



# South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178  
(909) 396-2000 • www.aqmd.gov

## NOTICE

### SPECIAL MEETING OF THE SOUTH COAST AQMD GOVERNING BOARD

OCTOBER 27, 2020 • 11:00 a.m.

## AGENDA

**Pursuant to Governor Newsom's Executive Orders N-25-20 (March 12, 2020) and N-29-20 (March 17, 2020), the Governing Board meeting will only be conducted via video conferencing and by telephone. Please follow the instructions below to join the meeting remotely.**

### **ELECTRONIC PARTICIPATION INFORMATION (Instructions provided at bottom of the agenda)**

***Join Zoom Meeting - from PC, Laptop or Phone***

**<https://scagmd.zoom.us/j/93128605044>**

Meeting ID: **931 2860 5044** (applies to all)

Teleconference Dial In +1 669 900 6833 or +1 253 215 8782

One tap mobile +16699006833,,97364562763# or +12532158782,,93128605044#

**Audience will be allowed to provide public comment through telephone or Zoom connection.**

### **PUBLIC COMMENT WILL STILL BE TAKEN**

#### **CALL TO ORDER**

- Pledge of Allegiance
  - Roll Call
  - Opening Comments: William A. Burke, Ed.D., Chair  
Other Board Members  
Wayne Nastri, Executive Officer
-

## **PUBLIC HEARING**

---

Staff/Phone (909) 396-

### **1. Determine That Proposed Amendments to Rule 445 – Wood-Burning Devices, Are Exempt from CEQA and Amend Rule 445**

Rees/2856

Proposed amendments to Rule 445 will satisfy U.S. EPA contingency measure requirements due by October 31, 2020 for the South Coast Air Basin (Basin) which is classified as an extreme non-attainment area for ozone. The proposed amendments would include addition of an ozone threshold for calling a No-Burn day, effective September 1 through April 30, if the ozone contingency measures are triggered. The ozone threshold for No-Burn days would be incrementally lowered automatically for each subsequent final determination by U.S. EPA of a failure to meet an applicable Clean Air Act milestone. PM2.5 rule provisions will remain unchanged, including calling No-Burn days only from November 1 through the end of February. Other minor amendments include revisions/additions to the definition of terms used in the rule and revisions to improve clarity/rule implementation. This action is to adopt the Resolution: 1) Determining that the proposed amendments to Rule 445 – Wood-Burning Devices, are exempt from the requirements of the California Environmental Quality Act; and 2) Amending Rule 445 – Wood-Burning Devices. (Reviewed: Stationary Source Committee, October 16, 2020)

### **2. Public Comment Period**

Members of the public are afforded the opportunity to speak on any agenda item before or during the Board's consideration of the item (Gov. Code Section 54954.3). Each speaker will be afforded three minutes to address the Board. The Board may limit public comment to a shorter period, if deemed appropriate due to the number of speaker requests. At a special meeting, no other business may be considered.

## **ADJOURNMENT**

### **Americans with Disabilities Act and Language Accessibility**

Disability and language-related accommodations can be requested to allow participation in the Governing Board meeting. The agenda will be made available, upon request, in appropriate alternative formats to assist persons with a disability (Gov. Code Section 54954.2(a)). In addition, other documents may be requested in alternative formats and languages. Any disability or language-related accommodation must be requested as soon as practicable. Requests will be accommodated unless providing the accommodation would result in a fundamental alteration or undue burden to the South Coast AQMD. Please contact the Clerk of the Boards Office at (909) 396-2500 from 7:00 a.m. to 5:30 p.m., Tuesday through Friday, or send the request to [cob@aqmd.gov](mailto:cob@aqmd.gov)

## **INSTRUCTIONS FOR ELECTRONIC PARTICIPATION**

### **Instructions for Participating in a Virtual Meeting as an Attendee**

As an attendee, you will have the opportunity to virtually raise your hand and provide public comment.

Before joining the call, please silence your other communication devices such as your cell or desk phone. This will prevent any feedback or interruptions during the meeting.

**Please note:** During the meeting, all participants will be placed on Mute by the host. You will not be able to mute or unmute your lines manually.

After each agenda item, the Chairman will announce public comment.

Speakers may be limited to a total of 3 minutes for the entirety of the consent calendar plus board calendar, and three minutes or less for each of the other agenda items.

A countdown timer will be displayed on the screen for each public comment.

If interpretation is needed, more time will be allotted.

**Once you raise your hand to provide public comment, your name will be added to the speaker list. Your name will be called when it is your turn to comment. The host will then unmute your line.**

### **Directions for Video ZOOM on a DESKTOP/LAPTOP:**

- If you would like to make a public comment, please click on the “**Raise Hand**” button on the bottom of the screen.
- This will signal to the host that you would like to provide a public comment and you will be added to the list.

### **Directions for Video Zoom on a SMARTPHONE:**

- If you would like to make a public comment, please click on the “**Raise Hand**” button on the bottom of your screen.
- This will signal to the host that you would like to provide a public comment and you will be added to the list.

### **Directions for TELEPHONE line only:**

- If you would like to make public comment, please **dial \*9** on your keypad to signal that you would like to comment.

BOARD MEETING DATE: October 27, 2020

AGENDA NO. 1

**PROPOSAL:** Determine That Proposed Amendments to Rule 445 – Wood-Burning Devices, Are Exempt from CEQA and Amend Rule 445

**SYNOPSIS:** Proposed amendments to Rule 445 will satisfy U.S. EPA contingency measure requirements due by October 31, 2020 for the South Coast Air Basin (Basin) which is classified as an extreme non-attainment area for ozone. The proposed amendments would include addition of an ozone threshold for calling a No-Burn day, effective September 1 through April 30, if the ozone contingency measures are triggered. The ozone threshold for No-Burn days would be incrementally lowered automatically for each subsequent final determination by U.S. EPA of a failure to meet an applicable Clean Air Act milestone. PM2.5 rule provisions will remain unchanged, including calling No-Burn days only from November 1 through the end of February. Other minor amendments include revisions/additions to the definition of terms used in the rule and revisions to improve clarity/rule implementation.

**COMMITTEE:** Stationary Source, October 16, 2020; Reviewed

**RECOMMENDED ACTIONS:**

Adopt the attached Resolution

1. Determining that the proposed amendments to Rule 445 – Wood-Burning Devices, are exempt from the requirements of the California Environmental Quality Act; and
2. Amending Rule 445 – Wood-Burning Devices

Wayne Natri  
Executive Officer

## **Background**

Rule 445 – Wood-Burning Devices was adopted on March 7, 2008 to implement the PM<sub>2.5</sub> Control Measure BCM-03 of the 2007 AQMP to reduce PM<sub>2.5</sub> emissions from wood-burning devices. Most wood-burning devices in the Basin are fireplaces or wood stoves and the rule applies to manufacturers, vendors, commercial firewood sellers, as well as end-user owners/operators. The rule prohibits burning of unseasoned wood and materials not intended as fuel and the sale of unseasoned wood and includes curtailment of wood-burning on “No-Burn” days when ambient PM<sub>2.5</sub> concentration is forecast to exceed threshold limit. There are a limited number of exemptions in the rule from the burning prohibition. Specifically, there are exemptions for low income households, where the wood-burning device is the sole source of heating, where there is no natural gas service within 150 feet of the property line, geographic elevations 3,000 feet or higher above mean sea level, and ceremonial fires which are covered under Rule 444 – Open Burning.

On May 3, 2013 the rule was amended to implement Control Measure BCM-01 in the 2012 AQMP to make the rule more stringent to help meet both the 2006 24-hour PM<sub>2.5</sub> standard and the 2012 annual PM<sub>2.5</sub> standard, by their respective attainment deadlines of December 31, 2019 and December 31, 2021. The 2013 amendments expanded the wood-burning curtailment by lowering the curtailment threshold from 35 to 30  $\mu\text{g}/\text{m}^3$ , establishing a basin-wide curtailment when the threshold is exceeded at a source receptor area (SRA) that continues to exceed the 24-hour PM<sub>2.5</sub> standard, and setting standards for commercially sold solid-fuel labeling. On June 5, 2020, the rule was amended to fulfill U.S. EPA requirements for PM<sub>2.5</sub> contingency measures that would be automatically implemented if U.S. EPA determines that the Basin failed to meet a PM<sub>2.5</sub> Reasonable Further Progress (RFP) reporting milestone or to attain a PM<sub>2.5</sub> National Ambient Air Quality Standard (NAAQS) by the applicable attainment date.

Health studies have shown a significant association between inhalation of higher concentrations of ambient ozone and health risks. These include cardiovascular and respiratory impacts. Ozone is a pollutant that is formed in the atmosphere by the reaction of oxides of nitrogen (NO<sub>x</sub>) and volatile organic compounds (VOCs) in the presence of sunlight. Residential wood-burning is a significant source of VOC emissions, a key ozone precursor. Ambient ozone concentrations can exceed federal standards in the months of September, October, March and February, months where residential wood burning is occurring based on ambient measurements of Levoglucosan, a compound unique to wood-smoke. This indicates that a reduction in wood-burning during these months would lead to a decrease in VOC emissions and subsequent ozone formation. The Basin is currently in Extreme nonattainment status for the 1997 (80 parts per billion (ppb)), 2008 (75 ppb) and the 2015 (70 ppb) 8-hour ozone standards.

The 2016 Air Quality Management Plan (AQMP) was developed to address the Clean Air Act (CAA) requirements of the 2008 8-hour ozone standard. It was approved by the

South Coast AQMD and the California Air Resources Board (CARB) and submitted to the U.S. EPA in April 2017. Based on the *Bahr v. EPA*, 836 F.3d 1218 (9th Cir. 2016) court ruling, South Coast AQMD must adopt contingency measures to be triggered if U.S. EPA makes a final determination that an RFP requirement or an ozone standard is not met by the applicable due date. South Coast AQMD is under a deadline of October 31, 2020, to submit an RFP contingency measure to the U.S. EPA. Staff proposes to amend Rule 445 to add Basin-wide ozone contingency measure provisions that will only be implemented if triggered by the aforementioned U.S. EPA findings.

Contingency measures are required to result in emission reductions within one year of a final action by U.S. EPA. It would be challenging to implement more stringent requirements, achieving additional NO<sub>x</sub> or VOC reductions, in rules involving other traditional sources within the mandated one-year time period. Retrofitting/replacement of existing equipment with newer technologies/equipment, or any permitting provisions would likely take more than one year to effectively implement. Conversely, the proposed amendment to Rule 445, does not require permitting of units, does not require units be retrofitted or replaced, and does not require reformulation or development of new products. Consequently, Rule 445 is well suited for contingency provisions since implementing a lower threshold for an ozone No-Burn curtailment program could be easily implemented in less than one year following the triggering of a contingency measure.

### **Public Process**

A Public Consultation meeting was held on September 30, 2020, with close of comments on October 13, 2020, and this item was presented at the Stationary Source Committee Meeting on October 16, 2020.

### **Proposed Amendment**

The proposed amendment satisfies the U.S. EPA requirement that the South Coast AQMD submit by October 31, 2020 a Reasonable Further Progress (RFP) contingency measure for ozone by adding such provisions to the current rule. Contingency measures, if triggered, would reduce VOC emissions, a precursor of ozone, by increasing the number of No-Burn days during an expanded wood-burning season based on forecasted ozone levels.

Upon a U.S. EPA finding of a failure to either attain an ozone NAAQS or an RFP reporting requirement, the first contingency measure would be triggered. If triggered, the first contingency measure would establish a wood-burning season for ozone, from September 1 through April 30, and require wood-burning curtailment on days during these months when the ambient daily maximum 8-hour average ozone is forecast to exceed 80 ppb. Subsequently, if U.S. EPA makes a second finding of a failure to either meet an RFP reporting requirement or attain an ozone standard, the forecast threshold is automatically reduced to 75 ppb, and upon a third finding to 70 ppb. Curtailment

thresholds correspond to the 1997 (80 ppb), 2008 (75 ppb) and the 2015 (70 ppb) 8-hour ozone NAAQS. As each contingency measure is triggered, with increasingly more stringent ozone No-Burn thresholds, it is anticipated that the number of curtailment days during the expanded wood-burning season will increase with a corresponding reduction in ozone.

PAR 445 also clarifies that existing Rule 444 provisions regarding prescribed burns essential for forestry management remain unchanged. Rule 445 provisions regarding curtailment days based on PM2.5 will continue to be effective from November 1 through February and do not include the potential expanded wood-burning curtailment season in the months of September, October, March, and April. Other amendments include adding definitions in the rule for ozone forecasting; the Daily Maximum 8-Hour Ozone Air Quality Forecast, and the Wood-Burning Season for ozone which will span the months of September through April. Existing rule provisions regarding PM2.5 remain unchanged including existing exemptions from rule requirements.

### **Emission Reductions**

Upon rule amendment, if contingency measures are triggered, the resulting VOC emissions reduction will be 22.4 TPY, based on the anticipated number of annual Basin-wide curtailment days at a daily maximum 8-hour ozone air quality forecast threshold of 80 ppb. Similarly, upon triggering a second contingency measure (lowering the forecast threshold to 75 ppb) and triggering a third contingency measure (lowering the forecast threshold to 70 ppb), would result in estimated VOC emissions reductions of 46.1 and 88.4 TPY, respectively.

### **Implementation and Outreach**

If the contingency measures are triggered, staff will use the existing South Coast AQMD Check Before You Burn (CBYB) program. The CBYB web page provides program information regarding No-Burn days. This includes web links and on-line videos and the Check Before You Burn map indicating No-Burn days. No-Burn day notifications are disseminated via e-mail and a toll-free number. Additional notifications are provided by website updates, press releases, email blasts to media contacts, news pitches to local news desks, press interviews and social media (Facebook, Twitter and Instagram). Facebook Ads are run on No-Burn Days, and a Check Before You Burn video advertisement on Facebook is run during the wood-burning season.

### **California Environmental Quality Act (CEQA)**

Pursuant to the California Environmental Quality Act (CEQA) Guidelines Sections 15002(k) and 15061, the proposed project is exempt from CEQA pursuant to CEQA Guidelines Sections 15061(b)(3) and 15308. Further, there is no substantial evidence indicating that any of the exceptions to the categorical exemption applies to the proposed project pursuant to CEQA Guidelines Section 15300.2. A Notice of Exemption has been prepared pursuant to CEQA Guidelines Section 15062 and is

included as Attachment G to this Board letter. If the project is approved, the Notice of Exemption will be electronically filed with the State Clearinghouse to be posted on their CEQAnet Web Portal, which may be accessed via the following weblink: <https://ceqanet.opr.ca.gov/search/recent>. In addition, the Notice of Exemption will be electronically posted on the South Coast AQMD's webpage which can be accessed via the following weblink: <http://www.aqmd.gov/nav/about/public-notice/ceqa-notice/notice-of-exemption/noe---year-2020>. The electronic filing and posting of the Notice of Exemption is being implemented in accordance with Governor Newsom's Executive Orders N-54-20 and N-80-20 issued on April 22, 2020 and September 23, 2020, respectively, for the State of Emergency in California as a result of the threat of COVID-19.

### **Socioeconomic Impact Assessment**

Even though this proposed rule amendment provides sufficient emission reductions to satisfy U.S. EPA requirements, the amendment is exempt from the requirement to prepare a socioeconomic assessment because as proposed, the amendments will not have a significant effect on emissions limitations or air quality for the purposes of complying with Health & Safety Code § 40440.8. On adoption, the proposed amendments will not result in emissions reductions. Emission reductions from the proposed amendments would occur only if the specified triggering actions occur, thereby automatically adding curtailment days based on ozone forecasting, expanding the months for curtailment, and by sequentially lowering the ozone curtailment threshold after multiple triggering actions. Any air quality or emissions impact is dependent on the occurrence of a triggering event, which would take place only after a specific U.S. EPA finding. Because any such finding is uncertain to occur, and the timing of such finding would occur potentially years in the future, the estimated emission reductions remain too remote to meet the standard Health & Safety Code § 4044.8. Consistent with Health & Safety Code § 40703, the direct costs expected to be incurred by regulated parties from PAR 445 are discussed below.

PAR 445 contingency measures, if triggered, would affect commercial firewood sellers in the Basin and the public. Commercial firewood sellers belong to the industry of fuel dealers (NAICS 454319). Based on a South Coast AQMD staff survey, there are about 86 commercial firewood sellers in the Basin, out of which 31 are located in Los Angeles County, 24 in Orange County, 16 in Riverside County, and the remaining 15 in San Bernardino County. Additionally, PAR 445 would affect the general public who use wood-burning fireplaces and other wood-burning devices. The cost impacts of Basin-wide curtailment on firewood sellers are expected to be minimal because the additional number of No-Burn days for ozone due to this proposed amendment is expected to be small, at about 14 days upon implementation, during the wood-burning season for ozone. Most commercial firewood sellers are expected to be small facilities. A lack of data on number of employees and gross annual sales of the affected commercial firewood sellers precludes staff from determining their small business status. Cost

impacts to the general public are also expected to be minimal as wood-burning in the South Coast AQMD is done mainly for aesthetic purposes and there are cost-effective alternatives to burning wood for heating.

### **AQMP and Legal Mandates**

Proposed Amended Rule 445 is necessary to implement new contingency measures specific to ozone to satisfy U.S. EPA requirements subsequent to the decision in *Bahr vs. EPA* to address the Clean Air Act (CAA) Section 172(c)(9). The South Coast AQMD is under a deadline of October 31, 2020 to submit an RFP contingency measure to the U.S. EPA.

### **Resource Impacts**

Existing staff resources are adequate to implement the proposed rule amendment.

