment: Encourage stronger incentives and outreach to help residents move away from wood burning to cleaner alternatives.

Commenters: Tasha, Catherine Hutton

Response: The Air District offers alternatives to residential wood burning through the Clean Heating Efficiently with Electric Technology (Clean HEET) Program. This program provides incentive funding to help alleviate the cost of replacing fireplaces, wood stoves, pellet stoves, and fireplace inserts with electric heat pumps, or to permanently decommission wood-burning devices without providing a replacement. Clean HEET focuses on communities most impacted by air pollution. The Air District conducts targeted outreach in priority communities, including AB 617 and disadvantaged communities, and additional funding support is available for low-income residents. More information is available at: <https://www.baaqmd.gov/en/funding-and-incentives/residents/clean-heet-program>.

Removal of sole-source-of-heat exemption

Summary of comment: Recommendation to eliminate the exemption.

Commenter: Catherine Hutton

Response: The exemption for households that rely on wood as their sole source of heat applies to a small portion of homes in the Bay Area (fewer than four percent), but is maintained in recognition of circumstances where no reliable or cost-effective alternative is available—such as in areas with intermittent utility service or other logistical constraints. Individuals seeking this exemption must apply through the Air District, and exemptions must be renewed on a regular basis. Staff reviews these applications to confirm eligibility, recognizing that households with no other heating source must be able to retain the ability to heat their homes.

Enforcement process and challenges

Summary of comment: Requests for stronger enforcement and clarity on complaint handling.

Commenters: Catherine Hutton, Merrily Robinson, Ingrid Behrsin

Response: The Air District acknowledges the challenges associated with enforcement of this rule. The proposed amendments are designed to make the curtailment program more health-protective, and staff will continue evaluating enforcement approaches to improve compliance and further reduce exposure to woodsmoke.

Members of the public are encouraged to report potential violations, which can be done online or by phone:

- <https://myaironline.baaqmd.gov/account/complaints>
- General air pollution complaint: 1-800-334-ODOR (1-800-334-6367)
- Woodsmoke complaint: 1-877-4NO-BURN (1-877-466-2876)

The Air District takes all woodsmoke complaints seriously. Complaints are entered into the Air District's system, which guides patrols and investigations in Assembly Bill 617 communities and areas with high levels of burning or complaints. When a violation is documented by an inspector, education materials are mailed to the reported address, and a Notice of Violation is issued. Repeat violations at the same address may result in increased penalties. Determination of "sole source of heat" status is made by reviewing the Air District's registration records; inspectors do not enter homes.

Public outreach and Spare the Air efforts

Summary of comment: Emphasize robust outreach and timely alerts; encourage use of multiple channels and languages.

Commenters: Ann Harvey, Kristel Rietesel (Bay Area Clean Air Coalition), Tony Fisher (Coalition For Clean Air)

Response: The Air District maintains a robust public outreach program to increase awareness of woodsmoke health impacts and promote cleaner alternatives to residential wood burning. The Spare the Air program and associated public outreach campaigns emphasize the health impacts of woodsmoke and encourage residents to avoid burning even on days without a Mandatory Burn Ban. Campaign materials are distributed across multiple platforms—including TV, radio, digital media, outdoor banners, and social media—and in multiple languages to reach diverse communities throughout the Bay Area.

The Air District also works to ensure that notifications reach relevant stakeholders across the region. City and county governments are encouraged to subscribe to Spare the Air Alerts, and alerts are sent to Air District Board members representing communities throughout the Air District’s jurisdiction. The public can receive notifications via text, email, the Spare the Air app, social media, and the Air District website. These multiple communication channels help ensure timely and widespread outreach during burn bans.

Localized impacts

Summary of comment: Concern about localized impacts and that neighborhood-level concentrations can be higher than at regional monitors.

Commenter: Ann Harvey

Response: Staff recognizes concerns about localized impacts from residential wood burning, since at times pollutant concentrations can be higher at some places than at regulatory air monitors. Air sensor networks can provide additional information on rapidly changing conditions associated with localized impacts from residential wood burning. EPA’s [Fire and Smoke Map](#) can be a useful resource for visualizing how conditions are changing in near real-time that combines data from the Air Districts regulatory air monitoring sites and local air sensor data from multiple manufacturers.

The Air District encourages the public to submit complaints about localized smoke sources through the woodsmoke complaint line (1-877-4NO-BURN) or online reporting. While wood burning is permissible on non-burn ban days, complaint data help the Air District refine outreach materials, incentive programs, and woodsmoke enforcement patrols.

Suggested change to visible emissions language

Summary of comment: Suggested replacing opacity/Ringelmann references with plain-language terms like “clearly visible” or “barely visible.”

