

PROPOSED AMENDED RULE  
(PAR) 445 -  
WOOD BURNING DEVICES  
PUBLIC WORKSHOP

February 27, 2020

South Coast AQMD

Diamond Bar, CA

# Rule 445 – Wood-Burning Devices

- Applies to residential fireplaces or wood-burning stoves
- Intended to help reduce ambient fine particulate (PM<sub>2.5</sub>) levels
  - Increased mortality
  - Cardiovascular and respiratory impacts
- Key to attainment of health based National Ambient Air Quality Standards (NAAQS)
  - Approximately 20% of area-wide PM<sub>2.5</sub> is from wood-burning devices
  - Currently nonattainment for the 2012 annual and 2006 24 hour PM<sub>2.5</sub> NAAQS

# Rule Requirements

- New developments
- Existing devices
- Seasoned wood fuel
- Non-wood fuel burning prohibition
- Wood-burning curtailment “No-Burn” day
  - Unhealthful levels of ambient PM<sub>2.5</sub> forecast
  - Wood-burning prohibited
  - Source Receptor Area or Basin-wide

# Exemptions From Wood-Burning Curtailment

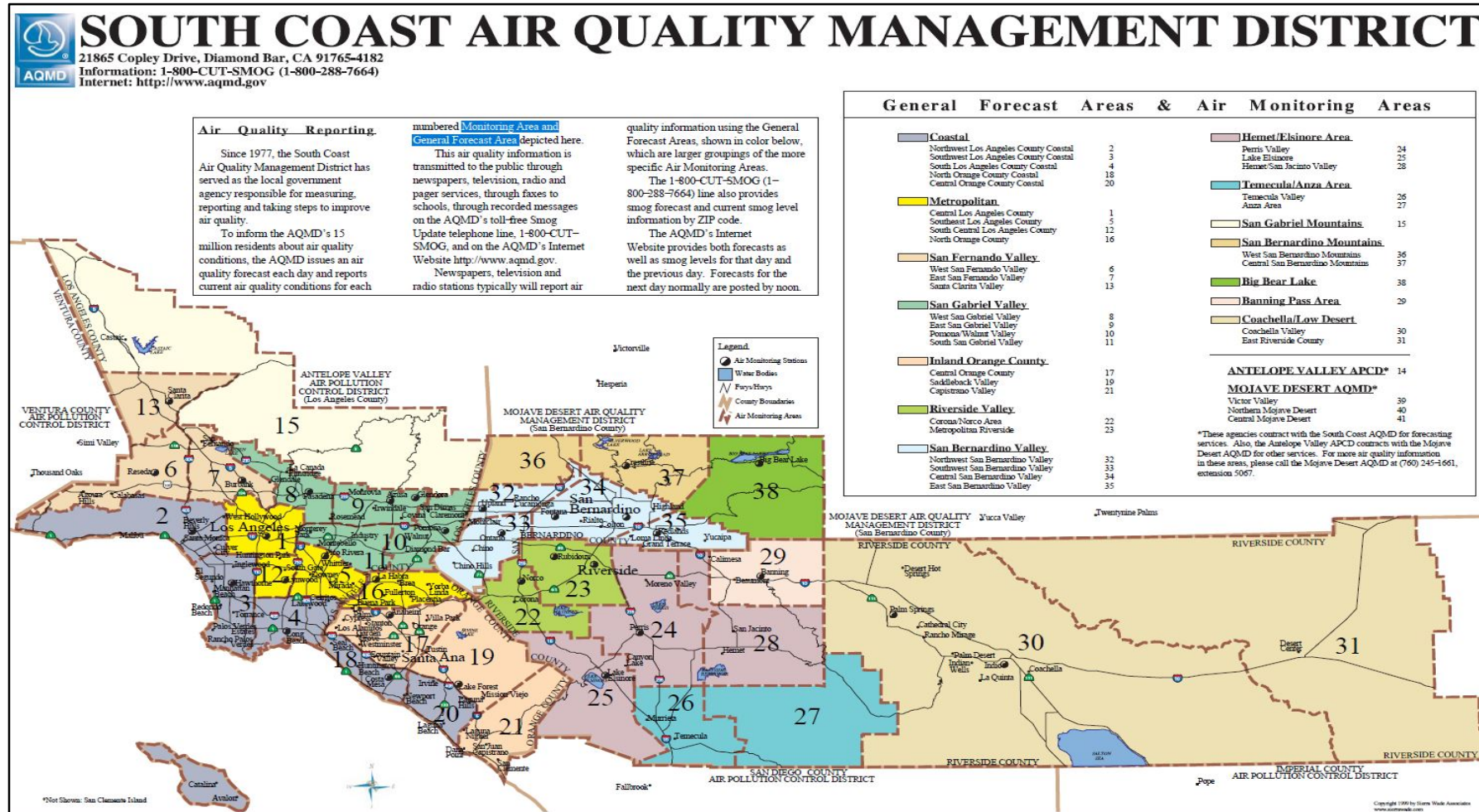
- Sole source of heat
- Low-income households
- No natural gas service within 150 feet
- $\geq 3,000$  feet above mean sea level
- Ceremonial Fires exempted under Rule 444 – Open Burning