### **Attachments**

- A. Summary of Proposed Amendments
- B. Rule Development Process
- C. Key Contacts
- D. Resolution
- E. Proposed Amended Rule 445
- F. Final Staff Report
- G. CEQA Notice of Exemption
- H. Board Presentation

**ATTACHMENT A**  
**SUMMARY OF PROPOSAL**

Proposed Amended Rule 445 – Wood-Burning Devices

*Definitions*

- Adds “Daily Maximum 8-Hour Ozone Air Quality Forecast” relative to a contingent wood-burning season for ozone that would be effective only if by the applicable due date U.S. EPA makes either a final determination of a failure to meet an RFP requirement or attain an ozone NAAQS.
- Adds contingent “Wood-Burning Season” for ozone from September through April. Effective only if by the applicable due date U.S. EPA makes either a final determination of a failure to meet an RFP requirement or attain an ozone NAAQS triggering the first ozone forecasting threshold at 80 ppb.

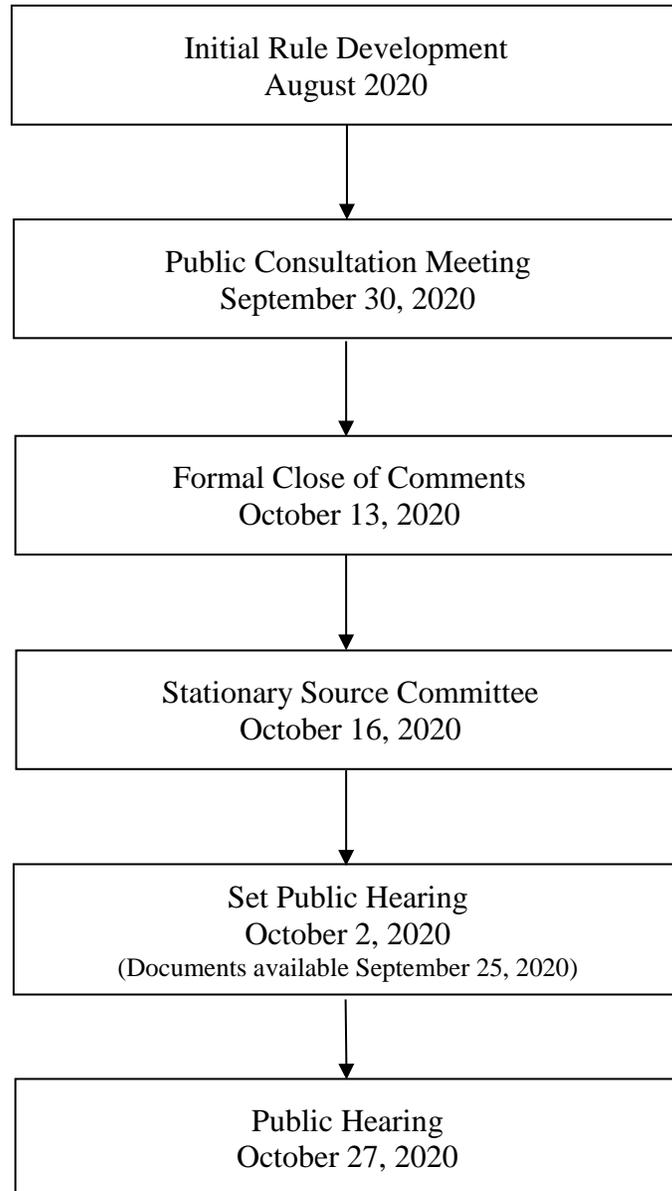
*Requirements*

- Specifies contingency measures for ozone that would be triggered only upon a final determination by U.S. EPA that the South Coast Basin has failed to meet an applicable RFP requirement or attain an ozone NAAQS standard, by the applicable due date.
- Specifying that incremental reductions in the ambient ozone concentration forecast threshold for wood-burning curtailments will be 80, 75 and 70 ppb for the first, second and third final determination of a failure to attain or meet an applicable RFP requirement by the applicable due date.
- Clarifying that PAR 445 will not impact the current implementation of Rule 444. Specifically, that the existing Rule 445 provisions in Rule 444 regarding No-Burn will continue to be applicable only from November 1 through to the end of February.

## ATTACHMENT B

### RULE DEVELOPMENT PROCESS

#### Proposed Amended Rule 445 – Wood Burning Devices



**Three (3) months spent in rule development.**

**ATTACHMENT C**  
**KEY CONTACTS LIST**

Proposed Amended Rule 445 – Wood-Burning Devices

- ❖ American Lung Association
- ❖ Building Industry Association
- ❖ California Air Resource Board
- ❖ Clean Energy
- ❖ Earthjustice
- ❖ Hearth, Patio and Barbecue Association
- ❖ Los Angeles County Department of Public Health
- ❖ R.H. Peterson
- ❖ Realtors Committee on Air Quality
- ❖ San Bernardino Fireplace
- ❖ U. S. Environmental Protection Agency

**ATTACHMENT D**

RESOLUTION NO. 2020 - \_\_\_\_\_

**A Resolution of the Governing Board of the South Coast Air Quality Management District (South Coast AQMD) determining that Proposed Amended Rule 445 – Wood-Burning Devices, is exempt from the requirements of the California Environmental Quality Act (CEQA).**

**A Resolution of the Governing Board of the South Coast AQMD amending Rule 445 – Wood-Burning Devices.**

**WHEREAS**, the South Coast AQMD Governing Board finds and determines that Proposed Amended Rule 445 is considered a “project” as defined by CEQA; and

**WHEREAS**, the South Coast AQMD has had its regulatory program certified pursuant to Public Resources Code Section 21080.5 and CEQA Guidelines Section 15251(1) and has conducted a CEQA review and analysis of the proposed project pursuant to such program (South Coast AQMD Rule 110); and

**WHEREAS**, the South Coast AQMD Governing Board finds and determines that after conducting a review of the proposed project in accordance with CEQA Guidelines Section 15002(k) – General Concepts, the three-step process for deciding which document to prepare for a project subject to CEQA, and CEQA Guidelines Section 15061 – Review for Exemption, procedures for determining if a project is exempt from CEQA, that Proposed Amended Rule 445 is exempt from CEQA; and

**WHEREAS**, the South Coast AQMD Governing Board finds and determines that, because the proposed project is comprised of administrative amendments that adopt additional ozone reasonable further progress (RFP) contingency measures in accordance with U.S. EPA requirements and would not cause any physical changes that would adversely affect any environmental topic area, it can be seen with certainty that there is no possibility that Proposed Amended Rule 445 may have any significant adverse effects on the environment, and is therefore exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3) – Common Sense Exemption; and

**WHEREAS**, the South Coast AQMD Governing Board finds and determines that the proposed project is also categorically exempt from CEQA requirements pursuant to CEQA Guidelines Section 15308 – Actions by Regulatory Agencies for the Protection of the Environment, because the proposed project is designed to further protect or enhance the environment; and

**WHEREAS**, the South Coast AQMD Governing Board has determined that there is no substantial evidence indicating that any of the exceptions to the categorical exemption apply to the proposed project pursuant to CEQA Guidelines Section 15300.2 – Exceptions; and

**WHEREAS**, the South Coast AQMD staff has prepared a Notice of Exemption for Proposed Amended Rule 445, that is completed in compliance with CEQA Guidelines Section 15062 – Notice of Exemption; and

**WHEREAS**, Proposed Amended Rule 445 and other supporting documentation, including but not limited to the Notice of Exemption and the Final Staff Report, were presented to the South Coast AQMD Governing Board and the South Coast AQMD Governing Board has reviewed and considered this information, as well as has taken and considered staff testimony and public comment prior to approving the project; and

**WHEREAS**, the South Coast AQMD Governing Board finds and determines, taking into consideration the factors in Section (d)(4)(D) of the Governing Board Procedures (codified as Section 30.5(4)(D)(i) of the Administrative Code), that the modifications to Proposed Amended Rule 445 since the notice of public hearing was published are not so substantial as to significantly affect the meaning of the proposed amended rule within the meaning of Health and Safety Code Section 40726 because: (a) the changes do not impact emission reductions, (b) the changes do not affect the number or type of sources regulated by the rule, (c) the changes are consistent with the information contained in the notice of public hearing, and (d) the consideration of the range of CEQA alternatives is not applicable because Proposed Amended Rule 445 is exempt from CEQA; and

**WHEREAS**, the South Coast AQMD Governing Board has determined that the proposed amendments to Rule 445 are required in order to meet an October 31, 2020 deadline to promulgate and submit to U.S. EPA ozone RFP contingency measures required under Clean Air Act Section 172(c)(9), 42 U.S.C. Section 7502(c)(9), which

would be automatically triggered upon a U.S. EPA finding of a failure to meet either a reasonable further progress deadline, or attain an applicable NAAQS ozone standard by the applicable attainment date, as required by *Bahr v. EPA*, 836 Fd.3d 1218 (9th Cir. 2016); and

**WHEREAS**, the proposed amendment to Rule 445 will add contingency measures for ozone which will be triggered and automatically become effective upon a U.S. EPA finding of a failure to either, attain an ozone NAAQS, or an ozone RFP reporting requirement; and

**WHEREAS**, contingency measures, if triggered, would reduce Volatile Organic Compound (VOC) emissions from wood-burning, a precursor of ozone, by increasing the number of No-Burn days during an expanded wood-burning season for ozone, from September 1 through April 30; and

**WHEREAS**, the proposed amendment would upon a U.S. EPA finding of a failure to either, attain an ozone NAAQS, or an RFP reporting requirement trigger the first contingency measure establishing the wood-burning season for ozone, and prohibit wood-burning on days during these months when the ambient daily maximum 8-hour average ozone is forecast to exceed 80 parts per billion (ppb). Furthermore, that if U.S. EPA makes a second additional finding of a failure to either, meet an RFP reporting requirement, or attain an applicable ozone standard the forecast threshold is automatically reduced to 75 ppb, and upon a third finding to 70 ppb, incrementally increasing the number of No-Burn days with an anticipated corresponding reduction in VOC's; and

**WHEREAS**, South Coast AQMD Governing Board has determined that Proposed Amended Rule 445 does not change the existing Rule 444 provisions regarding prescribed burns essential for forestry management, and clarifying that if triggered, the expanded wood-burning season for ozone (during the months of September, October, March, and April) are not applicable to Rule 444 – Open Burning; and

**WHEREAS**, South Coast AQMD Governing Board has determined that other provisions of the proposed amendment, including adding definitions, in the rule for ozone, the Daily Maximum 8-Hour Ozone Air Quality Forecast and the Wood-Burning Season for ozone which will span the months of September through April, are added for clarification; and

**WHEREAS**, Proposed Amended Rule 445 will be submitted for inclusion into the State Implementation Plan; and

**WHEREAS**, Health and Safety Code Section 40727 requires that prior to adopting, amending or repealing a rule or regulation, the South Coast AQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication; and

**WHEREAS**, the South Coast AQMD Governing Board has determined that a need exists to amend Rule 445 to promulgate additional ozone contingency measures required under Clean Air Act Section 172(c)(9), 42 U.S.C. Section 7502(c)(9), to be put into effect and which can be automatically triggered upon an EPA finding of a failure to meet a reasonable further progress or attainment for an applicable ozone standard or a failure to attain an ozone standard, as required by *Bahr v. EPA*, 836 F.3d 1218 (9th Cir. 2016).; and

**WHEREAS**, the South Coast AQMD Governing Board obtains its authority to adopt, amend, or rescind rules and regulations from Sections 40000, 40001, 40440, 40702, and 40725 through 40728 of the Health and Safety Code; and

**WHEREAS**, the South Coast AQMD Governing Board has determined that Rule 445, as proposed to be amended, is written or displayed so that its meaning can be easily understood by the persons directly affected by it; and

**WHEREAS**, the South Coast AQMD Governing Board has determined that Rule 445, as proposed to be amended, is in harmony with, and not in conflict with or contradictory to, existing statutes, court decisions, or state or federal regulations; and

**WHEREAS**, the South Coast AQMD Governing Board has determined that Rule 445, as proposed to be amended, does not impose the same requirements as any existing state or federal regulation, and the proposed amended rule is necessary and proper to execute the powers and duties granted to, and imposed upon, the South Coast AQMD; and

**WHEREAS**, the South Coast AQMD Governing Board, in adopting amendments to Rule 445, references the following statutes which the South Coast AQMD hereby implements, interprets, or makes specific: California Health and Safety

Code Sections 40440(a) (rules to carry out the Air Quality Management Plan), 40440(c) (regulatory efficiency and cost effectiveness) U.S. EPA Regulation 40 CFR Part 51, Section 51.1014 (contingency measures), and federal Clean Air Act Section 172(c)(1) (RACT); and

**WHEREAS**, California Health and Safety Code Section 40727.2 requires the South Coast AQMD to prepare a written analysis of existing federal air pollution control requirements applicable to the same source type being regulated whenever it adopts, or amends a rule, and the South Coast AQMD's comparative analysis of Proposed Amended Rule 445 is included in the Final Staff Report; and

**WHEREAS**, the South Coast AQMD Governing Board has determined that Proposed Amended Rule 445 – Wood-Burning Devices would result in minimal cost impacts as described in the Final Staff Report; and

**WHEREAS**, the South Coast AQMD Governing Board has actively considered the Socioeconomic Impact Assessment and has made a good faith effort to minimize such impacts; and

**WHEREAS**, a public hearing has been properly noticed in accordance with the provisions of Health and Safety Code Section 40725; and

**WHEREAS**, the South Coast AQMD Governing Board has held a public hearing in accordance with all the provisions of law; and

**WHEREAS**, the South Coast AQMD specifies that the Planning and Rules Manager of Rule 445 as the custodian of the documents or other materials which constitute the record of proceedings upon which the adoption of the proposed amendments is based, which are located at the South Coast Air Quality Management District, 21865 Copley Drive, Diamond Bar, California; and

**NOW, THEREFORE, BE IT RESOLVED**, that the South Coast AQMD Governing Board does hereby determine, pursuant to the authority granted by law, that Proposed Amended Rule 445 is exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3) – Common Sense Exemption and CEQA Guidelines Section 15308 – Actions by Regulatory Agencies for the Protection of the Environment. No exceptions to the application of the categorical exemption set forth in CEQA Guidelines Section

15300.2 – Exceptions, including the “unusual circumstances” exception, apply to the proposed project. This information was presented to the South Coast AQMD Governing Board, whose members exercised their independent judgment and reviewed, considered and approved the information therein prior to acting on Proposed Amended Rule 445; and

**BE IT FURTHER RESOLVED**, that the South Coast AQMD Governing Board does hereby adopt, pursuant to the authority granted by law, Proposed Amended Rule 445 as set forth in the Attachment E and incorporated herein by reference; and

**BE IT FURTHER RESOLVED**, that the South Coast AQMD Governing Board hereby directs the Executive Officer to forward a copy of this Resolution and Proposed Amended Rule 445 to the California Air Resources Board for approval and to be subsequently submitted to the U.S. EPA for inclusion into the State Implementation Plan.

DATE: \_\_\_\_\_

CLERK OF THE BOARDS

(Adopted March 7, 2008)(Amended May 3, 2013)(Amended June 5, 2020)  
(Amended October 27, 2020)

**PROPOSED AMENDED RULE 445.      WOOD-BURNING DEVICES**

(a) Purpose

The purpose of this rule is to reduce the emission of particulate matter from wood-burning devices and establish contingency measures for applicable ozone standards for the reduction of volatile organic compounds.

(b) Applicability

The provisions of this rule shall apply to specified persons or businesses within the South Coast Air Basin portion of the South Coast Air Quality Management District:

- (1) Any person that manufacturers, sells, offers for sale, or installs a wood-burning device;
- (2) Any commercial firewood seller that sells, offers for sale, or supplies wood or other wood-based fuels intended for burning in a wood-burning-device or portable outdoor wood-burning device; and
- (3) Any property owner or tenant that operates a wood-burning device or portable outdoor wood-burning device.

(c) Definitions

- (1) COMMERCIAL WOOD-BASED FUEL SELLER means any operation that has a business license that sells, or offers for sale, or supplies packaged, bundled or bulk firewood, manufactured firelogs, or wood pellets.
- (2) COOKSTOVE means any wood or wood-based fuel-fired device that is designed and used for cooking food and has the following characteristics as defined in Title 40 of the Code of Federal Regulations Section 60.531, March 16, 2015, or any subsequent revision:
  - (A) An oven, with a volume of 0.028 cubic meters (1 cubic foot) or greater, and an oven rack;
  - (B) A device for measuring oven temperatures;
  - (C) A flame path that is routed around the oven;
  - (D) A shaker grate;
  - (E) An ash pan;
  - (F) An ash clean-out door below the oven; and

- (G) The absence of a fan or heat channels to dissipate heat from the appliance.
- (3) DAILY MAXIMUM 8-HOUR OZONE AIR QUALITY FORECAST means the maximum predicted ambient average ozone concentration, during any rolling eight (8) hour time period for the entire consecutive 24-hour period, beginning at midnight of the current day and ending upon the subsequent midnight.
- (34) DAILY PM2.5 AIR QUALITY FORECAST means the predicted ambient average PM2.5 concentration, for the entire consecutive 24-hour period, beginning at midnight of the current day and ending upon the subsequent midnight.
- (45) DEDICATED GASEOUS-FUELED FIREPLACE means any indoor or outdoor fireplace, including, but not limited to, a gas log fireplace, either constructed on-site, or factory built, fueled exclusively with a gaseous fuel such that the burner pan and associated equipment are affixed to the masonry or metal base of the fireplace.
- (56) FIREPLACE means any permanently installed indoor or outdoor masonry or factory-built device used for aesthetic or space-heating purposes and designed to operate with an air-to-fuel ratio greater than or equal to 35-to-1.
- (67) LOW INCOME HOUSEHOLD means any household that receives financial assistance through reduced electric or gas bills from an electric or natural gas utility based on household income levels.
- (78) MANUFACTURED FIRELOG means a commercial product expressly manufactured for use to simulate a wood burning fire in a wood-burning device.
- (89) MASONRY HEATER means any permanently installed device that meets the definition of a masonry heater in ASTM E 1602-03.
- (910) NEW DEVELOPMENT means residential or commercial, single or multi-building unit, which begins construction on or after March 9, 2009. For the purposes of this definition, construction has begun when the building permit has been approved or when the foundation for the structure is started, whichever occurs first.
- (1011) PELLET-FUELED WOOD-BURNING HEATER means any wood-burning heater that is operated on any pellet fuel, and is either U.S. EPA Phase II-certified or exempted under U.S. EPA requirements as defined in Title 40 Code of Federal Regulations, Part 60, Subpart AAA, March 16, 2015, or any subsequent revision.