Commenter: Ann Harvey

Response: Staff appreciates the suggestion to clarify language for the general public. The Ringelmann Chart and opacity limits remain the standard method for quantifying visible emissions by trained enforcement staff. When members of the public have concerns, the Air District encourages them to report smoke through the complaint line or online system rather than attempting to interpret opacity themselves. Staff reviewed the suggested terms “clearly visible” and “barely visible” but determined these phrases introduce subjectivity into enforcement, whereas the Ringelmann Chart provides a documented and consistent visual standard. Staff recognizes, however, that it can be challenging for inspectors to arrive in time to observe emissions directly while they are occurring.

Reference to the Code of Federal Regulations

Summary of comment: Concern that referencing federal standards could weaken protections if EPA relaxes requirements.

Commenter: Ann Harvey

Response: The proposed amendment to Section 6-3-302 will automatically impose the applicable standards promulgated by US EPA in Title 40, Code of Federal Regulations, Part 60, Subpart AAA without requiring the Air District to initiate a rulemaking each time US EPA updates the standards. Section 6-3-302 does not impose any other standards than what EPA requires in Title 40, Code of Federal Regulations, Part 60, Subpart AAA. Should EPA modify the federal standards to make them less protective, the Air District will consider approaches that ensure local health protections are preserved.

Other woodsmoke sources

Summary of comment: Questions about campfires, wood-fired pizza ovens, and commercial cooking sources and consideration of including them in Rule 6-3.

Commenters: Ann Harvey, Kristel Rietesel (Bay Area Clean Air Coalition)

Response: Rule 6-3 applies specifically to residential wood-burning devices. Other sources, including campfires, wood-fired pizza ovens, and certain commercial operations, fall under other regulations or exemptions. For example:

- Some commercial cooking operations require Air District permits, while specific equipment such as charbroilers is regulated under *Regulation 6, Rule 2: Commercial Cooking Equipment*.
- Restaurant operations are generally exempt from Air District permit requirements under *Rule 2-1, Section 2-1-113.2.2.2* (restaurant exemption).
- Outdoor recreational fires such as campfires are addressed under *Regulation 5: Open Burning* and are subject to Mandatory Burn Bans.

- Wood-fired pizza ovens used for residential cooking are exempt under *Regulation 1, Section 1-110.4*, which excludes residential cooking fires from Air District regulations.

The Air District encourages the public to continue reporting localized smoke concerns through the complaint line or online system, which assists staff in evaluating potential violations and ensuring compliance. Future rulemaking may consider additional measures to further limit residential wood burning.

Economic benefits of reducing woodsmoke

Summary of comment: The health-related economic benefits of reduced woodsmoke exposure are not captured in the Staff Report's socioeconomic analysis.

Commenter: Ellen Golla/Susan Goldsborough (Families for Clean Air)

Response: The Air District recognizes that reducing woodsmoke provides significant public health and economic benefits. While the rulemaking economic analysis focused on costs to households and businesses, staff has also considered health impacts through health risk modeling. While the impacts of the proposed amendments were not modeled, the Woodsmoke White Paper published in November 2024 estimated that residential wood burning contributes to 94 to 210 premature deaths annually in the Bay Area due to elevated annual average PM_{2.5}. This analysis and related valuation are available on the Air District's website: <https://www.baaqmd.gov/en/rules-and-compliance/rule-development/woodsmoke>.

Calls for further woodsmoke reductions beyond the proposal

Summary of comment: Recommendations to adopt thresholds lower than 25 µg/m³ and pursue additional measures.

Commenters: Ellen Golla/Susan Goldsborough (Families for Clean Air), Kristel Rietesel (Bay Area Clean Air Coalition)

Response: The Air District acknowledges the recommendation to reduce the PM_{2.5} curtailment threshold even further. The proposed threshold of 25 µg/m³ represents a health-protective step consistent with scientific guidance and achievable implementation for forecasting, public notification, and compliance. Staff will continue to evaluate opportunities for future rulemaking to further reduce residential woodsmoke emissions and associated health impacts.

Reporting on air quality trends and use of PurpleAir data

Summary of comment: Air pollution trends from year-to-year should be transparently shared and easily accessible; encourage expanded reporting and use of community sensor data; ensure timely alerts.

Commenters: Kristel Rietesel (Bay Area Clean Air Coalition), Tony Fisher (Coalition For Clean Air)

Response: The Air District routinely monitors and reports air quality trends to the public and Board of Directors. Some recent presentations to the Air District's Board of Directors occurred on February 5, 2025, November 6, 2024, February 7, 2024, and July 19, 2023 and included information on recent air quality trends. Year-to-year changes in air quality measured at Air District air monitoring sites can be easily accessed and visualized on EPA's [AirData](#) website under "Data Viz Tools". For example, the [Mutliyear Tile Plot](#) allows users to select a geographic area, pollutant, and a date range to visualize multiple years of data in one plot. In addition to data from the Air District's monitoring sites, the Air District has also compiled a 7-year dataset of PM_{2.5} data from public PurpleAir sensors in the Bay Area from 2018-2024 that can be used to better understand how PM_{2.5} is changing from place-to-place and from year-to-year. A preliminary review of these data suggests that the spatial variability during woodsmoke episodes changes from day-to-day and can affect different areas throughout the Bay Area depending on a number of factors including changes in emissions and meteorological conditions. Data from air monitoring networks, sensors, and health analyses help guide program development, ensure transparency, and inform future policy.

