

**SACRAMENTO FEDERAL OZONE NONATTAINMENT AREA
AIR QUALITY MANAGEMENT DISTRICTS**

**Sacramento Federal Ozone Nonattainment Area
Contingency Measure Commitments for the
2015 Ozone National Ambient Air Quality Standard**

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Prepared by: Marc Cooley
Associate Air Quality Engineer
Sacramento Metropolitan Air Quality Management District

Approved by: El Dorado County Air Quality Management District
Feather River Air Quality Management District
Placer County Air Pollution Control District
Sacramento Metropolitan Air Quality Management District
Yolo-Solano Air Quality Management District

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INTRODUCTION AND BACKGROUND

The El Dorado County Air Quality Management District (EDCAQMD), Feather River Air Quality Management District (FRAQMD), Placer County Air Pollution Control District (PCAPCD), Sacramento Metropolitan Air Quality Management District (SMAQMD) and Yolo-Solano Air Quality Management District (YSAQMD) are local regulatory air quality agencies with the primary responsibility for regional air quality monitoring and planning as well as for administering air quality improvement grant programs and areawide, indirect and stationary source programs for the Sacramento Federal Ozone Nonattainment Area (SFNA). The SFNA region includes Sacramento and Yolo counties, the western portions of El Dorado and Placer counties, the southern portion of Sutter County, and the northeastern portion of Solano County.

In 2015, the U.S. Environmental Protection Agency (EPA) promulgated a new National Ambient Air Quality Standards (NAAQS) for Ozone (O₃) at a maximum daily 8-hour average of 70 parts per billion (ppb). The SFNA exceeded the 2015 O₃ NAAQS and was classified as a “serious” nonattainment area. However, the air districts of the SFNA have requested a voluntarily bump up to a severe nonattainment classification because additional time is needed to meet the standard. EPA is expected to take action to reclassify the SFNA.

The federal Clean Air Act (CAA)¹ requires areas that are classified as nonattainment to develop State Implementation Plans (SIPs) that describes how the SFNA will attain the 2015 ozone standard through strategies that achieve air quality improvements. One requirement of the SIP is to include contingency measures. This document describes the CAA’s requirements for contingency measures, its triggers, and details of the measures proposed.

Health Impacts

Ground level ozone is a secondary pollutant formed from photochemical reactions of nitrogen oxides (NO_x) and volatile organic compounds (VOC) in the presence of sunlight. Ozone is a strong irritant that adversely affects human health and damages crops and other environmental resources. As documented by EPA in the most recent science assessment for ozone², both short-term and long-term exposure to ozone can irritate and damage the human respiratory system, resulting in:

- decreased lung function;
- development and aggravation of asthma;
- chronic obstructive pulmonary disease (COPD) exacerbation;
- respiratory infection;
- reproductive and developmental effects, such as low birth weight from long-term exposure to ozone;
- increased risk of cardiovascular problems such as heart attacks and strokes;
- central nervous system effects, such as memory and sleep patterns;
- increased hospitalizations and emergency room visits; and
- premature deaths.

¹ CAA Sections 172(c)(9) and 182(c)(9).

² “Integrated Science Assessment for Ozone and Related Photochemical Oxidants,” U.S. EPA, April 2020, Table 2-1.

CLEAN AIR ACT CONTINGENCY MEASURES REQUIREMENTS

CAA sections 172(c)(9) and 182(c)(9) require nonattainment areas in general, and ozone nonattainment areas classified serious and higher, to include contingency measures in their SIPs. To fulfill the contingency measure requirements, the air districts of the SFNA must adopt or amend rules that trigger automatically if EPA finds the area fails to attain a NAAQS by an applicable attainment date, fails to meet reasonable further progress requirements, or fails to meet any applicable milestone.

The CAA does not specify the number of measures or the magnitude of emissions reductions that must be provided by these measures. Previous EPA guidance had suggested the level of required reductions; however, in response to court decisions³ issued after the Guidance was developed, EPA is revisiting existing policy. In March 2023 it released draft guidance⁴ for public comment. Under both the court decisions and EPA's revised guidance, contingency measures must be reductions that will not have occurred prior to the triggering event and must be surplus to the reductions needed to meet attainment.

Upon EPA's final issuance of the contingency measure guidance, the SFNA air districts will identify any additional measures that may be needed. Until that time, the SFNA proposes the following architectural coating contingency measures to be included in the SIP.

SUMMARY OF ARCHITECTURAL COATING CONTINGENCY MEASURE COMMITMENTS

Architectural coatings are applied to stationary structures and their appurtenances. Coating types include general use flat and non-flat coatings as well as specialty coatings such as industrial maintenance coatings, lacquers, floor coatings, roof coatings, stains and many others. VOCs in the coatings are emitted as the coatings dry.

To satisfy the requirement for contingency measures, the air districts of the SFNA are committing to adopt amendments to existing architectural coatings rules to add contingency provisions to their architectural coating rules. The contingency provisions will incorporate the California Air Resources Board (CARB) 2019 Suggested Control Measure for Architectural Coatings (SCM).