- (~~41~~12) PERMANENTLY INSTALLED means any device built or installed in such a manner that the device is attached to the ground, floor, or wall, and is not readily moveable. A free standing stove that is attached to an exhaust system that is built into or through a wall is considered permanently installed.
- (~~42~~13) PM2.5 means particulate matter with an aerodynamic diameter less than 2.5 microns.
- (~~43~~14) PORTABLE OUTDOOR WOOD-BURNING DEVICE means any portable outdoor device burning any wood-based fuel for aesthetic or space heating purposes including, but not limited to, fireplaces, burn bowls, and chimineas located on property zoned for residential uses.
- (~~44~~15) SEASONED WOOD means wood of any species that has been sufficiently dried so as to contain 20 percent or less moisture content by weight as determined by
- (A) ASTM Test Method D 4442-92, Standard Test Method for Use and Calibration of Hand-Held Moisture Meters; or
  - (B) A hand-held moisture meter operated in accordance with ASTM Test Method D 4444-92, Standard Test Methods for Use and Calibration of Hand-Held Moisture Meters; or
  - (C) An alternative method approved by the Executive Officer, the California Air Resources Board, and the U.S. Environmental Protection Agency.
- (~~45~~16) SOLE SOURCE OF HEAT means the only permanent source of heat that is capable of meeting the space heating needs of a household.
- (~~46~~17) SOURCE RECEPTOR AREA (SRA) means any of the numbered areas in the Basin as shown on the map in Attachment 1.
- (~~47~~18) SOUTH COAST AIR BASIN means the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange County as defined in California Code of Regulations, Title 17, Section 60104.
- (~~48~~19) TREATED WOOD means wood of any species that has been chemically impregnated, painted, coated or similarly modified to improve resistance to insects, wood rot and decay, or weathering.
- (~~49~~20) U.S. EPA CERTIFIED WOOD-BURNING HEATER means any device certified by the U.S. EPA to meet the performance and emission standards as defined in Title 40 Code of Federal Regulations, Part 60, Subpart AAA, March 16, 2015, or any subsequent revision.
- (~~20~~21) WOOD-BASED FUEL means any wood, wood-based product, or non-gaseous or non-liquid fuel, including but not limited to manufactured firelogs, wood or

pellet products. For the purpose of this rule, charcoal is not considered a wood-based fuel.

~~(2122)~~ WOOD-BURNING DEVICE means any fireplace, wood-burning heater, pellet-fueled wood-burning heater, or any similarly open or enclosed, permanently installed, indoor or outdoor device burning any wood-based fuel for aesthetic purposes, which has a heat input of less than one million British thermal units per hour (Btu/hr).

~~(2223)~~ WOOD-BURNING HEATER means an enclosed, wood-burning device capable of space heating that meets all the criteria defined in Title 40 Code of Federal Regulations Section 60.531, March 16, 2015, or any subsequent revision including, but not limited to, wood stoves and wood-burning fireplace inserts.

~~(2324)~~ WOOD-BURNING SEASON means for:

(A) PM2.5, the consecutive entire ~~four (4)~~ months of November, December, January, and February.

(B) Ozone, upon triggering any one of the ozone contingency provisions in subparagraph (g), the consecutive entire eight (8) months of September, October, November, December, January, February, March and April.

~~(2425)~~ WOOD-FIRED COOKING DEVICE means any cookstove, wood-fired oven or grill, or any device designed for burning any wood-based fuel for cooking purposes.

(d) Requirements

(1) No person shall permanently install a wood-burning device into any new development.

(2) Notwithstanding the requirements of paragraph (d)(1), no person shall sell, offer for sale, supply, or install, a new or used permanently installed indoor or outdoor wood-burning device or gaseous-fueled device unless it is one of the following:

(A) A U.S. EPA Certified wood-burning heater; or

(B) A pellet-fueled wood-burning heater; or

(C) A masonry heater; or

(D) A dedicated gaseous-fueled fireplace.

(3) No person shall burn any product not intended for use as fuel in a wood-burning device including, but not limited to, garbage, treated wood, particle board, plastic products, rubber products, waste petroleum products, paints, coatings or solvents, or coal.

(4) A commercial firewood seller shall only sell seasoned wood from July 1 through the end of February the following year. Any commercial firewood seller may sell seasoned as well as non-seasoned wood during the remaining months.

(5) Labeling and Sell-Through Provision

~~Effective November 4, 2013, a~~ No commercial firewood seller shall sell, offer for sale, or supply wood-based fuel without first attaching a permanently affixed indelible label to each package or providing written notice to each buyer at the time of purchase of bulk firewood that at a minimum that states the following:

Use of this and other solid fuel products may be restricted at times by law. Please check (1-877-4NO-BURN) or (www.8774NOBURN.org) before burning.

- (A) Alternative language, toll-free telephone number or web address for the information specified in subdivision (e) may be used, subject to Executive Officer approval.
- (B) The Executive Officer shall specify guidelines for the aforementioned labeling requirements.

(e) Wood-Burning Season PM2.5 Mandatory Burning Curtailment (No-Burn day)

No person shall operate an indoor or outdoor wood-burning device, portable outdoor wood-burning device, or wood-fired cooking device on a calendar day during the wood-burning season for PM2.5 so declared to the public by the Executive Officer to be a mandatory wood-burning curtailment (No-Burn) day based on the specified geographic area below 3,000 feet above mean sea level and applicable daily PM2.5 air quality forecast as follows:

- (1) Basin-wide if the daily PM2.5 air quality forecast for any source receptor area exceeds 30  $\mu\text{g}/\text{m}^3$ , or
- (2) subsequent to a determination by U.S. EPA, pursuant to 40 CFR § 51.1014(a) of a failure to comply with either a referenced PM2.5 standard or reporting requirement; the applicable daily PM2.5 air quality forecast as set forth in subdivision (f) PM2.5 Contingency Measures.

(f) PM2.5 Contingency Measures

- (1) Upon the issuance of a final determination by U.S. EPA, pursuant to 40 CFR § 51.1014(a), that the South Coast Air Basin has failed to comply with the following requirements by the applicable date to:

- (A) meet any Reasonable Further Progress (RFP) requirement in an attainment plan approved in accordance with § 51.1012;
  - (B) meet any quantitative milestone in an attainment plan approved in accordance with § 51.1013;
  - (C) submit a quantitative milestone report required under § 51.1013(b); or,
  - (D) attain the applicable PM2.5 NAAQS by the applicable attainment date, the contingency measure(s) specified in paragraph (f)(2) shall be implemented, sequentially and in the order of stringency.
- (2) A Basin-wide, mandatory wood-burning curtailment during the wood-burning season if the daily PM2.5 air quality forecast for any SRA exceeds:
- (A) 29  $\mu\text{g}/\text{m}^3$ , upon a final determination of a failure to comply with any of the provisions of paragraph (f)(1);
  - (B) 28  $\mu\text{g}/\text{m}^3$ , upon a final determination of a failure to comply with any two of the provisions in paragraph (f)(1);
  - (C) 27  $\mu\text{g}/\text{m}^3$ , upon a final determination of a failure to comply with any three of the provisions in paragraph (f)(1); and
  - (D) 26  $\mu\text{g}/\text{m}^3$ , upon a final determination of a failure to comply with any four of the provisions in paragraph (f)(1).

(g) Ozone Contingency Measures

- (1) Upon the issuance of a final determination by U.S. EPA, that the South Coast Air Basin has failed to comply with the following requirements by the applicable date to:
- (A) meet a Reasonable Further Progress (RFP) requirement in an approved attainment plan for an applicable ozone NAAQS; or
  - (B) attain an applicable ozone NAAQS by the applicable attainment date, the applicable contingency measure(s) specified in paragraph (g)(2) shall be implemented, sequentially and in the order of stringency.
- (2) Basin-wide, below 3,000 feet above mean sea level, no person shall operate an indoor or outdoor wood-burning device, portable outdoor wood-burning device, or wood-fired cooking device on a calendar day during the wood-burning season for ozone, so declared by Executive Officer to be a curtailment (No-Burn) day due to forecasted ambient ozone concentration levels, if the daily maximum 8-hour ozone air quality forecast for any SRA exceeds:

- (A) 80 ppb, upon a final determination of a first failure to comply with any of the provisions of paragraph (g)(1);
  - (B) 75 ppb, upon a final determination of a second failure to comply with any of the provisions of paragraph (g)(1); and
  - (C) 70 ppb, upon a final determination of a third failure to comply with any of the provisions of paragraph (g)(1).
- (h) Prohibitions on Permissive Burn Days as described in Rule 444(c)(25)(C) or restrictions on Marginal Burn Days as described in Rule 444 (c)(21)(D) shall be in effect only if a No-Burn day is declared during any of the consecutive months of November, December, January or February.
- (g) Exemptions
- (1) The provisions of this rule shall not apply to wood-fired cooking devices designed and used for commercial purposes.
  - (2) The provisions of paragraph (d)(1) shall not apply to new developments where there is no existing infrastructure for natural gas service within 150 feet of the property line or those 3,000 or more feet above mean sea level.
  - (3) The provisions of paragraph (d)(2) shall not apply to an indoor or outdoor wood-burning device that is permanently installed and included in the sale or transfer of any existing development.
  - (4) The provisions of (d)(2) shall not apply to properties that are registered as a historical site, or are contributing structures located in a Historic Preservation Overlay Zone, as determined by the applicable, federal, State, or local agency. Contributing structures are those buildings which are examples of the predominate styles of the area, built during the time period when the bulk of the structures were built in the Historic Preservation Overlay Zone.
  - (5) The provisions of (d)(3) shall not apply to manufactured firelogs.
  - (6) The provisions of (d)(5) shall not apply to wood-based fuel intended for the cooking, smoking, or flavoring of food.
  - (7) The provisions of subdivisions (e), ~~and (f)~~, and (g), shall not apply under the following circumstances:
    - (A) Residential or commercial properties where a wood-burning device is the sole source of heat; or
    - (B) A low income household; or

- (C) Residential or commercial properties where there is no existing infrastructure for natural gas service within 150 feet of the property line; or
- (D) Residential or commercial properties located 3,000 or more feet above mean sea level; or
- (E) Ceremonial fires exempted under Rule 444 - Open Burning.

**(h)** Administrative Requirements

The Executive Officer will provide public notice of a mandatory wood-burning curtailment through one or more of the following methods:

- (1) A recorded telephone message;
- (2) Messages posted on the South Coast Air Quality Management District web site;
- (3) Electronic mail messages to persons or entities that have requested such notice;
- (4) Notifying broadcast and print media operating within the boundaries of the South Coast Air Basin; and
- (5) Any additional method that the Executive Officer determines is appropriate.

**(i)** Penalties

Any person that violates the provisions of subdivision (e) is subject to the following:

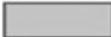
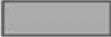
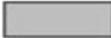
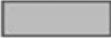
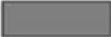
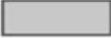
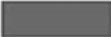
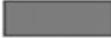
- (1) For first time violators during each wood-burning season, completion of a wood smoke awareness course that has been approved by the Executive Officer or payment of a penalty of \$50;
- (2) For second time violators during each wood-burning season, payment of a penalty of \$150 or submission of proof of installation of a dedicated gaseous-fueled fireplace within 90 days after receiving the Notice of Violation; and
- (3) For third time violators during each wood-burning season, payment of a penalty of \$500 or implementation of an environmentally beneficial project as derived through the mutual settlement process.

**(j)** Severability

If any provision of this rule is held by judicial order to be invalid, or invalid or inapplicable to any person or circumstance, such order shall not affect the validity of the remainder of this rule, or the validity or applicability of such provision to other persons or circumstances.



Source Receptor Area (SRA) Map Index

	<b>Coastal</b>			<b>San Bernardino Valley</b>	
	Northwest Los Angeles County Coastal	2		Northwest San Bernardino Valley	32
	Southwest Los Angeles County Coastal	3		Southwest San Bernardino Valley	33
	South Los Angeles County Coastal	4		Central San Bernardino Valley	34
	North Orange County Coastal	18		East San Bernardino Valley	35
	Central Orange County Coastal	20		<b>Hemet/Elsinore Area</b>	
	<b>Metropolitan</b>			Perris Valley	24
	Central Los Angeles County	1		Lake Elsinore	25
	Southeast Los Angeles County	5		Hemet-San Jacinto Valley	28
	South Central Los Angeles County	12		<b>Temecula/Anza Area</b>	
	Northern Orange County	16		Temecula Valley	26
	<b>San Fernando Valley</b>			Anza Area	27
	West San Fernando Valley	6		<b>San Gabriel Mountain</b>	
	East San Fernando Valley	7		San Gabriel Mountains	15
	Santa Clarita Valley	13		<b>San Bernardino Mountain</b>	
	<b>San Gabriel Valley</b>			West San Bernardino Mountains	36
	West San Gabriel Valley	8		Central San Bernardino Mountains	37
	East San Gabriel Valley	9		<b>Big Bear Lake</b>	
	Pomona-Walnut Valley	10		Big Bear Lake	38
	South San Gabriel Valley	11		<b>Banning Pass Area</b>	
	<b>Inland Orange County</b>			Banning Pass Area	29
	Central Orange County	17			
	Saddleback Valley	19			
	Capistrano Valley	21			
	<b>Riverside Valley</b>				
	Corona-Norco Area	22			
	Metropolitan Riverside	23			

## SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

### **Final Staff Report Proposed Amended Rule 445 – Wood-Burning Devices**

**October 27, 2020**

#### **Deputy Executive Officer**

Planning, Rule Development and Area Sources  
Philip M. Fine, Ph.D.

#### **Assistant Deputy Executive Officer**

Planning, Rule Development and Area Sources  
Sarah L. Rees, Ph.D.

#### **Planning and Rules Manager**

Planning, Rule Development and Area Sources  
Tracy A. Goss, P.E.

---

Authors: Henry Pourzand – Program Supervisor  
George Wu – Air Quality Specialist

Contributors: Kalam Cheung, Ph.D. – Program Supervisor  
Sang-Mi Lee, Ph.D. – Program Supervisor  
Scott Epstein, Ph.D. – Program Supervisor  
Xiang Li, Ph.D. – Air Quality Specialist  
Zorik Pirveysian – Planning and Rules Manager  
Ryan Banuelos – Air Quality Specialist  
Shah Dabirian, Ph.D. – Program Supervisor

Reviewed By: Barbara Baird, Esq. – Chief Deputy Counsel  
Kathryn Roberts, Esq. – Deputy District Counsel II

**SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT  
GOVERNING BOARD**

Chairman: DR. WILLIAM A. BURKE  
Speaker of the Assembly Appointee

Vice Chairman: BEN BENOIT  
Council Member, Wildomar  
Cities of Riverside County

**MEMBERS:**

KATHRYN BARGER  
Supervisor, Fifth District  
County of Los Angeles

LISA BARTLETT  
Supervisor, Fifth District  
County of Orange

JOE BUSCAINO  
Council Member, 15<sup>th</sup> District  
City of Los Angeles Representative

MICHAEL A. CACCIOTTI  
Council Member, South Pasadena  
Cities of Los Angeles County/Eastern Region

VANESSA DELGADO  
Senate Rules Committee Appointee

GIDEON KRACOV  
Governor's Appointee

LARRY MCCALLON  
Mayor, Highland  
Cities of San Bernardino County

JUDITH MITCHELL  
Council Member, Rolling Hills Estates  
Cities of Los Angeles County/Western Region

V. MANUEL PEREZ  
Supervisor, Fourth District  
County of Riverside

CARLOS RODRIGUEZ  
Council Member, Yorba Linda  
Cities of Orange County

JANICE RUTHERFORD  
Supervisor, Second District  
County of San Bernardino

**EXECUTIVE OFFICER:**

WAYNE NASTRI

**TABLE OF CONTENTS**

EXECUTIVE SUMMARY..... 1  
BACKGROUND ..... 3  
HEALTH EFFECTS & ENVIROMENTAL IMPACTS ..... 88  
OZONE FORECASTING..... 99  
RULE 445 ..... 1111  
CONTINGENCY MEASURES ..... 1313  
PROPOSED AMENDMENTS TO RULE 445 ..... 1414  
VOC EMISSION REDUCTIONS ..... 2020  
AFFECTED SOURCES ..... 2121  
PUBLIC PROCESS ..... 2121  
SOCIOECONOMIC ASSESSMENT..... 2121  
CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) ..... 2222  
CONCLUSION..... 2323  
DRAFT FINDINGS UNDER CALIFORNIA HEALTH AND SAFETY CODE SECTION  
40727..... 2323  
COMPARATIVE ANALYSIS ..... 2424

**APPENDICES**

A – VOC EMISSION REDUCTIONS EXPECTED FROM THE RULE AMENDEMENT .. A1  
B – SOURCE RECEPTOR AREAS (SRAs) .....B1  
C – COMMENTS AND RESPONSE TO COMMENTS.....C1

## EXECUTIVE SUMMARY

Rule 445 – Wood Burning Devices was adopted in March 2008 to implement the PM<sub>2.5</sub><sup>1</sup> Control Measure BCM-03 of the 2007 Air Quality Management Plan (AQMP) to reduce PM<sub>2.5</sub> emissions from wood-burning devices. Rule provisions apply to manufacturers, vendors, commercial firewood sellers, and persons owning or operating a wood-burning device. The majority of wood-burning devices in the South Coast Air Basin (SCAB)<sup>2</sup> are fireplaces and wood-stoves, but also include any similar permanently installed, indoor or outdoor wood-burning devices. The rule also prohibits burning of products not intended for use as fuel and the sale of unseasoned wood, and includes curtailment of wood-burning on “No-Burn” days when ambient PM<sub>2.5</sub> concentration is forecast to exceed a threshold limit (currently at 29 µg/m<sup>3</sup>)<sup>3</sup>. The rule was amended in May 2013 to implement Control Measure BCM-01 in the 2012 AQMP to address the U.S. EPA’s lowering of the PM<sub>2.5</sub> annual standard from 15 to 12 µg/m<sup>3</sup> ~~to reflect a more health protective standard~~. The 2013 amendments expanded the wood-burning curtailment or No-Burn day restrictions by lowering the curtailment threshold from 35 to 30 µg/m<sup>3</sup>, establishing criteria for Basin-wide curtailment, and also setting standards for commercially sold solid-fuel labeling. Exemptions are included for low income households, where the device is the sole source of heating, geographic elevations 3,000 feet or higher above mean sea level, and ceremonial fires. Rule 445 was most recently amended in June 2020 to establish PM<sub>2.5</sub> contingency measures that would be automatically implemented in the event that the U.S. EPA determines that the SCAB had failed to meet a Reasonable Further Progress (RFP) milestone or to attain a PM<sub>2.5</sub> National Primary Ambient Air Quality Standard by the attainment date, pursuant to CAA Section 172(c)(9).