Air District meteorologists utilize multiple data sources to guide air quality forecasts and Spare the Air Alerts. In addition to regional regulatory monitors, they use supplemental monitors such as PurpleAir to help identify localized hot spots, particularly during episodic PM events or wildfires. Final verifications and reporting, however, are based on the official air monitoring network.

Regulation 5 Topics

General support for Regulation 5 amendments

Summary of comment: Support was expressed for the proposed amendments to Regulation 5, recognizing the importance of prescribed fire as a tool for wildfire risk reduction and ecosystem management.

Commenters: Tasha, Joe Plaughter (Sonoma Land Trust), Miles Sarvis-Wilburn/Jeanne Wirka (LandPaths)

Response: The Air District appreciates the expressed support for the proposed amendments to Regulation 5.

General opposition for Regulation 5 amendments

Summary of comment: General opposition was expressed for the proposed amendments to Regulation 5.

Commenters: Janice Barton, Sandra Mariner, Ellen Golla/Susan Goldsborough (Families for Clean Air), rgkozel

Response: The Air District acknowledges these comments. Staff carefully considered a range of perspectives in developing the amendments and remain committed to supporting the safe use of prescribed fire as a tool for wildfire risk reduction while minimizing smoke impacts on local communities.

Escaped prescribed fire or expansion of prescribed burning

Summary of comment: Concerns were raised that prescribed burns can escape; questions about whether the amendments will expand burning activity or incentivize burning for wood debris disposal.

Commenters: Janice Barton, Sandra Mariner, Ellen Golla/Susan Goldsborough (Families for Clean Air), Kristel Rietesel (Bay Area Clean Air Coalition)

Response: The proposed amendment to Regulation 5 will remove operation fees for prescribed burns to allow nonprofit organizations and private landowners who may be positioned to carry out prescribed burns in areas where public agency capacity is limited. This change is intended to reduce administrative and cost barriers for strategic small-scale burns that can lower the risk of uncontrolled wildfires.

The proposed amendment does not change the definition of prescribed burning nor the strict safety, environmental, and notification requirements that must be met to conduct a prescribed burn. Specifically, all prescribed burns require submission to and approval by the Air District of a Smoke Management Plan that includes strict requirements for

planning, meteorology, public notification, and oversight. These Smoke Management Plans must be approved by the Air District before a prescribed burn is initiated. Additionally, all prescribed burns require separate permits from CAL FIRE or local fire agencies and all burns must be conducted by trained practitioners. These requirements ensure that these burns are subject to strong safeguards.

Entities taking advantage of the proposed new fee waiver would still be required to prepare a Smoke Management Plan, which is a significant undertaking, and staff therefore does not anticipate individuals using prescribed burning simply as a low-cost method of debris disposal. All burns are carefully planned and reviewed with the Air District to ensure they meet the stated application.

The Air District also promotes non-burning alternatives, such as the Agricultural Waste and Wildfire Prevention Chipping Programs, which provide incentives to chip and reuse woody debris instead of burning it. More information on this program can be found at the following website: <https://www.baaqmd.gov/permits/open-burn/waste-chipping-program>.

Harmful impacts of prescribed fire smoke

Summary of comment: Concerns were raised about smoke exposure and health effects from prescribed burns.

Commenters: Janice Barton, Ellen Golla/Susan Goldsborough (Families for Clean Air), Kristel Rietesel (Bay Area Clean Air Coalition)

Response: Prescribed burns are subject to strict safeguards designed to minimize smoke exposure and protect public health. Each burn must be supported by a Smoke Management Plan, submitted to the Air District at least 30 days in advance, that specifies burn conditions, outlines measures to limit smoke impacts, and addresses considerations related to public safety, environmental protection, and community health. The Air District reviews and approves these plans to ensure compliance before any burn may proceed.

Although prescribed burns produce emissions, they are generally shorter in duration, smaller in scale, and emit significantly less fine particulate matter (PM_{2.5}) per acre than uncontrolled wildfires.¹ They are also carefully timed using PM_{2.5} forecasts and meteorological conditions to reduce exposure for nearby communities. A recent study

¹ Berger C, Fitzgerald SA, Leavell D, Peterson J. 2018. *Fire FAQs – Air quality impacts from prescribed fire and wildfire: How do they compare?* Oregon State University Extension Service, EM 9203, 2p. <https://extension.oregonstate.edu/catalog/pub/em-9203-fire-faqs-air-quality-impacts-prescribed-fire-wildfire-how-do-they-compare>

suggests that prescribed fire use can meaningfully reduce smoke emissions, even when factoring in smoke from the prescribed fires themselves.²

Regulation 5 includes safeguards—such as limits on burn windows, requirements for Smoke Management Plans, and coordination with meteorological conditions—to minimize smoke exposure in local communities. Staff will continue to monitor emerging research and incorporate new findings into implementation as appropriate.