# Reason for Proposed Amendment

- Implement control contingency measure BCM-09 from 2016 AQMP
  - Further reducing PM2.5 emissions from wood-burning devices
- Address CAA contingency measure requirements for PM2.5
  - Requiring specific measures in case of a failure to comply
  - Specified in 40 CFR Section 51.104(a)
- Proposed amendment would add contingency measures increasing number of No Burn days

# South Coast AQMD Source Receptor Areas (SRAs)

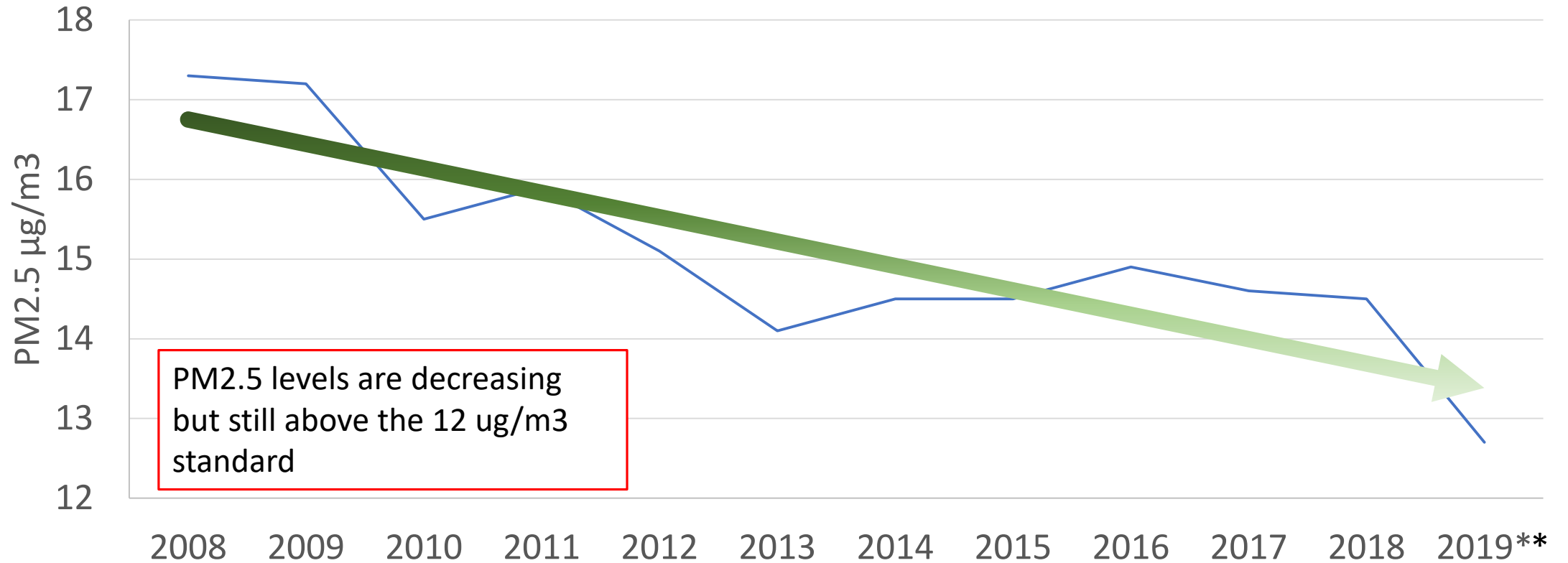
## PAR 445 Attachment 1



# Air Quality Forecasting

- PAR 445 (c)(16) Source Receptor Area (SRA)
- Forecast at SRA level
- Daily forecast used for No-Burn day
- PAR 445(c)(3) Daily PM<sub>2.5</sub> Air Quality Forecast  
“means the predicted ambient average PM<sub>2.5</sub> concentration, for the entire consecutive 24-hour period,-beginning at midnight of the current day and ending upon the subsequent midnight.”
- Hourly PM<sub>2.5</sub> air quality forecast – advisory only
- <http://www.aqmd.gov/home/air-quality/air-quality-forecasts>

# Annual Ambient PM2.5 Basin-wide Trend\*



\*Basin-wide historical Federal Reference Method ambient PM2.5 annual average maximum concentrations.

\*\*2019 DATA IS PRELIMINARY AND SUBJECT TO CHANGE.



# PM2.5 National Ambient Air Quality Standards (NAAQS)

- Health based revisions

Adopted	Standard	Measuring Period	South Coast AQMD Status
1997	65 $\mu\text{g}/\text{m}^3$	24-Hour Average	Attained
	15 $\mu\text{g}/\text{m}^3$	Annual Average	
2006	35 $\mu\text{g}/\text{m}^3$	24-Hour Average	Attainment Due December 31, 2019
2012	12 $\mu\text{g}/\text{m}^3$	Annual Average	Attainment Due December 31, 2021

May not have been met by the deadline

# Rule 445(c)(6) Current No-Burn Day Provision

- During wood-burning season – November – February
- Triggered when PM<sub>2.5</sub> levels forecast > 30 µg/m<sup>3</sup> for a specific source/receptor area
- Applies Basin-wide if PM<sub>2.5</sub> levels > 30 µg/m<sup>3</sup> predicted for a source/receptor area with monitoring data showing a violation of the 24 hour PM<sub>2.5</sub> NAAQS in either of the two previous three year design value periods.