The 2016 Air Quality Management Plan (AQMP) was developed to address the CAA requirements of the 2008 8-hour ozone standard. It was approved by the South Coast AQMD and the California Air Resources Board (CARB) and submitted to the U.S. EPA in April 2017. As an Extreme ozone nonattainment area, the SCAB relied on CAA section 182(e)(5) measures to comply with the attainment contingency requirement for the 2008 ozone standard to demonstrate compliance with RFP as well as contingency if the RFP milestones are not met. During the U.S. EPA’s evaluation of the 2016 AQMP, and as a result of a court’s requirements for contingency measures in *Bahr v. EPA*, 836 F.3d 1218 (9th Cir. 2016), the U.S. EPA advised South Coast AQMD that the contingency measures identified in the 2016 AQMP were not sufficient, and that South Coast AQMD must adopt a local contingency measure to be triggered upon finding of failure to meet an RFP milestone for the 2008 8-hour ozone standard. On October 1, 2019, effective October 31, 2019, the U.S. EPA approved the ozone portion of the 2016 AQMP for the South Coast Air Basin, except for the RFP contingency measure requirement which was “conditionally approved”<sup>4</sup>, relying on specific commitments to adopt a new or modify an existing rule or rules to provide for

---

1 Airborne fine particulate matter ≤ 2.5 micrometers in aerodynamic diameter (µm).

2 The South Coast Air Basin (SCAB or Basin) is a geographic region that encompasses Orange county and the non-desert portions of Los Angeles, Riverside and San Bernardino counties as defined in CCR, Title 17, Section 60104.

3 Micrograms per cubic meter. On 9/16/2020 US EPA published the finding of a failure to attain the 24-hour PM<sub>2.5</sub> standard triggering the Rule 445(f)(2)(A) contingency provision lowering the PM<sub>2.5</sub> forecast threshold from 30 µg/m<sup>3</sup> to 29 µg/m<sup>3</sup>, effective November 1, 2020.

4 84 FR 52005

additional emissions reductions in the event that the South Coast Air Basin fails to meet an RFP milestone, and for CARB to submit the rule(s) to the U.S. EPA as a SIP revision within 12 months of the U.S. EPA's final action. Accordingly, the South Coast AQMD is under a deadline of October 31, 2020, to submit an RFP contingency measure to the U.S. EPA.

The proposed amendments, which would add the required ozone contingency measures to the rule. These contingency measures would only be automatically implemented in the event that the U.S. EPA determines that the SCAB had failed to meet an RFP milestone or to attain an ozone NAAQS. Wood combustion generates Volatile Organic Compound (VOC) emissions, a key component in the formation of ozone. Measures that further curtail wood burning are therefore anticipated to reduce ambient ozone levels. These contingency control measures are necessary as part of comprehensive efforts to timely attain ozone standards.<sup>5</sup>

When implemented the proposed contingency measures would automatically establish a Basin-wide No-Burn day threshold when the daily maximum 8-hour ozone air quality is forecast to exceed 80 ppb in any Source Receptor Area (SRA)<sup>6</sup>. This threshold would automatically be lowered consecutively to 75 ppb and 70 ppb for a second and third U.S. EPA finding of a failure to comply with a milestone/attainment requirement by the applicable due date, respectively. The proposed amendment would also extend the current term of the wood-burning season (November, December, January and February) to include additional months (September, October, March and April). Staff has determined that these additional months include high ozone days and that ambient wood-burning impacts are significant. The proposed amendment would reduce ambient ozone by increasing the number of Basin-wide No-Burn days. Staff has determined that during these additional months higher ozone days and ambient wood smoke concentrations are correlated.<sup>7</sup> Staff therefore anticipates a reduction in ambient ozone by extending the current term of the wood-burning season to include these months. Ozone emission reductions are anticipated from extending the current term of the wood-burning season (November, December, January and February) to include additional months (September, October, March and April), and adding a contingency provision for Volatile Organic Compound (VOC) emissions reductions from wood-burning curtailment in the rule. Both the new Basin-wide No-Burn day thresholds and the extension of the current wood-burning season provisions would reduce ambient ozone by increasing the number of Basin-wide No-Burn days.<sup>8</sup> Both these provisions would become effective if proposed ozone contingency measures in the rule are triggered. Staff estimates that ozone contingency measures

---

~~5 Discussion of 3% RFP demonstration.~~

6 See Attachment B.

~~7 The US EPA AP-42 VOC emission factor for wood combustion is 229 pounds of VOC per ton of fireplace wood burned. Higher concentrations of levoglucosan, a product of wood burning, have been measured in months with appreciable levels of ozone (see Background section).~~

8 The US EPA AP-42 VOC emission factor for wood combustion is 229 pounds of VOC per ton of fireplace wood burned. VOCs react with Oxides of Nitrogen (NOx) in the presence of sunlight to form ground level ozone. Higher concentrations of levoglucosan, a combustion product unique to wood-burning, have been measured in months with appreciable levels of ozone. Therefore, it is anticipated that a reduction in wood-burning will result in a reduction in VOCs and consequently ambient ozone formation (see the Background section for more detailed information).

at 80, 75 and 70 ppb, if triggered, would result in an estimated 22.38, 46.10, and 88.43 TPY VOC emission reduction, respectively.

**BACKGROUND**

Ozone is a pollutant that is formed in the atmosphere by the chemical reaction of oxides of nitrogen (NOx) and VOCs in the presence of sunlight. Numerous studies have linked inhalation of higher concentrations of ambient ozone with health effects such as ~~increased mortality~~, respiratory and cardiovascular disease (see Health Effects section). The federal Clean Air Act (CAA) requires the U.S. EPA to set air quality standards for criteria pollutants and periodically review the latest health research to ensure that standards remain protective of public health. On July 18, 1997, the U.S. EPA revised the primary and secondary standards for ozone to a more health protective 0.08 ppm, averaged over an 8-hour period. In order to be further health protective, the 1997 8-hour ozone standard was lowered to 0.075 ppm in 2008, and to then 0.070 ppm in 2015.

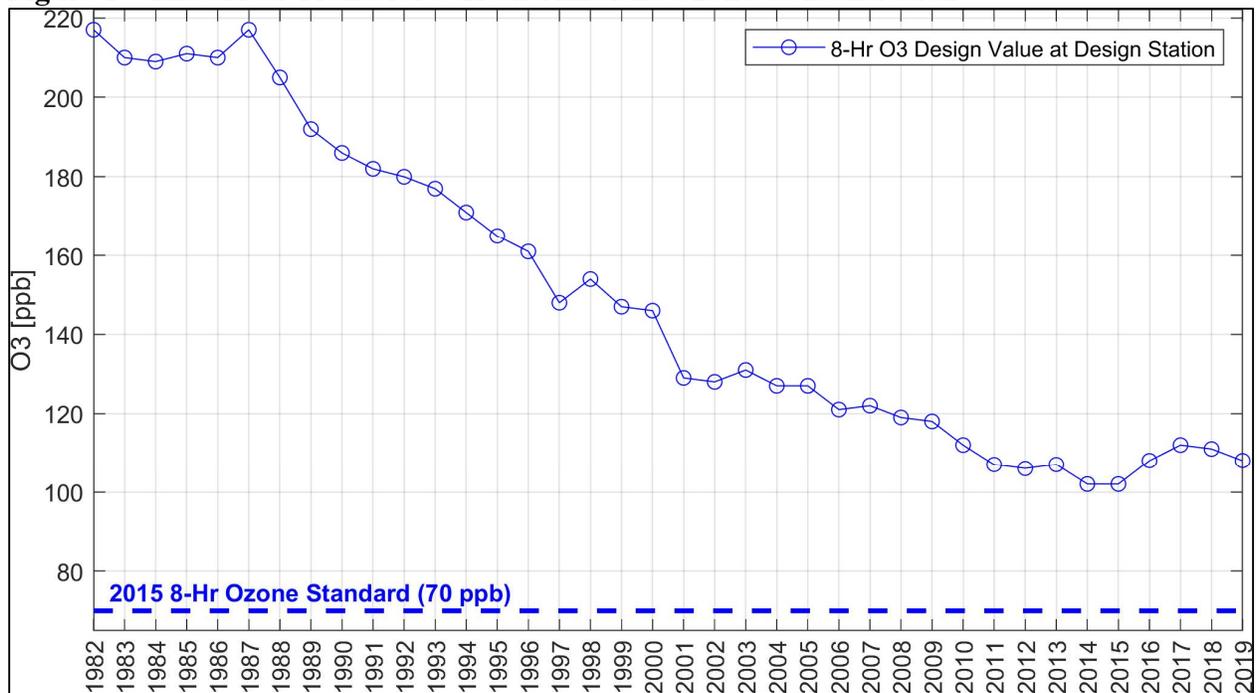
Sections 172(c)(9) and 182(c)(9) of the CAA require contingency measures to be implemented if an ozone nonattainment area fails to meet reasonable further progress (RFP) milestones or fails to attain the NAAQS by the required attainment date. The U.S. EPA Ozone Implementation Rule also states that “contingency measures should represent one-year’s worth of progress, amounting to reductions of three (3) percent of the baseline emissions inventory for the nonattainment area.”<sup>9</sup> In addition, CAA Section 182(e)(5) allows Extreme nonattainment areas to rely on future development of new control techniques or improvement of existing control technologies as part of the control strategy for attainment of an ozone standard. A summary of the requirements and current designations for the 8-hour averaged federal ozone standards for the Basin is shown in Table 1. Figure 1 shows that while historically ozone concentrations in the Basin ~~has~~ trended downwards, ~~it—the Basin~~ still remains in nonattainment ~~for the~~ status for the 8-hour ozone standards.

**Table 1 – Historical Summary for Ozone Standards and Attainment Dates**

<b>8-Hour Standard</b>	<b>Attainment Threshold</b>	<b>Basin Status</b>	<b>Basin Designation</b>	<b>Attainment Date</b>
1997	0.08 ppm (80 ppb)	Nonattainment	Extreme	6/15/2024
2008	0.075 ppm (75 ppb)	Nonattainment	Extreme	7/20/2032
2015	0.070 ppm (70 ppb)	Nonattainment	Extreme	8/3/2038

---

9 80 FR 12264

**Figure 1 – Historical Trend for 8-Hour Ambient Ozone Concentration**

The 2016 Air Quality Management Plan (AQMP) was developed to address the CAA requirements of the 2008 8-hour ozone standard. It was approved by the South Coast AQMD and the California Air Resources Board (CARB) and submitted to the U.S. EPA in April 2017. In accordance with the U.S. EPA’s guidance at the time, for the 2016 AQMP contingency measures, the South Coast AQMD relied on baseline emissions in future years, representing reductions achieved from existing rules and regulations with future implementation, to demonstrate compliance with RFP as well as contingency if the RFP milestones are not met. As an Extreme ozone nonattainment area, the South Coast Air Basin relied on CAA section 182(e)(5) measures to comply with the attainment contingency requirement for the 2008 ozone standard.

Since the adoption of the 2016 AQMP, the U.S. EPA has expressed concern that the RFP contingency element of the 2016 AQMP might not satisfy the court’s requirements for contingency measures in *Bahr v. EPA*, 836 F.3d 1218 (9th Cir. 2016). In that case, the court held that control measures that have already been implemented do not comply with the requirement for “contingency measures” under CAA section 172(c)(9). U.S. EPA staff has interpreted that decision to mean that contingency measures must include a future requirement that is to be triggered by a finding of failure to attain or failure to make RFP.

During the U.S. EPA’s evaluation of the 2016 AQMP, and as a result of the *Bahr* decision, the U.S. EPA advised South Coast AQMD that the contingency measures identified in the 2016 AQMP were not sufficient, and that South Coast AQMD must adopt a local contingency measure to be triggered upon finding of failure to meet an RFP milestone for the 2008 8-hour ozone standard. On January 9, 2019, South Coast AQMD submitted to the U. S. EPA a letter committing to adopt a new rule or amend an existing rule to satisfy the contingency measure requirement. On May 2, 2019, the Executive Officer sent an additional clarification letter, explaining what specific requirements would be changed in the rules if that rule is selected for contingency measure.

On October 1, 2019, effective October 31, 2019, the U.S. EPA approved the ozone portion of the 2016 AQMP for the South Coast Air Basin, and “conditionally approved” ~~except for the RFP contingency measure requirement which was “conditionally approved”~~<sup>10</sup>. The conditional approval relied on specific commitments from (1) South Coast AQMD to modify an existing rule or rules, or adopt a new rule(s), that would provide for additional emissions reductions in the event that the South Coast Air Basin fails to meet an RFP milestone, and (2) for CARB to submit the revised or new South Coast AQMD rule(s) to the U.S. EPA as a SIP revision within 12 months of the U.S. EPA’s final action (effective October 31, 2019). Accordingly, the South Coast AQMD is under a deadline of October 31, 2020, to submit an RFP contingency measure to the U.S. EPA. The attainment contingency for the 2008 standard, currently relying on section 182(e)(5) measures, is required to be defined three years before the attainment year of 2032. Additional requirements are further discussed in the section titled Contingency Measures.

The proposed rule is designed to reduce ozone by extending the number of months during which wood-burning curtailment days may potentially be declared. As shown in Figure 2 below, higher levels of levoglucosan (a combustion product of unique to wood-burning) are also measured<sup>11</sup> in the “shoulder” months of March, April, September and October on either side of the traditional current wood-burning season (November 1 through to the end of February) at monitoring stations throughout the Basin. Figure 3<sub>2</sub> shows that there are also appreciable levels of ambient ozone during the shoulder months, so that a curtailment of wood-burning during the shoulder months is anticipated to reduce VOC emissions and thus ambient ozone concentrations. This is also in line with U.S. EPA AP-42 emissions factor of 229 pounds of VOC emitted per ton of fireplace wood burned.<sup>12</sup>