Use of alternatives to prescribed fire (e.g. goats, chipping)

Summary of comment: Preference was expressed for non-burning vegetation management methods.

Commenter: Janice Barton, Ellen Golla/Susan Goldsborough (Families for Clean Air)

Response: Land managers select treatment methods based on site conditions, safety, and ecological goals. In some cases, prescribed fire may be the most appropriate treatment. The Air District also promotes non-burning alternatives through programs such as the Agricultural Waste and Wildfire Prevention Chipping Programs, which provide incentives to chip and reuse woody debris rather than burn it. More information: <https://www.baaqmd.gov/permits/open-burn/waste-chipping-program>.

² Kelp, Makoto, et al. "Effect of recent prescribed burning and land management on wildfire burn severity and smoke emissions in the western United States." *AGU Advances* 6.3 (2025): e2025AV001682. <https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2025AV001682>

Organizations and Individuals Who Submitted Written Comments on the Proposed Amendments to Rule 6-3 and Regulation 5

Name	Organization/Affiliation	Date	Reg 5 Position	Rule 6-3 Position
Tasha	Public	7/14/2025	Support	Support
Cate Hutton	Public	7/14/2025		Support
Janice Barton	Public	7/14/2025	Oppose	
Joe Plaugher	Sonoma Land Trust	8/1/2025	Support	
Karen Gray	Public	8/4/2025		Support
Ann Harvey	Public	8/10/2025		Support
Merrily Robinson	Public	8/11/2025		
Rgkozel	Public	8/11/2025	Oppose	Oppose
Sandra Mariner	Public	8/12/2025	Oppose	Support
Susan Goldsborough	Families for Clean Air	8/13/2025	Oppose	Support
Tony Fisher	Coalition for Clean Air	8/13/2025		Support
Miles Sarvis-Wilburn	LandPaths	8/13/2025	Support	
Kristel Rietesel	Bay Area Clean Air Coalition	8/13/2025		Support
Ingrid Behrsin	Public	8/13/2025		Support

All Comments Received

Tasha Comment Email (Received 7/14/2025)

Comment:

I am writing to support both of the proposed amendments that I was just sent an email about.

I have asthma and am very concerned about particulate matter in the air, so lower the threshold is something I strongly support. I have also read some of the scientific understanding around this issue and know that it is dangerous for everyone, not just those with asthma.

I have grown up in the Bay Area and the frequency and severity of fires has dramatically increased in my lifetime. I am in support of increased ease of access to authorized folks being able to set prescribed burns as needed to decrease the risk of catastrophic fires.

I especially admire places in our state, such as Yosemite National Park, that have sought out counsel and wisdom from local indigenous groups as to how they have effectively managed prescribed burns in their areas historically.

I would also urge you to explore all avenues to incentivize and encourage people to move away from recreational wood burning fireplaces or fire pit options, especially safer and cleaner electric options.

Thank you.

Tasha

Bay Area Stakeholder in 94602

Catherine Hutton Comment Email (Received 7/14/2025)

Comment:

As a resident of rural Sonoma County, I support lowering the particulate level threshold to trigger Spare the Air Days and prohibit wood burning in wood burning devices to the new proposed level. In winter, we regularly experience sufficiently uncomfortable amounts of smoke due to wood burning in woodstoves and fireplaces that we need to stay inside and close all windows to avoid feeling the effects of the smoke in our lungs.

*In addition, it would be very beneficial to public health if the Air Quality District rescinded the waiver from abiding by the wood ban during Spare the Air Days **even for those individuals and residences relying on woodburning stoves for their sole source of heat**. I propose this because the Air Quality District has provided financial support for*

*several funding cycles now for conversion of woodburning stoves to heat pumps and other cleaner forms of heating. Despite this, the air in our area continues to be problematic because individuals continue to use and install unpermitted, non-EPA certified woodstoves as their heat sources. Since the Air Quality District has no way to easily enforce the existing regulations regarding residential wood burning, for public health reasons (not to mention fairness) Spare the Air Days should be applied to **all** wood burning devices.*

The District cannot distinguish between a residence relying solely on wood for heat vs one in which the stove augments another heat source without entering the residence or obtaining information from the relevant building permit agency. Similarly, it cannot easily distinguish between a grandfathered-in non-EPA compliant wood stove from a newly (but illegally) installed one. It is burdensome on the District to identify those who skirt the rules to the detriment of their neighbors and community. As a result, there is minimal enforcement and scofflaws recognize that there is little possibility of getting caught. Dropping the waiver will make Spare the Air burning ban enforcement easier and may encourage those with woodstoves to replace them with cleaner sources of heat or to simply not burn on Spare the Air Days.