# PAR 445(e) “No-Burn” Day Provision

## Wood-Burning Season\* Mandatory ~~Winter~~ Burning Curtailment

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 so declared to the public by the Executive Officer to be a mandatory winter wood-burning curtailment day during the wood-burning season when a mandatory winter burning curtailment based on the specified geographic area and applicable daily PM2.5 air quality forecast threshold for the specified geographic area, 3,000 or less feet below mean sea level and applicable daily PM2.5 air quality forecast as follows: is forecast for the specific region where the device is located, or on a Basin-wide basis as defined in paragraph (c)(6).

(1) Basin-wide if the daily PM2.5 air quality forecast for any source receptor are exceeds 30 µg/m<sup>3</sup>, or

(2) the entire South Coast Air Basin whenever the daily PM2.5 air quality forecast exceeds 30 µg/m<sup>3</sup> for a Source Receptor Area (SRA) containing a monitoring station that has recorded a violation of the federal 24-hour PM2.5 National Ambient Air Quality Standard for either of the two previous three-year design value periods. The design value is the three-year average of the annual 98th percentile of the 24-hour values of monitored ambient PM2.5 data, or

(3) subsequent to a determination by U.S. EPA, pursuant to 40 CFR § 51.104(a) of non-attainment with either a referenced PM2.5 standard or reporting requirement; the applicable daily PM2.5 air quality forecast threshold for the specified geographic area as set forth in **subdivision (f) Contingency Measures.**

\* Defined in Rule 445(c)(21) as the consecutive entire months of November, December, January and February.

Contingency  
Provision

# PAR 445(f) Contingency Measures

- (1) Upon the issuance of a **final determination by U.S. EPA**, pursuant to 40 CFR §51.104(a), that the South Coast Air **Basin** has **failed to comply** with the following requirements by the applicable date to:

- TRIGGERS**
- (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:

- CONTROLS**
- (A) **29 µg/m<sup>3</sup>**, upon a final determination of a failure to comply with **any** of the provisions of paragraph (f)(1);
  - (B) **28 µg/m<sup>3</sup>**, upon a final determination of a failure to comply with **any two** of the provisions in paragraph (f)(1)
  - (C) **27 µg/m<sup>3</sup>**, upon a final determination of a failure to comply with **any three** of the provisions in paragraph (f)(1)
  - (D) **26 µg/m<sup>3</sup>**, upon a final determination of a failure to comply with **any four** of the provisions in paragraph (f)(1).