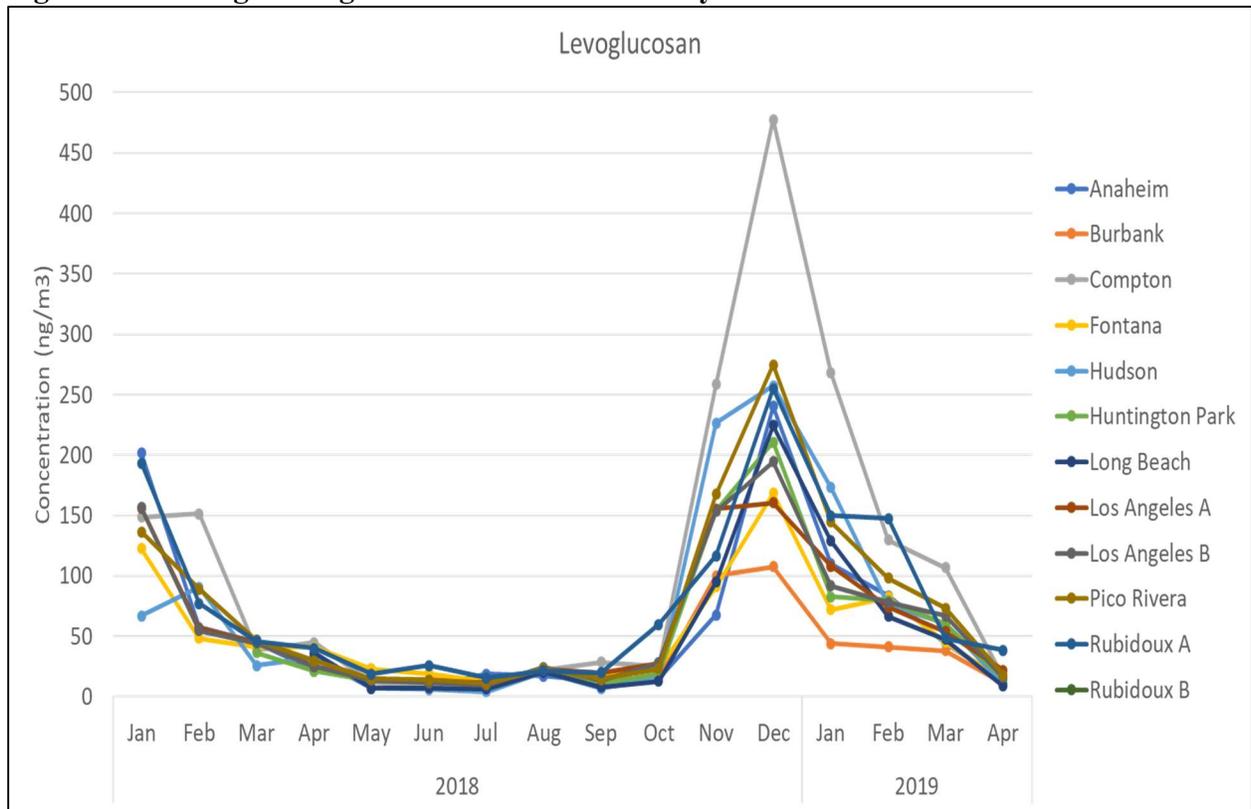
---

10 84 FR 52005

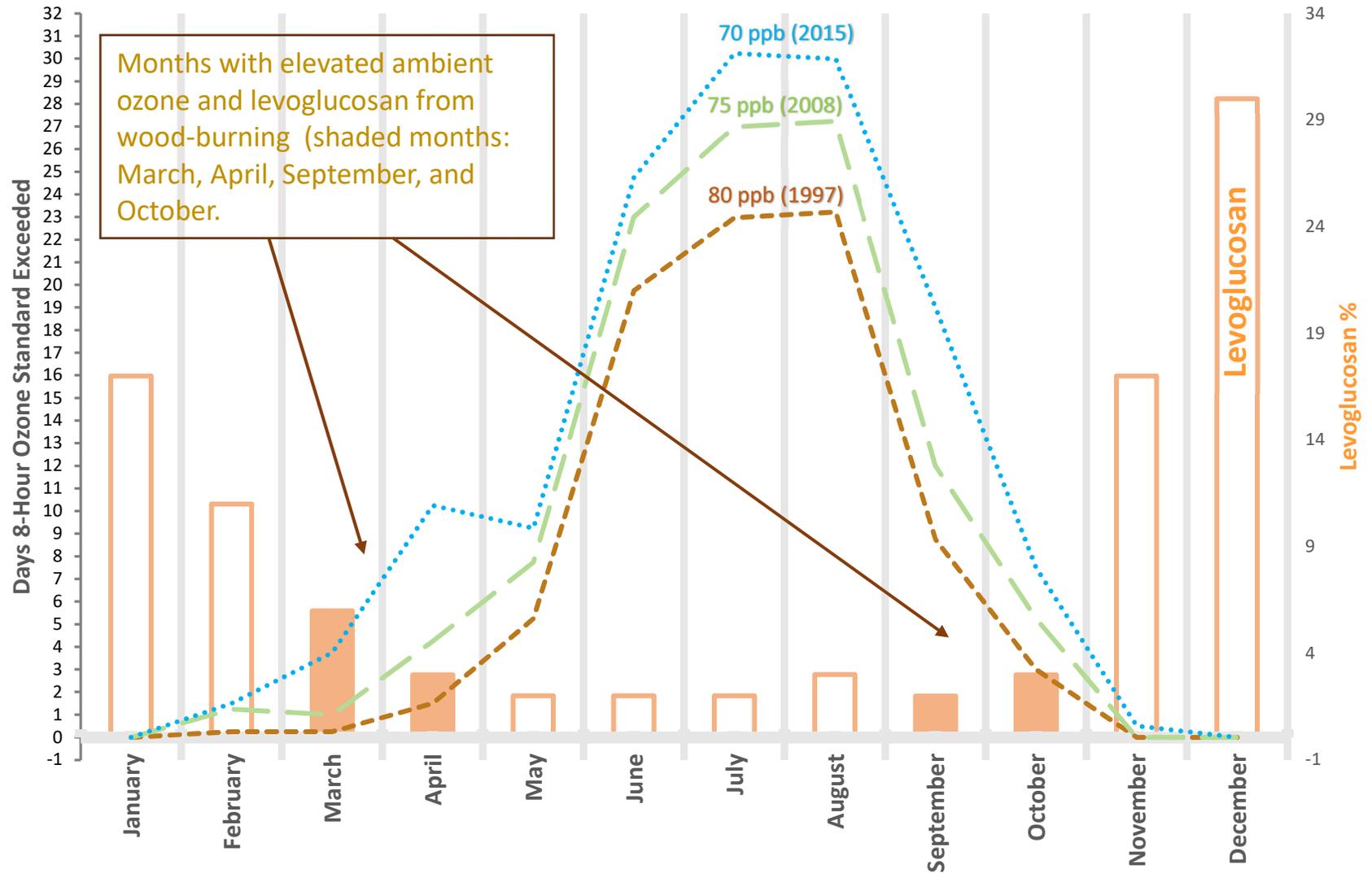
11 <http://www.aqmd.gov/docs/default-source/air-quality/air-toxic-studies/mates-iii/mates-iii-draft-report-january-2008/appendix-vii-pm2-5-source-apportionment-methodology.pdf>

12 <https://www3.epa.gov/ttn/chief/ap42/ch01/final/c01s09.pdf>

**Figure 2 – Average Levoglucosan Concentrations by Month and Location**



**Figure 3 - Average Number of Days per Month 8-Hour Ozone Standard Exceeded (2016-2019) and Average Levoglucosan Concentrations**



## HEALTH EFFECTS & ENVIRONMENTAL IMPACTS

The adverse effects of ozone air pollution exposure on health have been studied for many years, as documented by a significant body of peer-reviewed scientific research, including studies conducted in Southern California. The April, 2020 U.S. EPA document, Integrated Science Assessment of Ozone and Related Photochemical Oxidants,<sup>13</sup> summarizes the state of the scientific knowledge and research on ozone and its health effects. A summary of health effects information and additional references can also be found in Appendix I: Health Effects in the 2016 AQMP. Individuals working outdoors, children (including teenagers), older adults, people with preexisting lung disease, such as asthma, and individuals with certain nutritional deficiencies are the sub-groups most susceptible to the effects of ozone. Short-term exposures (lasting for a few hours) to ozone at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated ozone levels are associated with increased school absences and daily hospital admission rates, ~~as well as increased mortality~~. An increased risk for asthma has been found in children who participate in multiple sports and live in high-ozone communities. Ozone exposure under exercising conditions is known to increase the severity of respiratory symptoms. Although lung volume and airway resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.

High levels of ozone also can affect sensitive plants by inhibiting photosynthesis, reducing the growth rate, and increasing the susceptibility to disease, insects, and severe weather. This can result in reduced crop output and the loss of species diversity in natural environments.

Residential wood-burning is a significant source of VOC emissions, a key ozone precursor. Many of these VOCs are considered air toxics, such as formaldehyde, acetaldehyde, acetonitrile, acrolein, benzene, and dioxin<sup>14</sup>. Emissions from residential wood-burning devices are caused primarily by incomplete combustion and also include PM, CO, NO<sub>x</sub>, and SO<sub>x</sub>. Additionally, incomplete combustion of wood produces polycyclic organic matter (POM), a group of compounds classified as hazardous air pollutants under Section 112 of the CAA. Biomass burning is also a source of black carbon (soot) which studies suggest can influence climate by directly absorbing light, reducing the reflectivity of snow and ice through deposition and interacting with clouds. According to CARB<sup>15</sup>, soot from residential wood combustion is forecast to be the largest individual anthropogenic (man-made) source of black carbon in 2030 if no new programs are implemented.

---

13 U.S. EPA. (2020). Integrated Science Assessment of Ozone and Related Photochemical Oxidants (Final Report). U.S. Environmental Protection Agency, Washington, DC, EPA/600/R-20/012, 2020-  
<https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=348522>

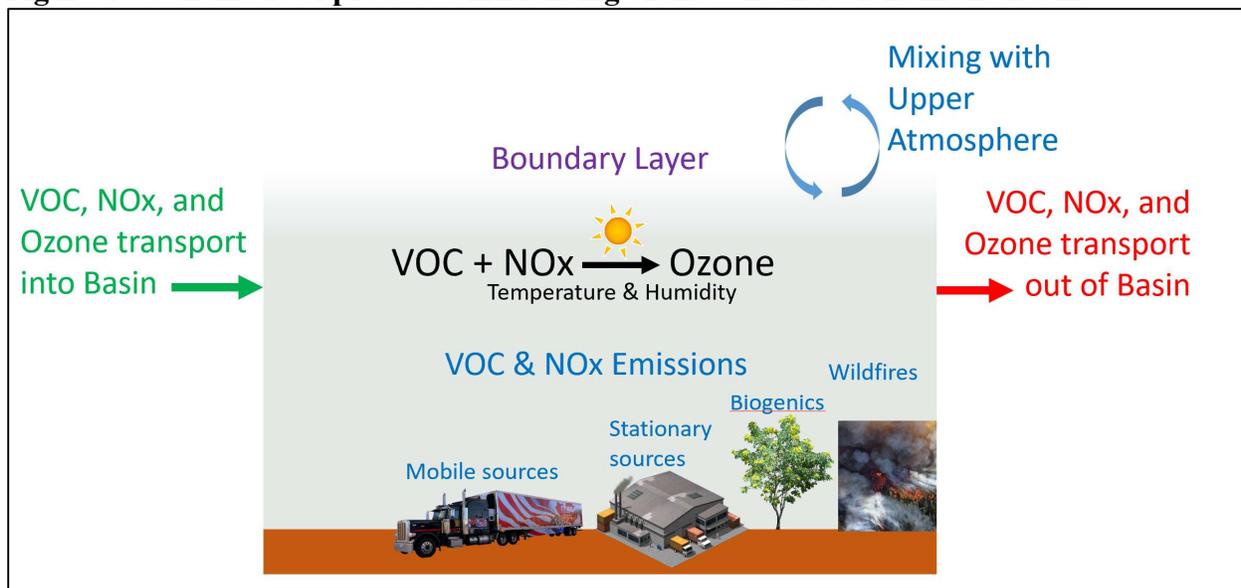
14 Brown, S.G. et al, (2020). Assessment of Ambient Air Toxics and Wood Smoke Pollution among Communities in Sacramento County. *Int. J. Environ. Res. Public Health*, 17, 1080

15 CARB. Short-Lived Climate Pollutant Reduction Strategy. March 14, 2017-  
[https://ww3.arb.ca.gov/cc/shortlived/meetings/03142017/final\\_slcp\\_report.pdf](https://ww3.arb.ca.gov/cc/shortlived/meetings/03142017/final_slcp_report.pdf)

## OZONE FORECASTING

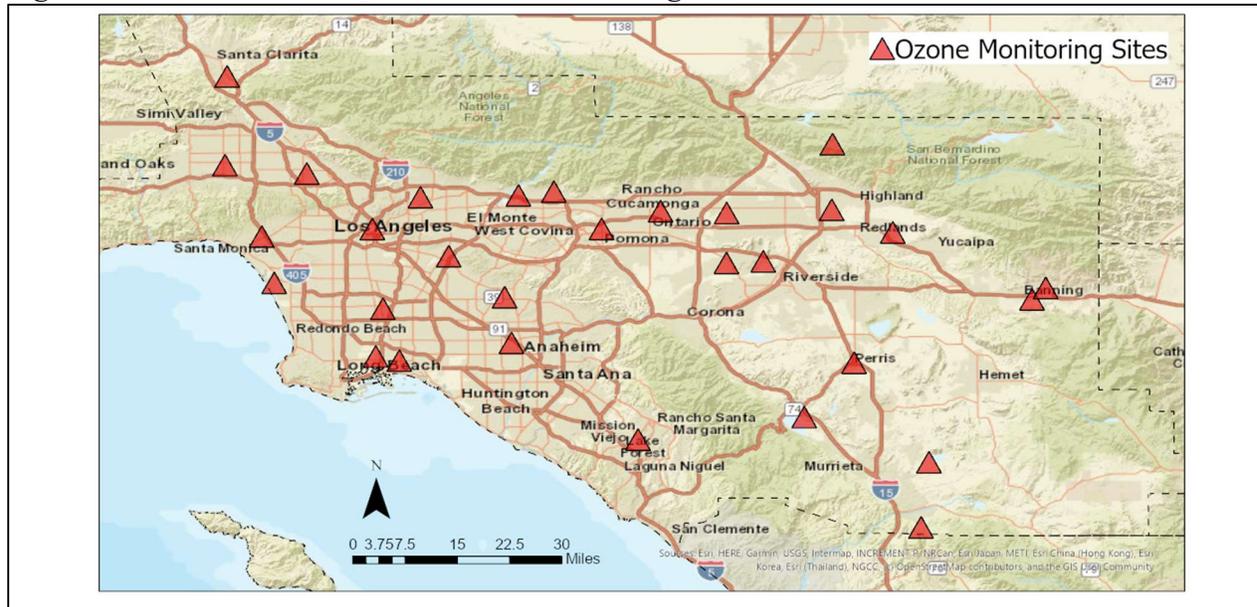
Figure 4 illustrates the processes influencing ozone concentrations in the Basin. NO<sub>x</sub> generated from combustion processes react with VOCs emitted from a wide variety of sources such as consumer products, mobile sources, vegetation, and combustion processes such as residential wood-burning to form ambient ozone. The chemical reactions that form ozone are highly complex and depend not only on NO<sub>x</sub> and VOC levels, but also on the ratio of VOC to NO<sub>x</sub> concentrations, temperature, the amount of sunlight, and other meteorological conditions. In addition, ozone can also be formed in one area and be transported to other areas.

**Figure 4 – Schematic of processes influencing ozone concentrations in the Basin**



Ozone is measured at 27 stations operated by the South Coast AQMD throughout the Basin.<sup>16</sup> Compliance with the 8-hour ozone NAAQS is determined using a three (3) year average of the fourth highest (99<sup>th</sup> percentile) 8-hour daily maximum concentrations at each monitoring station, which is defined as the 8-hour ozone design value. The monitoring site with the highest measured values in a non-attainment area is used for compliance purposes. Figure 5 illustrates the location of regulatory ozone monitors throughout the Basin, ~~located in the same SRA's as currently defined in the rule (see Appendix B). Note that the proposed amendments do not change the existing definition of SRA's in the rule and the purpose of Figure 5 is to show the location of the ozone monitoring stations.~~

<sup>16</sup> Details describing the monitoring network are presented in the annual South Coast AQMD Monitoring Network Plan available at <http://www.aqmd.gov/home/air-quality/clean-air-plans/monitoring-network-plan>.

**Figure 5 – South Coast AQMD Ozone Monitoring Stations**

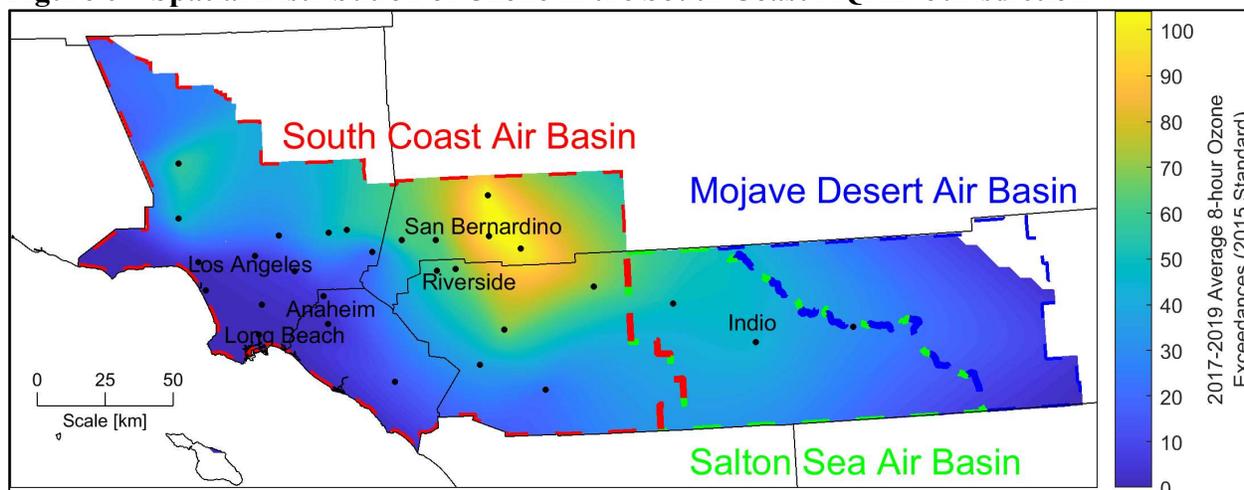
South Coast AQMD staff use weather forecasts, air pollution measurements, satellite data, and mathematical models to predict ozone, particulate (PM<sub>2.5</sub> and PM<sub>10</sub>), nitrogen dioxide, and carbon monoxide concentrations. Forecast models are tools for making predictions, which are based on and evaluated by air pollution measurements. Traditionally, South Coast AQMD staff issued a daily air quality forecast summarizing conditions expected over the entire day for each Source Receptor Area's (SRA) as shown in Figure 5 and Appendix B. With new models developed and maintained by NOAA<sup>17</sup> scientists, South Coast AQMD staff can also now issue hourly forecasts of PM<sub>2.5</sub> and ozone for the next day. These models are customized using local measurements and state-of-the-science models of air pollution levels, resulting in more accurate predictions. The predicted pollutant levels are reported as an Air Quality Index (AQI). The higher the AQI, the higher the level of air pollution and potentially greater health concerns for the exposed population. Air quality forecasts are generated on the SRA level with models using monitoring data. However, not all SRAs contain an ozone monitoring station/equipment, in which case, the forecast is interpolated. Data is available in real-time and is used for air quality forecasting and public reporting of current conditions. AQI values, which are based on ozone, PM<sub>2.5</sub>, PM<sub>10</sub>, nitrogen dioxide, and carbon monoxide measurements, are reported in real-time on the South Coast AQMD and AirNow websites. Hourly forecasts provide more detailed information about pollution levels throughout the day. This can be useful, for example, in planning out what time of the day would be best for outdoor activities. For regulatory purposes however, a daily average forecast is used. The proposed rule amendments include a definition for the daily ozone air quality forecast as the predicted ambient maximum 8-hour average ozone concentration expected over the 24-hour period. This is to distinguish the daily ozone forecast which is used for forecasting No-Burn days from the hourly ozone forecast, which is provided for informational purposes only. Both hourly

<sup>17</sup> The National Oceanic and Atmospheric Administration is a federal agency providing weather forecasts.  
<https://www.noaa.gov/>

and daily Basin forecasts can be found on the South Coast AQMD website at: <http://www.aqmd.gov/forecast>.