Finally, I want to thank the District for the grant programs it has provided over the years to encourage the replacement of non-compliant wood stoves with other heat sources. The additional financial support provided to low-income individuals and families is appropriate and hopefully has been beneficial. I encourage the District to continue these programs but also do stronger outreach to rural and especially low-income communities so that they are aware of the program, as well as pair the program with stiffer penalties for the use of non-EPA certified stoves as an enhanced incentive for replacing existing wood burning devices.

Catherine Hutton

[REDACTED]

Sebastopol, CA

[REDACTED]

Janice Barton Comment Email (Received 7/14/2025)

Comment:

I disagree with these changes. I feel that prescribed burns can get out of control as they did in New Mexico. I feel that relaxing restrictions is harmful to the health of neighbors. Perhaps they should rent goats to clear vegetation or have supervised controlled burns.

Joe Plaugher, Sonoma Land Trust Comment Email and Letter (Received 7/28/2025)

Comment:

Good afternoon,

Letter of support for the proposed change to Regulation 5 is attached. Thank you for your consideration of this incredibly beneficial amendment.

-Joe



Joe Plaugher | *Prescribed Fire Program Manager*
Sonoma Land Trust
[Redacted], Santa Rosa, CA 95404



822 5th Street, Santa Rosa, CA 95404 ☎ (707) 526-6930 🌐 sonomalandtrust.org

Rule Development
Bay Area Air District
375 Beale Street, Suite 600
San Francisco, CA 94105

Submitted via email to woodsmokerule@baaqmd.gov

RE: Support for proposed change to Regulation 5, Prescribed Burning fees

Dear Bay Area Air District:

I am writing on behalf of Sonoma Land Trust in support of the proposed amendments to Regulation 5 to waive Smoke Management Fees fees for all persons conducting prescribed burns. This change is much-needed boost to our efforts to increase the pace and scale of ecologically beneficial prescribed burns in the North Bay.

As you know, this change is intended to reduce administrative barriers and improve operational flexibility for nonprofit organizations and private landowners who are leading the charge forward to expand the use of beneficial fire. As the private and NGO prescribed burn community has become more efficient with burn implementation, SMP fees have become a significant hurdle; sometimes comprising half of the direct cost of a burn project. This change will allow us to spend our limited budgets more efficiently. Additionally, the proposed expansion of the exemption supports statewide efforts to expand beneficial fire practices for wildfire prevention and land stewardship.

Thank you for your consideration of this proposed amendment. The Bay Area District has been an important partner in the development and implementation of our prescribed burn projects over the past years, and we look forward to the continued shared effort in years to come.

Sincerely,

A handwritten signature in black ink, appearing to read "Joe Plaugher".

Joe Plaugher
Prescribed Burn Program Manager



Karen Gray Comment Email (Received 8/4/2025)

Comment:

I support this amendment as a long term resident of San Francisco. The residential wood smoke in SF has to go. – Karen Gray

Wood-burning curtailment is issued when the Air District forecasts that 24-hour average PM2.5 concentrations will exceed a designated threshold, currently set at 35 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). The proposed amendments would lower this 24-hour forecasted PM2.5 threshold to 25 $\mu\text{g}/\text{m}^3$, allowing the Air District to issue Mandatory Burn Bans when it forecasts conditions will meet this lower threshold. This change is intended to reduce short and long-term peaks in fine particulate matter exposure from wood-burning.

Ann Harvey Comment Email and Letter (Received 8/10/2025)

Comment:

I have attached my comments on the proposed Regulation 6, Rule 3 Amendments. I support the amendments but have a few specific suggestions.

Thank you,

Ann Harvey, MD

Oakland resident

Thank you for undertaking these updates. My comments relate to Rule 6-3. As you note,

- PM2.5 causes significant adverse health impacts;
- residential wood burning contributes over a third of Bay Area PM2.5 during the high PM2.5 months of December and January¹; and
- most residential wood burning is for aesthetic/recreational purposes.

In light of the cumulative region-wide impact of domestic wood smoke, curtailing burning on days with projected high ambient PM2.5 makes sense, and I support lowering the threshold from 35 at least to 25µg/m³.

However, domestic wood-burning devices in most of the Bay Area by definition emit their pollutants in the middle of densely populated neighborhoods, and the concentrations of PM2.5 and other TACS are much higher in their immediate neighborhoods than at the regional sensors, with P2.5 likely often >35µg/m³.

Therefore, I recommend that your publicity about the rule update, as well as your Spare the Air announcements in general, incorporate the message that all home wood-burning, any day of the year, harms neighbors' health with encouragement to minimize it.

6-3-308 Language change suggestion.

Since neighbors are the most likely observers of excessive emissions, it would be helpful to put the limits in terms that the general public can easily understand, enabling us to judge whether a complaint is warranted. (Patrols are deployed partially based on recent complaints, per p. 19).