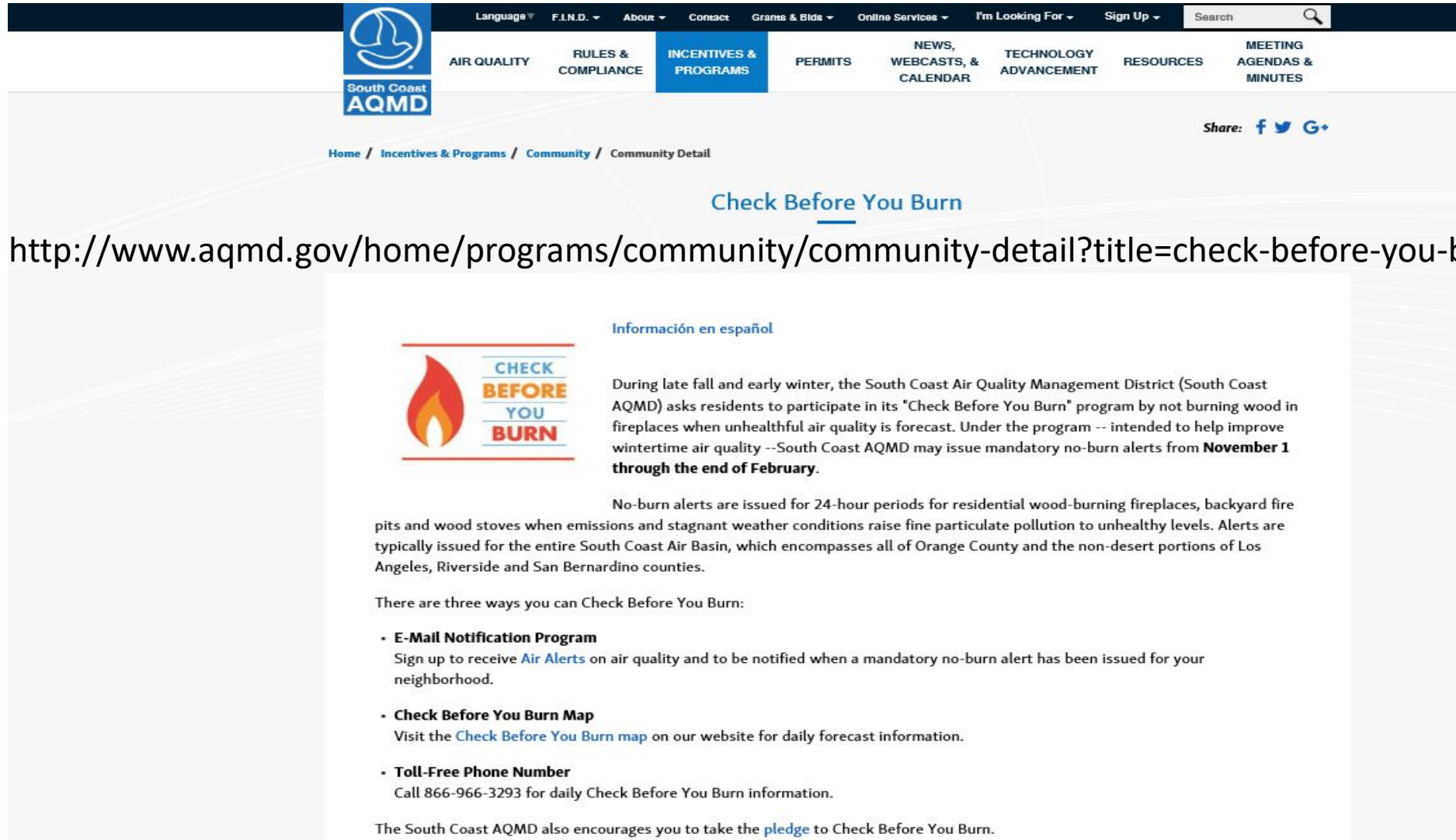
# PAR 445 Example

<p><b>IF</b>, upon a final determination of a <b>failure to</b>:</p>	<p><b>Basin-wide</b>, wood-burning curtailment if, daily PM2.5 air quality forecast for <b>any SRA</b> exceeds:</p>
<p>attain the applicable <b>PM2.5 NAAQS</b> by the applicable <b>attainment date (e.g., 2006 24-hour)</b> – 1<sup>st</sup> Trigger</p>	<p>1<sup>st</sup> Threshold Reduction <b>29 µg/m<sup>3</sup></b></p>
<p>meet any <b>quantitative milestone</b> in an attainment plan approved in accordance with §51.1013 – 2<sup>nd</sup> Trigger</p>	<p>2<sup>nd</sup> Threshold Reduction <b>28 µg/m<sup>3</sup></b></p>
<p>meet any <b>Reasonable Further Progress (RFP) requirement</b> in an attainment plan approved in accordance with §51.1012 - 3<sup>rd</sup> Trigger</p>	<p>3<sup>rd</sup> Threshold Reduction <b>27 µg/m<sup>3</sup></b></p>
<p>submit a quantitative milestone <b>report</b> required under §51.1013(b) – 4<sup>th</sup> Trigger</p>	<p>4<sup>th</sup> Threshold Reduction <b>26 µg/m<sup>3</sup></b></p>

# Estimated PM<sub>2.5</sub> Emission Reductions

No-Burn Day Threshold Mandatory Basin-wide Curtailment ( $\mu\text{g}/\text{m}^3$ )	Total Additional Reductions Beyond Current Rule (TPY)
30	25.4
29	46.3
28	67.1
27	81.0
26	100.1

# Public Outreach



The screenshot shows the South Coast AQMD website's navigation menu with options like Language, F.I.N.D., About, Contact, Grants & Bids, Online Services, I'm Looking For, Sign Up, and Search. The main navigation bar includes AIR QUALITY, RULES & COMPLIANCE, INCENTIVES & PROGRAMS (highlighted), PERMITS, NEWS, WEBCASTS, & CALENDAR, TECHNOLOGY ADVANCEMENT, RESOURCES, and MEETING AGENDAS & MINUTES. The breadcrumb trail reads: Home / Incentives & Programs / Community / Community Detail. The page title is "Check Before You Burn". A URL is provided: <http://www.aqmd.gov/home/programs/community/community-detail?title=check-before-you-burn>. The