Atmospheric chemistry and rates of dispersion are a strong function of topography and weather, leading to strong geographic variations in ozone concentrations. Ozone is formed in the atmosphere by reactions that take time to occur. The predominant afternoon onshore winds transport emissions towards the north into the San Fernando Valley and to the east towards the Inland Empire and the San Bernardino Mountains. These emissions react to form ozone as they are transported, generating higher concentrations as the plume moves north and east. Peak ozone concentrations in the Basin are generally highest in southwestern San Bernardino County. Figure 6 shows the distribution of ozone exceedance days in the Basin. Dilution of ozone and its precursors typically overcomes the competing effect of chemical formation as the plume moves beyond Crestline or the San Bernardino Valley.

**Figure 6 – Spatial Distribution of Ozone in the South Coast AQMD Jurisdiction**



## RULE 445

Current provisions of Rule 445 control PM<sub>2.5</sub> wood smoke emissions from wood-burning devices through several mechanisms. These include:

- New developments: prohibiting the installation of wood-burning devices in developments where construction began after March 9, 2009.
- Existing developments: by limiting the sale and installation of wood-burning devices to a:
  - U.S. EPA certified wood-burning heater,
  - pellet-fueled wood-burning heater,
  - masonry heater, or
  - dedicated gaseous-fueled fireplace insert.
- A prohibition against the burning of any product not intended for use as a fuel (e.g., trash, plastics, rubber products and treated wood).

- Sale of only seasoned wood fuel (20 percent or less moisture content by weight) by commercial wood-based fuel sellers between July 1, through to the end of February of the following year.
- A labeling requirement for commercial firewood sellers to affix an indelible label to each package of firewood advising at a minimum that there are times during the year (wood-burning season) when there may be a restriction on product usage (No-Burn days). The label or alternatively another form of written material which is provided must also list the No-Burn toll-free number and [www.8774NOBURN.org](http://www.8774NOBURN.org) website address. This advisory is intended to let the consumer know that on days declared to be No-Burn days, wood-burning is not allowed.
- PM2.5 Wood-Burning Season Mandatory Burning Curtailment (No-Burn): a prohibition on operating an indoor or outdoor wood-burning device, portable outdoor wood-burning device, or wood-fired cooking device during the wood-burning season (November 1 through February of the following year) based on the specified geographic area below 3,000 feet above mean sea level and applicable daily PM2.5 air quality forecast as follows:
  - (A) Basin-wide if the daily PM2.5 air quality forecast exceeds  $30 \mu\text{g}/\text{m}^3$  for any source receptor area, or
  - (B) subsequent to a determination by the U.S. EPA, of a failure to comply with either a referenced PM2.5 standard or reporting requirement; the applicable daily PM2.5 air quality forecast as set forth in Contingency Measures.
- PM2.5 Contingency Measures: upon the issuance of a final determination by the U.S. EPA, that the South Coast Air Basin has failed to comply with the following requirements the applicable date to:
  - (A) meet any PM2.5 Reasonable Further Progress (RFP) requirement in an attainment plan approved in accordance with § 51.1012;
  - (B) meet any quantitative PM2.5 milestone in an attainment plan approved in accordance with § 51.1013;
  - (C) submit a quantitative PM2.5 milestone report required under § 51.1013(b); or,
  - (D) attain the applicable PM2.5 NAAQS by the applicable attainment date,the contingency measure(s) shall be implemented, sequentially and in the order of stringency. The triggers for No-Burn threshold are as follows:
  - (A)  $29 \mu\text{g}/\text{m}^3$  for first failure;
  - (B)  $28 \mu\text{g}/\text{m}^3$  for second failure;
  - (C)  $27 \mu\text{g}/\text{m}^3$  for third failure; and
  - (D)  $26 \mu\text{g}/\text{m}^3$  for fourth failure.

Dedicated gaseous fueled fireplaces or electric powered devices are exempt from the provisions of Rule 445. Additional exemptions exist where there is no natural gas service within 150 feet of the property line, locations 3,000 feet or higher above mean sea level, when the device is the sole

source of heat, when the device is in low income households, and for ceremonial fires, as defined in the Rule 444 – Open Burning.

## CONTINGENCY MEASURES

In addition to the 2008 ozone standard, contingency measure requirements for other federal ozone standards are also applicable for the South Coast Air Basin. In 2015, the The U.S. EPA lowered the 8-hour standard to 0.070 ppm. The South Coast Air Basin is designated as Extreme nonattainment effective August 3, 2018. Contingency measures are required four years from the effective date of designation. Accordingly, the RFP and attainment contingencies for the 2015 8-hour ozone standard are due to the U.S. EPA on August 3, 2022.

For the 1997 ozone standard, the RFP demonstration was included in the 2007 AQMP (Tables 6-2A and 6-2B).<sup>18</sup> For all milestone years, RFP was met based on reductions in baseline emissions. The baseline emissions incorporated the rules and regulations adopted/amended before the 2007 AQMP. Since the 2007 AQMP, many rules and regulations have been adopted/amended which provide additional emission reductions beyond those described in the 2007 AQMP baselines. Thus, the South Coast AQMD has already met its RFP milestone requirements for the 1997 standard. For the attainment contingency, South Coast relied in part on the commitment to submit by 2020 additional contingency measures meeting the requirements of CAA sections 172(c)(9) and 182(e)(5).<sup>19</sup> A Contingency Measure Plan was developed and submitted prior to January 1, 2020 to address the requirements in section 182(e)(5).<sup>20</sup> The proposed contingency measures included in PAR 445 would also address the attainment contingency requirement for the 1997 ozone standard.

Contingency measures should provide for emission reductions approximately equivalent to either ~~one-~~(~~1~~) year's worth of air quality improvement or one~~1~~ year's worth of reductions needed for RFP in the years following RFP milestone and attainment years. While the proposed amendments in Rule 445 satisfy a 'triggering mechanism' requirement set by the U.S. EPA based on the *Bahr* case, the reductions from the rule alone are not adequate to satisfy the ~~1~~one-year's worth of progress, which is defined as a 3% emission reduction requirement of either NOx or VOC (or combined) per year.<sup>21</sup> However, additional surplus reductions available through existing regulations and programs in place will ensure that the ~~1~~one-year's worth of progress is achieved.

---

18 2007 Air Quality Management Plan. Available at <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2007-air-quality-management-plan/2007-aqmp-final-document.pdf?sfvrsn=2>

19 76 FR 57871 and 77 FR12673

20 Contingency Measure Plan for the 1997 8-hour Ozone Standard for the South Coast Air Basin. Available at <http://www.aqmd.gov/docs/default-source/planning/1997-ozone-contingency-measure-plan/1997-8-hour-ozone-draft-contingency-measure-plan---120619.pdf?sfvrsn=6>

21 80 FR 12264

The RFP and contingency measure requirements for the 2008 ozone standard were evaluated as part of the 2016 AQMP<sup>22</sup> and subsequently in the 2018 SIP update<sup>23</sup>. Both evaluations demonstrated that baseline emissions in the South Coast Air Basin not only provided the required RFP progress, but surplus reductions amounting to at least one-year's worth of progress (i.e. 3% emission reductions) needed for contingency measures (see Tables VI-C-1A and VI-C-1B of 2016 AQMP, and Tables IX-2 and X-4 of 2018 SIP Update). In other words, given the considerable amount of emission reductions generated from existing rules and regulations, there are surplus reductions for each of the milestone years after accounting for RFP and contingency requirements.

Contingency measures are required to result in emission reductions within one year of a final action by the U.S. EPA. It would be challenging to implement more stringent requirements, achieving additional NOx or VOC reductions, in rules involving other traditional sources within the mandated one-year time period. Retrofitting/replacement of existing equipment with newer technologies/equipment, or any permitting provisions would likely take more than one year to effectively implement. Conversely, the proposed amendment to Rule 445, does not require permitting of units, does not require units be retrofitted or replaced, and does not require reformulation or development of new products. Consequently, Rule 445 is well suited for contingency provisions since implementing a lower threshold for an ozone No-Burn curtailment program could be easily implemented in less than one year following the triggering of a contingency measure.

Based on the above analysis, the South Coast Air Basin will satisfy the contingency requirements for set in CAA section 172(c)(9) and the U.S. EPA's Ozone Implementation Rule with these proposed amendments to Rule 445. South Coast AQMD's PAR 445, Wood-Burning Devices, provides a contingency measure to be triggered/undertaken if the Basin fails to meet RFP or attain the applicable ozone standards by the applicable date. The emission reductions anticipated from PAR 445, in conjunction with reductions from existing rules and regulations, are expected to achieve the reductions equivalent to or more than ~~one~~ one-year's worth of progress. PAR 445 addresses the contingency measures for RFP and attainment for the applicable ozone standards (1997 8-hour ozone standard, 2008 8-hour ozone standard and 2015 8-hour ozone standard).

## **PROPOSED AMENDMENTS TO RULE 445**

Proposed amendments to Rule 445 will not affect current PM2.5 related rule provisions or any existing exemptions. Staff is proposing the addition of ozone related contingency provisions with the following elements:

- The proposed amendments would add contingent ozone provisions to the rule which, if triggered, would ~~also~~ establish an extended Wood-Burning Season for ozone. If ozone contingencies are triggered, on days during the Wood-Burning Season based on ozone

---

22 2016 Air Quality Management Plan. Available at <http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp>

23 2018 California SIP Update. Available at <https://ww2.arb.ca.gov/resources/documents/2018-updates-california-state-implementation-plan-2018-sip-update>

(September 1 through April 30)–, curtailment would be is–mandatory when the daily maximum 8-hour ambient ozone concentration for the Basin is forecast to exceed thresholds in the rule based on NAAQS 8-hour ozone standards.

- Subsequent to rule adoption by the Governing Board, ozone contingency provisions in the rule that will automatically take effect upon a final determination by the U.S. EPA of either, a failure to attain an ozone NAAQS, or comply with an RFP requirement, by the applicable due date.
- Curtailment thresholds corresponding to the 1997 (80 ppb), 2008 (75 ppb) and the 2015 (70 ppb) 8-hour ozone NAAQS.
- Contingency measures under the proposed rule achieve emissions reductions not otherwise relied upon in the current control strategy by incrementally lowering the curtailment forecast threshold for ozone with both incremental and cumulative emissions reductions quantified (see Appendix A). Figure 7 is a graphic showing the months during the wood burning season for which PM2.5, and (if the first ozone contingency measure in the proposed rule is triggered) ozone curtailment days may be declared. Note that there are no curtailment days in the months of May, June, July and August.

**Figure 7 – Wood-Burning Season (Months) for Ozone and PM2.5**

MONTH	January	February	March	April	May	June	July	August	September	October	November	December
Current Wood Burning Season	←→										←→	
Curtailment for PM2.5	←→										←→	
Potential Wood Burning Season*	←→								←→			
Potential Curtailment for Ozone*	←→								←→			

\* if the first ozone contingency measure in the proposed rule is triggered

Specific proposed amendments to the rule are as follows:

<b>(a) Purpose</b>	<p>Clarifies that the purpose of the amendment is to add contingency measures in the rule for <u>an applicable ozone 8-hour</u>–NAAQSs. Contingency measures would only become effective if triggered by failure to comply with any applicable RFP requirement, or applicable 8-hour ozone standard by the applicable attainment date.</p> <p>Rule Text:</p>
--------------------	--

	<p>The purpose of this rule is to reduce the emission of particulate matter from wood-burning devices <u>and establish contingency measures for applicable ozone standards for the reduction of volatile organic compounds.</u></p>
<p><b>(c)(3) Definitions - Daily Maximum 8- Hour Ozone Air Quality Forecast</b></p>	<p>Defines the <u>specific current 8-hour ozone forecasting standard to be used for declaring ozone No-Burn or curtailment days effective upon triggering the first contingency measure.</u></p> <p>Rule Text: <u>DAILY MAXIMUM 8-HOUR OZONE AIR QUALITY FORECAST means the maximum predicted ambient average ozone concentration, during any rolling eight (8) hour time period for the entire consecutive 24-hour period, beginning at midnight of the current day and ending upon the subsequent midnight.</u></p>
<p><b>(c)(24) Definitions – Wood Burning Season</b></p>	<p>The Wood-Burning Season encompasses the <del>period</del><u>term</u> during which a curtailment day may potentially be called based on <del>forecasts</del><u>ambient conditions</u>. Currently, the term spans the months of November through to the end of February. Staff proposes bifurcating the definition of wood-burning season in the rule to retain the current effective term for PM2.5 and define a new effective term for ozone. The span of existing wood-burning months (November, December, January and February) would be increased to include “shoulder” months on either side of the current term – expanding the season to September 1 through April 30. The wood-burning season for ozone would be implemented and <del>only</del> become effective <u>only</u> upon the first final determination of a finding of a failure to comply with any applicable RFP requirement, or applicable <del>8-hour</del> ozone standard by the applicable attainment date, triggering the first contingency measure for an ozone forecast threshold at 80 ppb. However, potential PM2.5 curtailment days <del>would</del><u>may</u> still only be declared November 1, through to the end of February <del>exclusively</del>, while ozone curtailment days may potentially be declared on any day during the wood-burning season. It is unlikely that any ozone curtailment days will be declared from November 1 through February however as ozone levels typically would not exceed thresholds during these months. Figure 7 shows the wood burning months of the year and the effective months for ozone and PM2.5 graphically.</p> <p>Rule Text: <u>WOOD-BURNING SEASON means for:</u> <u>(A) PM2.5, the consecutive entire four (4) months of November, December, January, and February.</u></p>

	<p><u>(B) Ozone, upon triggering any one of the ozone contingency provisions in subparagraph (g), the consecutive entire eight (8) months of September, October, November, December, January, February, March and April.</u></p>
<p><b>(d)(5) – Requirements – Labeling and Sell through Provisions</b></p>	<p>For clarity, a past effective date is deleted, a typo corrected, and a reference updated. These amendments do not change or have any impact on the existing provisions in the rule.</p> <p>Rule Text:          Labeling and Sell-Through Provision  <del>Effective November 4, 2013, n</del>No commercial firewood seller shall sell, offer for sale, or supply wood-based fuel without first attaching a permanently affixed indelible label to each package or providing written notice to each buyer at the time of purchase of bulk firewood <u>that</u> at a minimum that states the following:</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Use of this and other solid fuel products may be restricted at times by law. Please check (1-877-4NO-BURN) or (www.8774NOBURN.org) before burning.</p> </div> <p>(A) Alternative language, toll-free telephone number or web address for the information specified in subdivision (<del>gk</del>) may be used, subject to Executive Officer approval.</p>
<p><b>(e) - Requirements - Wood-Burning Season PM2.5 Mandatory Burning Curtailment (No-Burn day)</b></p>	<p>Clarifies and confirms the existing triggering provisions regarding PM2.5. No change is being proposed to any existing PM2.5 provisions in the rule and these amendments do not change or have any impact on the existing provisions in the rule.</p> <p>Rule Text:          Wood-Burning Season <u>PM2.5</u> Mandatory Burning Curtailment (No-Burn day)          No person shall operate an indoor or outdoor wood-burning device, portable outdoor wood-burning device, or wood-fired cooking device on a calendar day during the wood-burning season <u>for PM2.5</u> so declared to the public by the Executive Officer to be a mandatory wood-burning curtailment (No-Burn) day based on the specified geographic area below 3,000 feet above mean sea level and applicable daily PM2.5 air quality forecast as follows:          (1) Basin-wide if the daily PM2.5 air quality forecast for any source receptor area exceeds 30 µg/m<sup>3</sup>, or          (2) subsequent to a determination by U.S. EPA, pursuant to 40 CFR § 51.1014(a) of a failure to comply with either a referenced PM2.5 standard or reporting requirement; the applicable daily PM2.5 air quality forecast as set forth in subdivision (f) PM2.5 Contingency Measures.</p>

<p><b>(f) – Requirements - PM2.5 Contingency Measures</b></p>	<p>Clarifies and confirms the existing contingency measures regarding PM2.5. No change is being proposed to any existing PM2.5 provisions in the rule and this amendment does not change or have any impact on the existing provisions in the rule.</p> <p>Rule Text: <u>PM2.5</u> Contingency Measures</p>
---	---

<p style="text-align: center;"><b>(g) – Requirements - Wood-Burning Season Ozone Mandatory Burning Curtailemt (No-Burn day)</b></p>	<p>Specifies the triggers for ozone contingency measures, triggered upon a final determination, by the U.S. EPA that the Basin has failed to comply with either an ozone RFP requirement or an applicable <del>8-hour</del> NAAQS, by the applicable due date. Contingency measures, triggered for each final determination of a failure to comply or missed milestone, increase in stringency by decreasing the curtailment forecast threshold in a step wise fashion at 80, 75 and 70 ppb. These forecast thresholds reflect the <del>requirements for the</del> 1997, 2008 and 2015 8-hour ozone NAAQS, respectively. Once in effect, operation of wood-burning devices on No-Burn days based on the daily maximum 8-hour ozone forecast as defined in paragraph (c)(3), during the wood-burning season for ozone, from September 1 through April 30 as defined in paragraph (c)(24), is prohibited in all areas of the Basin located below 3,000 feet.</p> <p>Rule Text:</p> <p><u>(g) Ozone Contingency Measures</u></p> <p><u>(1) Upon the issuance of a final determination by U.S. EPA, that the South Coast Air Basin has failed to comply with the following requirements by the applicable date to:</u></p> <p><u>(A) meet a Reasonable Further Progress (RFP) requirement in an approved attainment plan for an applicable ozone NAAQS; or</u></p> <p><u>(B) attain an applicable ozone NAAQS by the applicable attainment date,</u> <u>the applicable contingency measure(s) specified in paragraph (g)(2) shall be implemented, sequentially and in the order of stringency.</u></p> <p><u>(2) Basin-wide, below 3,000 feet above mean sea level, no person shall operate an indoor or outdoor wood-burning device, portable outdoor wood-burning device, or wood-fired cooking device on a calendar day during the wood-burning season for ozone, so declared by Executive Officer to be a curtailment (No-Burn) day due to forecasted ambient ozone concentration levels, if the daily maximum 8-hour ozone air quality forecast for any SRA exceeds:</u></p> <p><u>(A) 80 ppb, upon a final determination of a first failure to comply with any of the provisions of paragraph (g)(1);</u></p> <p><u>(B) 75 ppb, upon a final determination of a second failure to comply with any of the provisions of paragraph (g)(1); and</u></p> <p><u>(C) 70 ppb, upon a final determination of a third failure to comply with any of the provisions of paragraph (g)(1).</u></p>
---	--

<p><b>(h) – Rule 444 Clarification</b></p>	<p>Clarifies that the proposed amendments will not impact the current implementation of Rule 444, including the necessity for prescribed burns essential for forestry management and prevention/mitigation of wildfires. Currently, Rule 444 restricts open burning on certain days during the wood-burning season for PM2.5 (November 1 through to the end of February). This provision confirms that the reference to Rule 444 provisions will remain unchanged and curtailment days for the purposes of Rule 444 do not include the expanded wood-burning months for ozone (September, October, March and April) when prescribed burns are critical for effective forestry management. Rule 444 also currently prohibits open burning at a forecast threshold of 150 AQI which corresponds to the proposed 85 ppb ambient ozone concentration threshold.</p> <p>Rule Text:</p> <p>i) <u>Prohibitions on Permissive Burn Days as described in Rule 444(c)(25)(C) or restrictions on Marginal Burn Days as described in Rule 444 (c)(21)(D) shall be in effect only if a No-Burn day is declared during any of the consecutive months of November, December, January or February.</u></p>
<p><b>Other</b></p>	<p>Other clarifications include updating the numbering sequence in the rule and various references. For example, references in paragraph (i)(7) of the proposed rule are updated.</p>

## VOC EMISSION REDUCTIONS

Appendix A provides a detailed methodology for the estimated VOC emission reductions from the proposed rule. The methodology is based on an analysis of relevant historical daily ambient ozone concentrations in the Basin from January 2016 through December 2019. Table 2 summarizes the estimated total annual VOC emission reductions as detailed in Appendix A. Upon rule amendment, if contingency measures are triggered the resulting VOC emissions reduction will be 22.38 TPY, based on the anticipated number of annual Basin-wide curtailment days at a daily maximum 8-hour ozone air quality forecast threshold of 80 ppb. Similarly, upon triggering a second contingency measure (lowering the forecast threshold to 75 ppb) and triggering a third contingency measure (lowering the forecast threshold to 70 ppb), would result in estimated VOC emissions reductions of 46.10 and 88.43 TPY, respectively.