Current recommended language:

6-3-308 Visible Emissions Limitation: No person shall cause or allow a visible emission from any wood-burning device in any building or structure that exceeds No 1 on the Ringelmann Chart or 20 percent opacity for a period or periods aggregating more than 3 minutes in any hour.²

My suggested change:

No person shall cause or allow **clearly visible smoke (No. 2 or greater on the Ringelmann Chart) to be emitted** from any wood-burning device in any building or structure for a period or periods **totaling** more than 3 minutes in any hour.

OR, If this language is inaccurate—i.e., if the gradations between No. 1 and No. 2, or 21 to 39 percent opacity, are measured by BAAD staff and prohibited, then I suggest:

No person shall cause or allow **more than barely visible smoke (i.e., exceeding No. 1 on the Ringelmann Chart or 20 percent opacity) to be emitted** from any wood-burning device in any building or structure for a period or periods **totaling** more than 3 minutes in any hour.

I took the “clearly visible” and “barely visible” language from the Ringelmann Chart.

I suggest “totaling” rather than “aggregating” only because I think it has the same meaning and is a more common, familiar usage. Language aside, this timing seems cumbersome to measure!

My third suggestion concerns the staff recommendation to remove references to specific emissions ratings in Section 6-3-302, replacing them with reference to the most current emissions standards in federal regulations in order to eliminate the need for future rule amendments each time the EPA updates its emissions standards.³

I agree with the goal, but because the current EPA could loosen restrictions without regard to scientific health data, I suggest continuing to list the current emissions ratings as a baseline and specifying that they will be automatically made more stringent whenever EPA standards become more stringent.

Lastly, I have several questions about important wood smoke sources that I think should be restricted—at least on burning curtailment days—but that don’t fit the narrow “wood-burning device” definition in Rule 6-3.

Are there restrictions on campfires? (And bonfires, if they are ever legal?)

Are there restrictions on wood-fired pizza ovens? Unfortunately, they seem to be proliferating.

Are there any regulations concerning intensively polluting sources such as the Smokehouse on Telegraph in Berkeley? It is hard to breathe for a block downwind of it.

¹Staff Report, p. 22

²Staff Report, p. 33

³Staff Report, p. 30

Thank you again for taking this initiative to further the Bay Area’s health, and thank you for considering my suggestions.

Ann Harvey, MD

Oakland

Merrily Robinson Comment Email (Received 8/11/2025)

Comment:

How about someone enforcing those that still send smoke up on no burn days!?!?!?!?

Merrily

Sandra Mariner Comment Email (Received 8/12/2025)

Comment:

I am strongly against the proposed amendment to Regulation 5. There should be no expansion of prescribed burns.

I am for the proposed amendment to Rule 6-3.

Sincerely,

Sandra Mariner

Fremont, CA

Ellen Golla and Susan Goldsborough, Families for Clean Air Comment Email and Letter (Received 8/13/2025)

Comment:

Hi,

Please see the attached PDF for our comments on the proposed amendments to Rule 6-3 and Regulation 5. Thank you!

Best regards,

Ellen Golla

Families for Clean Air

FAMILIES FOR CLEAN AIR

Dr. Philip Fine, Executive Officer/Air Pollution Control Officer
Bay Area Air District
375 Beale Street, Suite 600
San Francisco, CA 94105

August 13, 2025

Comments on Proposed Amendments to Woodsmoke Rules Regulation 6, Rule 3: Wood-Burning Devices and Regulation 5: Open Burning

Families for Clean Air appreciate this opportunity to offer our comments on the proposed amendments to Regulation 6, Rule 3 and Regulation 5. Thank you for considering our input.

Amendments to Regulation 6, Rule 3

We strongly support the proposed amendments to Rule 6-3, and we commend the Air District for making these changes.

We support reducing the curtailment threshold level to $25 \mu\text{g}/\text{m}^3$. We do note that there is evidence to support reducing it even further, given the World Health Organization recommends a 24-hour $\text{PM}_{2.5}$ standard of $15 \mu\text{g}/\text{m}^3$. But $25 \mu\text{g}/\text{m}^3$ is an important improvement to the regulation.

We also support the proposed amendment to 6-3-308. This would limit visible emissions from startup fires to “not more than once in any four-hour period,” removing the provision that the emissions need to be consecutive. It will be important, however, for the Air District to formulate a well-thought-out enforcement plan for this provision.

The economic analysis of the changes to 6-3 focused on potential reduced sales of firewood and potential costs to wood-burning families, but did not mention the significant health-related economic benefits of reducing exposure to wood smoke. The costs related to wood smoke pollution, both to individuals and to society, are staggering—studies from around the world have made this clear. Any potential reduction in wood smoke is likely to have a positive economic benefit in terms of reduced healthcare costs.

Amendments to Regulation 5

We agree with the Air District’s goal of encouraging activities that reduce wildfire risks. However, we are concerned that the proposed change to Regulation 5 will create unintended consequences, resulting in additional woody debris burning that will not actually reduce wildfire

risks, but rather will, ironically, result in more air pollution and climate impacts than if the rule had not been changed.