main content area features a "CHECK BEFORE YOU BURN" logo with a flame icon. Below the logo, there is a link for "Información en español". The text explains that during late fall and early winter, the South Coast Air Quality Management District (South Coast AQMD) asks residents to participate in its "Check Before You Burn" program by not burning wood in fireplaces when unhealthy air quality is forecast. It states that the program is intended to help improve wintertime air quality and that South Coast AQMD may issue mandatory no-burn alerts from **November 1 through the end of February**. It further notes that no-burn alerts are issued for 24-hour periods for residential wood-burning fireplaces, backyard fire pits and wood stoves when emissions and stagnant weather conditions raise fine particulate pollution to unhealthy levels. Alerts are typically issued for the entire South Coast Air Basin, which encompasses all of Orange County and the non-desert portions of Los Angeles, Riverside and San Bernardino counties. There are three ways you can Check Before You Burn:

- **E-Mail Notification Program**  
Sign up to receive [Air Alerts](#) on air quality and to be notified when a mandatory no-burn alert has been issued for your neighborhood.
- **Check Before You Burn Map**  
Visit the [Check Before You Burn map](#) on our website for daily forecast information.
- **Toll-Free Phone Number**  
Call 866-966-3293 for daily Check Before You Burn information.

The South Coast AQMD also encourages you to take the [pledge](#) to Check Before You Burn.

# Rule Development Schedule

\* Please submit comments by March 13, 2020 \*

March 20, 2020 - Stationary Source Committee Meeting

April 3, 2020 - Set Hearing

May 1, 2020 - Public Hearing



# Questions or Comments

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909-396-2414