**Table 2 - Estimated VOC Reductions (TPY) By Ozone Curtailment Thresholds**

Contingencies	Upon Triggering the First Contingency Measure	Upon Triggering a Second Contingency Measure	Upon Triggering a Third Contingency Measure
Forecast Threshold	80 ppb	75 ppb	70 ppb
TPY	22.38	46.10	88.43

### AFFECTED SOURCES

An estimated 1.4 million wood-burning devices are subject to the provisions of Rule 445.<sup>24</sup> The number of affected sources is not anticipated to change greatly since wood-burning devices have lengthy useful lifetimes and Rule 445 prohibits the installation of wood-burning devices in new developments. Rather it is anticipated that the proposed amendments will decrease the number of days that the devices can be operated resulting in emissions reductions. No additional costs are expected to be incurred. Provisions of the proposed amended rule would extend the prohibition on use of wood-burning devices ~~to additional days almost exclusively used for aesthetic ambience purposes~~ use of these devices. Wood burning devices that are the sole source of heat for a dwelling or structure are specifically exempted from the No-Burn mandate.

### PUBLIC PROCESS

PAR 445 is being developed through a public process. A Public Consultation Meeting was held on ~~is scheduled for~~ September 30, 2020, with close of comments on October 13, 2020 and the proposal is ~~was~~ ~~is scheduled to be~~ presented at the Stationary Source Committee on October 16, 2020. A Public Hearing regarding the proposed amendments to Rule 445 is scheduled for October 27, 2020. A public workshop with 75 days' notice, pursuant to Health & Safety Code § 40440.7, was not required because the proposed amendment does not significantly affect emissions limitations or air quality, as discussed in the paragraph on socioeconomic assessment requirements.

### SOCIOECONOMIC ASSESSMENT

Even though this proposed rule amendment provides sufficient emission reductions to satisfy U.S. EPA requirements, the amendment is exempt from the requirement to prepare a socioeconomic assessment because as proposed, the amendments will not have a significant effect on emissions limitations or air quality for the purposes of complying with Health & Safety Code § 40440.8. ~~The proposed amendment is exempt from the requirement to prepare a socioeconomic assessment~~

---

24 James E. Houck and Brian N. Eagle, "Residential Wood Combustion Emission Inventory South Coast Air Basin and Coachella Valley Portion of Salton Sea Air Basin 2002 Base Year" Based on a 2002, [www.omni-test.com](http://www.omni-test.com), October 24, 2006, <http://www.omni-test.com/publications/SCAQMD-RWC4.pdf>.

~~because as proposed, the amendments will not have a significant effect on emissions limitations or air quality. (Health & Safety Code § 40440.8). On adoption, the proposed amendments will not result in emissions reductions. Emission reductions from the proposed amendments would occur only if the specified triggering actions occur, thereby automatically adding curtailment days based on ozone forecasting, expanding the months for curtailment, and by sequentially lowering the ozone curtailment threshold after multiple triggering actions. Any air quality or emissions impact is dependent on the occurrence of a triggering event, which would take place only after a specific U.S. EPA finding. Because any such finding is uncertain to occur, and the timing of such finding would occur potentially years in the future, the estimated emission reductions remain too remote to meet the standard Health & Safety Code § 4044.8. Staff does not anticipate any of the triggering actions to occur, and those emission reductions are therefore uncertain to occur. Even if one or two triggering events occurs, the amount of reductions would still be less than the CEQA significance threshold of 55 lb/day. Staff believes experiencing a third triggering event is very unlikely so there is no significant effect requiring a socioeconomic report. Consistent with Health & Safety Code § 40703, the direct costs expected to be incurred by regulated parties from PAR 445 are discussed below.~~

PAR 445 contingency measures, if triggered, would affect commercial firewood sellers in the Basin and the general public. Commercial firewood sellers belong to the industry of fuel dealers (NAICS 454319). Based on a South Coast AQMD staff survey, there are about 86 commercial firewood sellers in the Basin, out of which 31 are located in Los Angeles County, 24 in Orange County, 16 in Riverside County, and the remaining 15 in San Bernardino County. Additionally, PAR 445 would affect the general public who use wood-burning fireplaces and other wood-burning devices. The cost impacts of Basin-wide curtailment on firewood sellers are expected to be minimal because the additional number of No-Burn days for ozone due to this proposed amendment is expected to be small, at about 14 days, during the wood-burning season for ozone. The majority of commercial firewood sellers are expected to be small facilities. A lack of data on number of employees and gross annual sales of the affected commercial firewood sellers precludes staff from determining their small business status. Cost impacts to the general public are also expected to be minimal as wood-burning in the South Coast AQMD is done mainly for aesthetic purposes and there are cost-effective alternatives to burning wood for heating.

### **CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)**

Pursuant to the California Environmental Quality Act (CEQA) Guidelines Sections 15002(k) and 15061, the proposed project is exempt from CEQA pursuant to CEQA Guidelines Sections 15061(b)(3) and 15308. Further, there is no substantial evidence indicating that any of the exceptions to the categorical exemption applies to the proposed project pursuant to CEQA Guidelines Section 15300.2. A Notice of Exemption has been prepared pursuant to CEQA Guidelines Section 15062. If the proposed project is approved, the Notice of Exemption will be electronically filed with the State Clearinghouse to be posted on their CEQAnet Web Portal, which may be accessed via the following weblink: <https://ceqanet.opr.ca.gov/search/recent.county-clerks-of-Los-Angeles,-Orange,-Riverside,-and-San-Bernardino-counties>. In addition, the Notice of Exemption will be electronically posted on the South Coast AQMD's webpage which can be accessed via the following weblink: <http://www.aqmd.gov/nav/about/public-notice/ceqa-notice/notice-of-exemption/noe---year-2020>. The electronic filing and posting of the Notice of Exemption is being implemented in accordance with Governor Newsom's Executive Orders N-

54-20 and N-80-20 issued on April 22, 2020 and September 23, 2020, respectively, for the State of Emergency in California as a result of the threat of COVID-19. ~~In addition, the Notice of Exemption will be electronically filed with the State Clearinghouse to be posted on their CEQAnet Web Portal, which may be accessed via the following weblink:~~ <https://ceqanet.opr.ca.gov/search/recent>.

## CONCLUSION

PAR 445 amendments are necessary to promulgate new contingency measures to satisfy U.S. EPA concerns that existing contingency measures do not satisfy requirements under CAA section 172(c)(9) subsequent to the decision in *Bahr vs. EPA*. As such, the proposed amendments would add new contingency measures specific to ozone that would be triggered upon a finding of a failure to comply with either an ozone NAAQS or ozone RFP milestone, by the applicable due date. Furthermore, the South Coast AQMD is under a deadline of October 31, 2020, to submit an RFP contingency measure to the U.S. EPA, ~~which includes such an element and so amending Rule 445 satisfies this requirement by including~~ demonstrating such contingency measures for ozone in the rule. The proposed amendments accomplish this mandate by adding an ozone curtailment provision to the rule and then incrementally lowering the wood-burning curtailment threshold for ozone during an eight-month long wood-burning season for each determination of a failure to comply. As required by U.S.EPA, these amendments once adopted would become effective only upon the applicable U.S. EPA finding, after adoption by the Governing Board, without any further action by the Governing Board, and are anticipated to result in additional No-Burn days during the wood-burning season. Contingency measures, if triggered, are anticipated to successively establish the daily maximum 8-hour ozone air quality forecast threshold at 80, 75 and 70 ppb with VOC emissions reductions anticipated to average 22.38, 46.10 and 88.43 TPY, respectively. Existing PM2.5 rule provisions and existing open burn provisions are not impacted by the proposed amendments. Furthermore, the proposed amendments are anticipated to have negligible cost impacts and no significant environmental impacts.

## DRAFT FINDINGS UNDER CALIFORNIA HEALTH AND SAFETY CODE SECTION 40727

### Requirement to Make Findings:

California Health and Safety Code Section 40727 requires that prior to adopting, amending or repealing a rule or regulation, the South Coast AQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the public hearing and in the staff report.

#### *Necessity*

Proposed Amended Rule 445 is needed to promulgate additional contingency measures required under Clean Air Act Section 172(c)(9), 42 U.S.C. Section 7502(c)(9), to be put into effect and which can be automatically triggered upon an EPA finding of failure to meet reasonable further progress or attainment for an applicable ozone standard, as required by *Bahr v. EPA*, 836 Fd.3d 1218 (9th Cir. 2016).

#### *Authority*

The South Coast AQMD Governing Board has authority to adopt Proposed Amended Rule 445 pursuant to the California Health and Safety Code Sections 39002, 40000, 40001, 40440, 40702, 40725 through 40728, and 41508.

*Clarity*

Proposed Amended Rule 445 is written or displayed so that its meaning can be easily understood by the persons directly affected by it. The addition of definitions will improve the clarity.

*Consistency*

Proposed Amended Rule 445 is in harmony with and not in conflict with or contradictory to, existing statutes, court decisions, or state or federal regulations.

*Non-Duplication*

Proposed Amended Rule 445 will not impose the same requirements as any existing state or federal regulations. The proposed amended rule is necessary and proper to execute the powers and duties granted to, and imposed upon, the South Coast AQMD.

*Reference*

By adopting Proposed Amended Rule 445 the South Coast AQMD Governing Board will be implementing, interpreting or making specific the requirements in Clean Air Act Section 172(c)(9), 42 U.S.C. Section 7502(c)(9), as articulated by *Bahr v. EPA*, 836 F3d 1218 (9th Cir. 2016).

**COMPARATIVE ANALYSIS**

Under California Health and Safety Code Section 40727.2, the South Coast AQMD is required to perform a comparative written analysis when adopting, amending, or repealing a rule or regulation. The comparative analysis is relative to existing federal requirements, existing or proposed South Coast AQMD rules and air pollution control requirements and guidelines which are applicable to wood-burning devices. The proposed ozone-related amendments to Rule 445 do not conflict or overlap with existing federal requirements for wood burning devices. Existing provisions of Rule 445 for PM2.5 do not conflict with existing federal requirements for PM2.5 for wood burning devices in U.S. EPA's New Source Performance Standards, 40 CFR pt. 60, Sub. AAA. South Coast AQMD's only other regulation pertaining to burning, Rule 444 regulates open burning and does not conflict with Rule 445.

## Appendix A – VOC Emission Reductions Expected from the Rule Amendment

### VOC Emission Reductions Expected from the Rule 445 Amendment

#### 1. Baseline Emissions

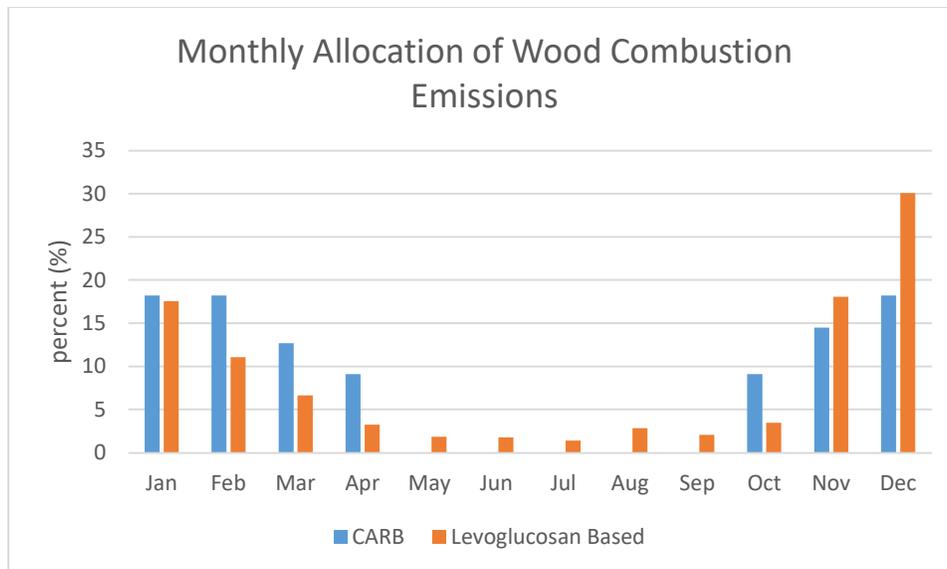
Annual average VOC emissions developed for the 2016 AQMP were utilized to estimate reductions expected from the proposed amended Rule 445. The two emission categories subject to the rule are Residential Wood combustion for Wood Stoves and Fireplaces. The annual average emissions of VOC from the two categories are 7.414 tons per day (TPD) in 2017. The rule baseline emissions do not change in future years due to full implementation of the current rule in year 2015 and the rule amendment adopted in June 5, 2020 is not implemented yet.

The rule baseline emissions were allocated to each Source Receptor Area (SRA) using a spatial allocation factor developed based on the U.S. Census American Community Survey (ACS) data regarding fuel type used to heat households. ACS is conducted every year to update a portion of the population. Excluding mountainous areas with altitude higher than 3000 ft, the basin-wide total emissions subject to the rule are 6.526 TPD in annual average emissions.

Residential wood burning has a distinctive seasonal signal with more activity during cold months and less in warm months. Wood burning emissions used to be allocated in January to April and October to December<sup>1</sup>. However, while recent levoglucosan measurements indicate that the bulk of wood-burning occurs during the months of November through February, some wood burning occurs throughout the year in the South Coast Air Basin. Levoglucosan is an organic compound indicating the presence of wood burning smoke. The measurements were taken at 10 locations within the South Coast Air Basin as a part of Multiple Air Toxics Exposure Study V (MATES V) conducted during the period of May 2018 to April 2019. Figure A-1 provides monthly fraction of levoglucosan concentrations using averages of the 10 sites data. The measurements indicate that December has the highest wood burning activities and July has the lowest. The CARB's method to allocate annual average emissions from wood combustion to each month is included for comparison in Figure A-1. While levoglucosan data is still preliminary, it clearly indicates the presence of wood burning smoke during summer months. Therefore, the monthly allocation factors based on the levoglucosan data are used to estimate emission reductions benefits from the proposed rule amendment.

---

<sup>1</sup> CARB Methodology Updates: Residential Wood Combustion, 2015. Available at [https://ww3.arb.ca.gov/ei/areasrc/fullpdf/full7-1\\_2011.pdf](https://ww3.arb.ca.gov/ei/areasrc/fullpdf/full7-1_2011.pdf)



**Figure A-1 - Monthly Allocation of Wood Combustion Emissions**

Daily average VOC emissions for each month are provided in Table A-1. The daily average emissions for each month follows the trend in levoglucosan concentrations shown in Figure A-1, showing the highest wood combustion emissions in December and the lowest in July.

**Table A-1 - Calculation of 2017 Daily Average VOC Emissions Per Month**

Month	Number of days per month	Percent of Emissions Occurring in each Month (%)	VOC Emissions per Month (tons per year)	VOC Emissions per Day in each Month (tons per day)
1	31	17.53	417.5	13.468
2	28	11.06	263.4	9.406
3	31	6.64	158.2	5.103
4	30	3.23	77.0	2.566
5	31	1.84	43.8	1.412
6	30	1.79	42.6	1.420
7	31	1.41	33.6	1.083
8	31	2.84	67.6	2.180
9	30	2.06	49.2	1.639
10	31	3.48	82.9	2.674
11	30	18.05	430.0	14.334
12	31	30.07	716.3	23.106
Annual Total	365	100.00	2381.9	6.526

## 2. Emission Reductions from the Proposed Rule Amendment

The proposed amendment includes two mechanisms to expand the wood burning curtailment program. The first mechanism is to expand the curtailment season from the current four months (November to February) to eight months (September to April). The second mechanism is to define a threshold for daily maximum 8-hour ozone over which curtailment is triggered, during the curtailment season. Contingency measure thresholds for daily maximum 8-hour ozone are 80, 75 and 70 ppb, corresponding to the proposed curtailment thresholds in the rule.