The proposed amendment to Regulation 5 would “waive operation fees for all persons conducting prescribed burns, expanding the current exemption that applies only to public agencies.” The stated goal is to make it easier for more people to carry out prescribed burns, “particularly smaller-scale burns, where resource constraints and higher costs per acre can limit participation.” Yet the District states this is not expected to change the amount of prescribed burning or result directly in increased PM_{2.5} emissions. This seems to be a contradiction in logic, since in economic theory, reduced pricing leads to increased demand.

More importantly, the proposed rule change creates a perverse incentive for landowners and others to burn their wood debris rather than find less polluting methods of disposing of it. As the Air District is aware, mulching wood is far more beneficial from both an air quality and climate perspective than incineration. Disposing of wood in landfills is also preferable for air quality and climate impacts, since the stored carbon will be released over approximately a century, instead of instantly when it is incinerated. Yet the proposed rule change creates economic incentives that are preferential to incineration over these environmentally superior disposal methods.

If the proposed rule change is allowed to go forward, the District would need additional staff resources to review the increased burn plan submissions to prevent burning by the general public that is not actually conducted for wildfire reduction, but by individuals trying to dispose of wood refuse without having to pay disposal fees or go through the effort of mulching. Additionally, the increase in prescribed burning from this new incentive will lead to an additional burden on Air District enforcement staff, and without fees to compensate will force the District to reduce enforcement and services in other areas.

Expanding the definition of who may carry out a prescribed burn without paying a fee to “any person” creates the opportunity for unqualified individuals with little or no training to conduct burns, which could ironically lead to increased wildfire incidents. This is not farfetched when considering that even prescribed burns conducted by agency experts result in accidental wildfires. For example, the largest wildfire in New Mexico’s recorded history, which burned an area larger than the city of Los Angeles, destroying hundreds of homes and displacing thousands of people, was the result of two escaped prescribed burns¹. Even proponents of prescribed burns admit that there are about 10 escaped prescribed fires each year in California, and that these are more likely to occur on private land².

Furthermore, a minimum parcel size of only 10 acres will encourage more burning in close proximity to neighboring properties whose residents will suffer the health impacts of the wood smoke pollution.

1 Simon Romero, “The Government Set a Colossal Wildfire. What Are Victims Owed?” *New York Times*, June 21, 2022.

2 Shu Li, et al, “Temporal and Spatial Pattern Analysis of Escaped Prescribed Fires in California from 1991 to 2020,” *Fire Ecology* 21:3 (2025).

Finally, we must add that the science is far from settled on the purported public health benefits of prescribed burning. For example, earlier this year, researchers at Carnegie Mellon University found that smoke from wildfires and prescribed burning in the U.S. together caused \$200 billion in health damages in 2017, and was associated with 20,000 premature deaths. Fully half of these health damages were linked to smoke from prescribed fires. The study also found that this smoke disproportionately affects socially vulnerable communities³.

For all the reasons stated, we urge that the District keep the operation fees in place for the general public, and not expand the current exemption beyond public agencies.

Thank you for this opportunity to submit our comment.

Sincerely,

A handwritten signature in cursive script that reads "Susan Goldsborough".

Susan Goldsborough
Executive Director Families for Clean Air

³ Luke R. Dennin, et al, "Socially vulnerable communities face disproportionate exposure and susceptibility to U.S. wildfire and prescribed burn smoke," *Communications Earth & Environment* 6:190 (2025).

Miles Sarvis-Wilburn and Jeanne Wirka, LandPaths Comment Email
(Received 8/13/2025)

Comment:

Dear Bay Area Air District:

LandPaths is a 501(c)3 nonprofit organization with a mission to foster a love of the land in Sonoma County. We regularly conduct safe and efficient prescribed burns while engaging our community, with a focus on youth, the Spanish speaking community, and others who would otherwise not have easy access. We are writing in firm support of the proposed amendments to Regulation 5 to waive Smoke Management Plan fees for all persons conducting prescribed burns. This change is much-needed boost to our efforts to increase the pace and scale of ecologically beneficial prescribed burns in the Sonoma County.

As you know, this change is intended to reduce administrative barriers and improve operational flexibility for nonprofit organizations and private landowners who are leading the charge to expand the use of beneficial fire. As the private and NGO prescribed burn community has become more efficient with burn implementation, SMP fees have become a significant hurdle, sometimes comprising half of the direct cost of a burn project. This change will allow us to spend our limited budgets more efficiently. Additionally, the proposed expansion of the exemption supports statewide efforts to expand beneficial fire practices for wildfire prevention and land stewardship.

Thank you for your consideration of this proposed amendment. The Bay Area District has been an important partner in the development and implementation of our prescribed burn projects, and we look forward to the continued partnership in years to come.

Sincerely,

Miles Sarvis-Wilburn

Senior Stewardship Field Specialist, Good Fire Program, LandPaths

Jeanne Wirka

Community Stewardship Manager, LandPaths

Kristel Rietesel, Bay Area Clean Air Coalition Comment Email (Received 8/13/2025)

Comment:

Dear BAAQMD,

Thank you so much for proposing to further mitigate exposure to pollution in the Bay Area. This matters to me personally because I have a daughter with asthma and I have asthma myself. I am also representing the local organization the Bay Area Clean Air Coalition, which has around 180 members.

Thank you for noting there is no safe level of exposure to PM 2.5. Please remember that fine particulate matter affects virtually every organ in the body (The Guardian 2019).

Regarding strengthening Rule 6-3, I support setting the wood-burning curtailment threshold to 25 $\mu\text{g}/\text{m}^3$, down from 35 $\mu\text{g}/\text{m}^3$. I would advise this go even lower, since there are no safe levels of particulate matter. I would like to see even more advertising about wood burning harm for increased participation. I would recommend more fines given for those not in compliance (the workshops have not provided data on this, but news sources report it is very low).

It would be good to apply 6-3 to ozone AQI (of about 80) too - Multnomah County (Oregon) uses ozone and PM 2.5 AQI for wood-burning bans.

The wood-burning curtailment threshold should continue to be moved downward from that as quickly as possible. The WHO says annual fine particulate matter levels shouldn't exceed 28 AQI, and 24-hour increments shouldn't exceed 62 AQI more than 3 - 4 days per year. We will almost certainly exceed this with wildfire smoke, so need to do all we can to stop unnecessary pollution. Since you note that "Most residential wood burning in the Bay Area is for aesthetic or recreational purposes, and cost-effective alternatives to wood heat exist for households eligible for the sole source of heat exemption," we have no reason not to work toward banning wood burning. Other cities have or are doing so. The Bay Area could set a date to ban non-emergency wood burning, as Canberra (2045) and Utrecht (2030) have done.

More needs to be done for those with wood burning neighbors as well. Localized air pollution can get very high. Since people can't dump oil in drains or toxic waste in neighbor's driveways or lawns, why can people pollute others' air? Some ideas to mitigate high localized pollution include banning fire pits since other new wood-burning devices are banned, lowering the threshold for wood burning device replacements to a number as far below \$15,000 as possible, putting warning labels on wood-burning devices, putting warnings on wood-burning devices on real estate as we do with

warnings on lead, and using pollution reports for consistently high woodsmoke (that could be proven by air district cars w/monitors) to lead to education and fines. Smoke reports should continue to allow anonymity.

Regarding Regulation 5, please remember all purposely-created smoke is a socialized health cost. Will ecological experts be available for stopping unnecessary public projects? Will other non-burning methods be supported or even favored (perhaps subsidized to lessen the health costs)? Most important, will waiving the oversight of prescribed burns in a warming and less stable climate cause more wildfires (escaped burns)? Are escaped fires being prevented enough? Can the stats on escaped fires be presented?

Finally, part of stopping air pollution is to have easy-to-find graphs showing air pollution as tracked year to year, not just as percentages of a whole. The public needs full transparency. Along with tracking each aspect of air pollution year to year, deaths and hospital visits due to each segment of that would be fair to share.

Thank you for the chance to comment.

Sincerely,

Kristel Rietesel

Admin of Bay Area Clean Air Coalition

Ingrid Behrsin Comment Email (Received 8/13/2025)

Comment:

Hi,

I am a Kensington resident (zip code 94708) and I strongly support lowering the burn ban threshold to 80 AQI instead of 100 AQI. I also support increasing enforcement of this rule.

Thank you,

Ingrid Behrsin

[Redacted]

Kensington, CA

94708

Tony Fisher, Coalition For Clean Air Comment Email (Received 8/13/2025)

Comment:

Dr. Julia Luongo:

The Coalition For Clean Air supports the recent BAAQMD proposed White Paper amendments to

- Strengthen the Air District's burn curtailment (i.e. periodic wood burning ban) program to a PM 2.5 daily max level of 25 ug/m3 instead of 35 ug/m3 .*

Since Staff is seeking input on the mechanism for its proposed policy changes, we recommend:

1) A continued focus on Hot Spot areas around all residents in its Bay Area region using its monitoring data and other reputable sources like Purple Air, in determining Spare The Air Alerts for the following day or time periods and

2) A prompt notification on Spare The Air Alerts to real-time Radio, TV and Public Health Officials along with key contacts in all its BAAQMD counties & cities.

If you have any questions concerning our above recommendations, I can be reached by telephone at [Redacted] or via E-mail at [Redacted]

Tony Fisher

Rgkozel Comment Email (Received 8/11/2025)

Comment:

Ridiculous. All of it. So glad I'm now in North Carolina (or most any other state) where this nonsense would never be tolerated. Here's hoping someone someday (maybe Trump and his Administration?) takes you to court and wins!