In order to estimate emission reductions benefits from the amendment, the number of days exceeding a specific threshold were counted using 2016-2019 data (Table A-2). These numbers are the average of the four year data so they appear as a fraction of a day.

This analysis assumes that the wood-burning season for ozone, September 1 through April 30, is effective upon the first final determination of a finding of a failure to comply with any applicable RFP requirement, or applicable 8-hour ozone standard by the applicable attainment date, triggering the first contingency measure for an ozone forecast threshold at 80 ppb, as the proposed amendment defines the ozone wood burning season.

**Table A-2 - The Number of 8-hour Ozone Exceedance Days Per Month**

Month	Number of days exceeding 70 ppb	Number of days exceeding 75 ppb	Number of days exceeding 80 ppb
1	0.00	0.00	0.00
2	1.50	1.25	0.25
3	3.75	1.00	0.25
4	10.25	4.25	1.50
5	9.25	7.75	5.25
6	24.75	23.00	19.75
7	30.25	27.00	23.00
8	30.00	27.25	23.25
9	19.00	12.00	8.75
10	7.50	5.25	3.00
11	0.50	0.00	0.00
12	0.00	0.00	0.00

The number of exceedance days were multiplied by the daily average VOC emissions specified for each month, and multiplied by 0.75 to account for 75 percent compliance rate, to estimate emission reductions associated with each curtailment threshold (Table A-3). Table A-4 summarizes net VOC reductions with the expansion of curtailment season and ozone as curtailment trigger.

**Table A-3 - VOC Emission Reductions Per Month (tons/month) for Each Curtailment Threshold**

<b>Month</b>	<b>70ppb</b>	<b>75ppb</b>	<b>80ppb</b>
Jan	0.00	0.00	0.00
Feb	10.58	8.82	1.76
Mar	14.35	3.83	0.96
Apr	19.72	8.18	2.89
May	9.79	8.21	5.56
Jun	26.36	24.49	21.03
Jul	24.57	21.93	18.68
Aug	49.04	44.55	38.01
Sep	23.36	14.75	10.76
Oct	15.04	10.53	6.02
Nov	5.38	0.00	0.00
Dec	0.00	0.00	0.00

**Table A-4 . Cumulative VOC emission reductions expected during curtailment season (September through April) from the rule amendment.**

<b>Curtailment Threshold</b>	<b>70ppb</b>	<b>75ppb</b>	<b>80ppb</b>
VOC Reductions (tons per year)	88.43	46.10	22.38



	<b>Coastal</b>			<b>San Bernardino Valley</b>	
	Northwest Los Angeles County Coastal	2		Northwest San Bernardino Valley	32
	Southwest Los Angeles County Coastal	3		Southwest San Bernardino Valley	33
	South Los Angeles County Coastal	4		Central San Bernardino Valley	34
	North Orange County Coastal	18		East San Bernardino Valley	35
	Central Orange County Coastal	20			
	<b>Metropolitan</b>			<b>Hemet/Elsinore Area</b>	
	Central Los Angeles County	1		Perris Valley	24
	Southeast Los Angeles County	5		Lake Elsinore	25
	South Central Los Angeles County	12		Hemet-San Jacinto Valley	28
	Northern Orange County	16		<b>Temecula/Anza Area</b>	
	<b>San Fernando Valley</b>			Temecula Valley	26
	West San Fernando Valley	6		Anza Area	27
	East San Fernando Valley	7		<b>San Gabriel Mountain</b>	
	Santa Clarita Valley	13		San Gabriel Mountains	15
	<b>San Gabriel Valley</b>			<b>San Bernardino Mountain</b>	
	West San Gabriel Valley	8		West San Bernardino Mountains	36
	East San Gabriel Valley	9		Central San Bernardino Mountains	37
	Pomona-Walnut Valley	10		<b>Big Bear Lake</b>	
	South San Gabriel Valley	11		Big Bear Lake	38
	<b>Inland Orange County</b>			<b>Banning Pass Area</b>	
	Central Orange County	17		Banning Pass Area	29
	Saddleback Valley	19			
	Capistrano Valley	21			
	<b>Riverside Valley</b>				
	Corona-Norco Area	22			
	Metropolitan Riverside	23			

**APPENDIX C**

**COMMENTS AND RESPONSE TO COMMENTS**

**Comment Email #1**Janice Elliottjaniceeliott5@icloud.com

September 28, 2020

I support the proposed amended rule 445 that would impose penalties for wood burning on no burn days. I want our air to be cleaner. Thank you. ] 1-1

Response to Comment 1-1

Thank you for supporting our efforts to clean the air. This rule amendment will put in place contingency measures which if triggered are designed to further reduce ambient ozone in the Basin. Rule 445 does have procedures for penalizing non-compliance, but also allows first time violators to complete a wood smoke awareness course approved by the Executive Office in lieu of paying a \$50 fine. Subsequent violations can result in higher fines, a requirement to install a gaseous fueled fireplace and implementation of environmentally beneficial projects through a mutual settlement program.

**Comment Email #2**Connie HughesConstance.hughes@gmail.com

September 27, 2020

I am all for No Burn Days. My question is: ] 2-1

• What is your main (and secondary) means of communication w/the public? ] 2-2

• How will you get the word out? ] 2-3

• Is there a text message that might go out? PSA? ] 2-4

Response to Comment 2-1

Thank you for supporting our efforts to clean the air.

Response to Comment 2-2

There are currently several ways through which the South Coast AQMD is communicating information about No-Burn days with the public. These include a dedicated No-Burn day - Check Before You Burn webpage (<http://www.aqmd.gov/home/programs/community/community-detail?title=check-before-you-burn>); television, radio and print news segments/stories during the wood-burning season; the Burn/No-Burn forecast map at <https://www.arcgis.com/apps/webappviewer/index.html?id=d3e847503ff645eebfb667d4b0ce1d97> which provides visual information about No-Burn days and allows for a geographic search by address also; a toll-free number, 866-966-3293, for daily check before you burn information and to check if a No-Burn day is forecast; and the South Coast AQMD phone app which is available for both Android and Apple systems.

Response to Comment 2-3

In addition to notifying the public about No-Burn days the South Coast AQMD has extensive information about wood-smoke and the related health effects at <http://www.aqmd.gov/home/air-quality/air-alerts>. There are also links to various other sites including U.S. EPA's list of certified wood-burning devices at <https://www.epa.gov/burnwise>.

Response to Comment 2-4

Yes. Sign up for text messaging or e-mail notifications on the Check Before You Burn webpage at <http://www.aqmd.gov/home/programs/community/community-detail?title=check-before-you-burn>.

## ATTACHMENT G



# South Coast Air Quality Management District

21865 Copley Drive, Diamond Bar, CA 91765-4178  
(909) 396-2000 • [www.aqmd.gov](http://www.aqmd.gov)

**SUBJECT: NOTICE OF EXEMPTION FROM THE CALIFORNIA ENVIRONMENTAL QUALITY ACT**

**PROJECT TITLE: PROPOSED AMENDED RULE 445 – WOOD-BURNING DEVICES**

Pursuant to the California Environmental Quality Act (CEQA) Guidelines, the South Coast Air Quality Management District (South Coast AQMD), as Lead Agency, has prepared a Notice of Exemption pursuant to CEQA Guidelines Section 15062 – Notice of Exemption for the project identified above. To satisfy the United States Environmental Protection Agency (U.S. EPA) requirement to submit a Reasonable Further Progress (RFP) contingency measure that provides for additional ozone National Ambient Air Quality Standards emission reductions in the event that the South Coast Air Basin (Basin) fails to comply with an applicable Clean Air Act milestone, amendments to Rule 445 are proposed that would establish contingency measures for the applicable ozone standards. Specifically, Proposed Amended Rule 445 would: 1) establish an automatic Basin-wide No-Burn day that is triggered when the daily maximum 8-hour ozone air quality is forecast to exceed 80 parts per billion (ppb) in any Source Receptor Area; 2) automatically reduce the ozone threshold to 75 ppb and 70 ppb if the U.S. EPA makes a secondary and tertiary finding, respectively, of a failure to comply with a milestone or attainment requirement by the applicable due date; and 3) add contingent ozone No-Burn days to the definition of wood-burning season (currently November, December, January, and February) to include additional months (September, October, March, and April). Existing rule provisions regarding PM 2.5 remain unchanged. Other minor proposed amendments include additional definitions of terms used in the rule, and revisions to improve rule implementation and clarify existing requirements.

The proposed project has been reviewed pursuant to: 1) CEQA Guidelines Section 15002(k) – General Concepts, the three-step process for deciding which document to prepare for a project subject to CEQA and 2) CEQA Guidelines Section 15061 – Review for Exemption, procedures for determining if a project is exempt from CEQA. Since the adoption of additional RFP contingency measures for ozone in accordance with U.S. EPA requirements is administrative in nature, it can be seen with certainty that there is no possibility that the proposed project may have a significant adverse effect on the environment. Therefore, the proposed project is exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3) – Common Sense Exemption. In addition, the proposed project is designed as a backstop measure to further prevent the creation of additional ozone from wood-burning devices on days when ozone levels are forecasted to exceed the applicable threshold and thus, is considered an action to protect or enhance the environment pursuant to CEQA Guidelines Section 15308 – Actions by Regulatory Agencies for Protection of the Environment. Further, there is no substantial evidence indicating that any of the exceptions to the categorical exemption apply to the proposed project pursuant to CEQA Guidelines Section 15300.2 – Exceptions. If the proposed project is approved, this Notice of Exemption will be electronically filed with the State Clearinghouse of the Governor’s Office of Planning and Research to be posted on their CEQAnet Web Portal which, upon posting, may be accessed via the following weblink: <https://ceqanet.opr.ca.gov/search/recent>. In addition, the Notice of Exemption will be electronically posted on the South Coast AQMD’s webpage which can be accessed via the following weblink: <http://www.aqmd.gov/nav/about/public-notices/ceqa-notices/notices-of-exemption/noe---year-2020>. The electronic filing and posting of the Notice of Exemption is being implemented in accordance with Governor Newsom’s Executive Orders N-54-20 and N-80-20 issued on April 22, 2020 and September 23, 2020, respectively, for the State of Emergency in California as a result of the threat of COVID-19.

Any questions regarding this Notice of Exemption should be directed to Ryan Bañuelos by email at [rbanuelos@aqmd.gov](mailto:rbanuelos@aqmd.gov) or by phone at (909) 396-3479. Any questions regarding Proposed Amended Rule 445 should be directed to Henry Pourzand by email at [hpourzand@aqmd.gov](mailto:hpourzand@aqmd.gov) or by phone at (909) 396-2414.

**Date:** October 9, 2020

**Signature:**

A handwritten signature in black ink, appearing to read "Barbara Radlein", written over a horizontal line.

Barbara Radlein  
Program Supervisor, CEQA  
Planning, Rule Development, and Area Sources

**NOTICE OF EXEMPTION FROM THE  
CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)**

---

<b>To:</b> Governor's Office of Planning and Research - State Clearinghouse 1400 Tenth St, Suite 222 Sacramento, CA 95814-5502	<b>From:</b> South Coast Air Quality Management District 21865 Copley Drive Diamond Bar, CA 91765
---	---

---

**Project Title:** Proposed Amended Rule 445 – Wood-Burning Devices

---

**Project Location:** The project location is the portion within the South Coast Air Quality Management District (South Coast AQMD) jurisdiction which includes the four-county South Coast Air Basin (all of Orange County and the non-desert portions of Los Angeles, Riverside and San Bernardino counties) as defined in the California Code of Regulations, Title 17, Section 60104.

---

**Description of Nature, Purpose, and Beneficiaries of Project:** To satisfy the United States Environmental Protection Agency (U.S. EPA) requirement to submit a Reasonable Further Progress (RFP) contingency measure that provides for additional ozone National Ambient Air Quality Standards emission reductions in the event that the South Coast Air Basin (Basin) fails to comply with an applicable Clean Air Act milestone, amendments to Rule 445 are proposed that would establish contingency measures for the applicable ozone standards. Specifically, Proposed Amended Rule 445 would: 1) establish an automatic Basin-wide No-Burn day that is triggered when the daily maximum 8-hour ozone air quality is forecast to exceed 80 parts per billion (ppb) in any Source Receptor Area; 2) automatically reduce the ozone threshold to 75 ppb and 70 ppb if the U.S. EPA makes a secondary and tertiary finding, respectively, of a failure to comply with a milestone or attainment requirement by the applicable due date ; and 3) add contingent ozone No-Burn days to the definition of wood-burning season (currently November, December, January, and February) to include additional months (September, October, March, and April). Existing rule provisions regarding PM 2.5 remain unchanged. Other minor proposed amendments include additional definitions of terms used in the rule, and revisions to improve rule implementation and clarify existing requirements.

---

<b>Public Agency Approving Project:</b> South Coast Air Quality Management District	<b>Agency Carrying Out Project:</b> South Coast Air Quality Management District
--	--

---

**Exempt Status:**

CEQA Guidelines Section 15061(b)(3) – Common Sense Exemption

CEQA Guidelines Section 15308 – Actions by Regulatory Agencies for Protection of the Environment

---

**Reasons why project is exempt:** Since the adoption of additional RFP contingency measures for ozone in accordance with U.S. EPA requirements is administrative in nature, it can be seen with certainty that there is no possibility that the proposed project may have a significant adverse effect on the environment. Therefore, the proposed project is exempt from CEQA pursuant to CEQA Guidelines Section 15061(b)(3) – Common Sense Exemption. In addition, the proposed project is designed as a backstop measure to further prevent the creation of additional ozone from wood-burning devices on days when ozone levels are forecasted to exceed the applicable threshold and thus, is considered an action to protect or enhance the environment pursuant to CEQA Guidelines Section 15308 – Actions by Regulatory Agencies for Protection of the Environment. Further, there is no substantial evidence indicating that any of the exceptions to the categorical exemption apply to the proposed project pursuant to CEQA Guidelines Section 15300.2 – Exceptions.

---

**Date When Project Will Be Considered for Approval (subject to change):**

Special Meeting of the South Coast AQMD Governing Board Public Hearing: October 27, 2020

---

<b>CEQA Contact Person:</b> Mr. Ryan Bañuelos	<b>Phone Number:</b> (909) 396-3479	<b>Email:</b> <a href="mailto:rbanuelos@aqmd.gov">rbanuelos@aqmd.gov</a>	<b>Fax:</b> (909) 396-3982
--	--	---	-------------------------------

---

<b>Rule Contact Person:</b> Mr. Henry Pourzand	<b>Phone Number:</b> (909) 396-2414	<b>Email:</b> <a href="mailto:hpourzand@aqmd.gov">hpourzand@aqmd.gov</a>	<b>Fax:</b> (909) 396-3324
---	--	---	-------------------------------

---

**Date Received for Filing:** \_\_\_\_\_ **Signature:** \_\_\_\_\_ *(Signed Upon Board Approval)*  
Barbara Radlein  
Program Supervisor, CEQA  
Planning, Rule Development, and Area Sources



ATTACHMENT H  
PROPOSED AMENDED RULE (PAR) 445  
WOOD-BURNING DEVICES

Board Meeting

October 27, 2020

## Rule 445 – Wood-Burning Devices

- Applies to residential fireplaces or wood-burning stoves
- Reduces ambient fine particulate (PM<sub>2.5</sub>) levels by:
  - Restricting wood burning devices in new developments
  - Replacement of existing units must be with types approved in rule
  - Wood-burning curtailment on “No-Burn” days
  - Seasoned wood fuel provision
  - Non-wood fuel burning prohibition (e.g., no trash)
- Required to help attain health based National Ambient Air Quality Standards (NAAQS) for fine particulates
- Reduced burning also results in reduced VOCs which can lower ozone

# Contingency Measures

- Implemented if the Basin fails to attain either the PM or Ozone NAAQS
- EPA is interpreting a recent 9<sup>th</sup> Circuit decision to require that additional *contingency measures* be triggered if
  - EPA determines that a nonattainment area fails to meet the NAAQS by the applicable due date, or
  - Fails to meet a Reasonably Further Progress milestone
- Rule 445 was recently amended to add PM<sub>2.5</sub> contingency measures
  - First trigger to be implemented ( $29 \mu\text{g}/\text{m}^3$ ) for upcoming wood burning season (failure to attain PM<sub>2.5</sub> 24-hour standard)
- EPA is also requiring additional contingency measures for ozone

## Reason for Proposed Amendment

- Add new contingency measures for the ozone NAAQS to Rule 445
- New measures only go into effect if triggered
- South Coast AQMD is under a deadline of October 31, 2020 to submit an RFP contingency measure to the U.S. EPA

# Ozone Contingency Measures Proposal

- Implement **ozone** contingency measures if U.S. EPA determines failure to meet either:
  - Reasonable Further Progress (RFP); or
  - An applicable **ozone** standard
- Contingency measures – curtailment based on 8-Hour **ozone** No-Burn forecast
  - 80 ppb upon **first** failure determination
  - 75 ppb upon **second** failure
  - 70 ppb upon **third** failure
- Add/update necessary definitions for an ozone-based no-burn forecast

# Proposed Changes: New Definitions for Ozone

- Daily Maximum 8-Hour Ozone Forecast
- Wood-Burning Season

(\*extended for **ozone only** AND if first ozone contingency at **80 ppb** is triggered )

MONTH	January	February	March	April	May	June	July	August	September	October	November	December
Current Wood Burning Season (PM2.5 Only)	→										←	
Potential Wood Burning Season For Ozone*	→								←			

# Estimated VOC Contingency Measure Emission Reductions

Contingencies	Upon Triggering the <b>First</b> Contingency Measure	Upon Triggering a <b>Second</b> Contingency Measure	Upon Triggering a <b>Third</b> Contingency Measure
Forecast Threshold	80 ppb	75 ppb	70 ppb
TPY	22.4	46.1	88.4

## Recommended Actions

- Determine that the proposed amendments to Rule 445 – Wood-Burning Devices, are exempt from the requirements of the California Environmental Quality Act; and
- Amend Rule 445 – Wood-Burning Devices