The proposed contingency measure commitments add provisions to each district's architectural coating rule that, if triggered, would immediately reduce the allowable VOC content of architectural coatings. The contingency provisions in each rule would automatically trigger within 60 days of an EPA finding that the region failed to attain the 2015 ozone NAAQS by 2032, failed to meet reasonable further progress requirements, or failed to meet any applicable milestone.

Rules by District:

1. EDAPCD Rule 215
2. FRAQMD Rule 3.15
3. PCAPCD Rule 218
4. SMAQMD Rule 442
5. YSAQMD Rule 2.14

³ *Bahr v. EPA*, 836 F.3d 1218 (9th Cir. 2016) and *Sierra Club v. EPA*, 985 F.3d 1055 (D.C. Cir. 2021).

⁴ U.S. EPA. Draft: Guidance on the Preparation of SIP Provisions that Address the Nonattainment Area Contingency Measure Requirements for Ozone and Particulate Matter. March 16, 2023.

The following is a summary of proposed changes that would take effect upon triggering the contingency measure:

1. Add, amend, or eliminate certain coating categories, consistent with CARB's 2019 SCM for architectural coatings
2. Establish VOC limits for colorants added to coatings at the point of sale, excluding industrial maintenance coatings and wood coatings
3. Reduce the VOC limits for nine coating categories
4. Eliminate the nonflat – high gloss specialty coating category. These coatings will become subject to the nonflat coatings limits.
5. Establish a one-year sell-through period for products manufactured prior to the contingency measure trigger date

The contingency measure will be included in the SIP to be adopted by each air district and will be submitted to CARB and EPA for approval and incorporation into the California SIP.

CARB's 2019 Architectural Coatings SCM

The proposed contingency measure commitments are based on CARB's Suggested Control Measure for Architectural Coatings. The SCM is a model rule that CARB encourages local districts to adopt as a formal regulation. The purpose of the SCM is to promote uniformity among district rules, improve enforceability, and achieve additional reductions of VOC emissions from the application of architectural coatings.

In 2019, CARB amended the Architectural Coatings SCM to further reduce VOC limits for specific categories and to add VOC limits for colorants. CARB estimated that the 2019 SCM will achieve a 7.83% overall reduction in VOC emissions from architectural coatings (excluding emissions from thinning and cleanup solvents) for districts with rules based on the previous 2007 SCM. Each of the air districts in the SFNA have an existing architectural coating rule based on CARB'S 2007 SCM.

EMISSIONS IMPACT

The total amount of reductions depends on if or when the contingency measure is triggered. Because the contingency measure will include a one-year sell-through period, emission reductions will begin in the second year after the measure is triggered. Table 1 shows the VOC emissions inventory for each district in the SFNA and Table 2 shows the estimated emissions reductions for each district's contingency measure commitment if it were triggered in the potential milestone years or attainment year⁵.

⁵ The contingency measure for each District could potentially be triggered in the milestone years, 2026 and 2029, or the year of the attainment date, 2033 (based on air quality monitoring data collected in 2030, 2031, and 2032). VOC emission reductions would begin in the second year after the measure is triggered: 2028, 2031, or 2035.

TABLE 1: Architectural Coating Emissions Inventory			
District	VOC Emissions Inventory for Contingency Measure (tons per summer day)^a		
	2028	2031	2035
EDAQMD	0.121	0.125	0.128
FRAQMD	0.006	0.007	0.007
PCAPCD	0.256	0.267	0.277
SMAQMD	1.883	1.934	1.990
YSAQMD	0.549	0.562	0.580
Total SFNA Contingency Measure Emission Inventory	2.815	2.894	2.815

^a Excluding thinning and cleanup solvents.

TABLE 2: Contingency Measure Commitments Emission Reductions			
District	VOC Emission Reductions (tons per summer day)		
	2028	2031	2035
EDCAQMD	0.003	0.003	0.003
FRAQMD	0.000	0.000	0.000
PCAPCD	0.004	0.004	0.004
SMAQMD	0.119	0.122	0.126
YSAQMD	0.027	0.028	0.029
Total SFNA Contingency Measure Emission Reductions	0.154	0.158	0.162

Evaluation of Additional Contingency Measures

The SFNA districts commit to re-evaluating the contingency measure requirements upon EPA's issuance of a final Ozone and Particulate Matter Contingency Measure Guidance. EPA promulgated the draft guidance on March 23, 2023⁶ and received 22 comment letters, including from the SFNA and several other California air districts⁷. If additional contingency measures are needed, the districts of the SFNA will amend the SIP at that time.

⁶ 88 FR 17571.

⁷ EPA. "Draft Guidance on the Preparation of the State Implementation Plan Provisions that Address the Nonattainment Area Contingency Measure Requirements for Ozone and Particulate Matter. Docket #EPA-HQ-OAR-2023-0063. March 22, 2023.

TECHNOLOGICAL AND ECONOMIC FEASIBILITY

In the draft contingency measure guidance, EPA provides additional interpretation of the CAA that would allow for contingency measures that result in emissions reductions that occur up to two years from the triggering event. The technological and economic feasibility for the architectural contingency measure can be considered when determining the timeline for emission reductions.

Coatings that comply with the 2019 SCM are already available. The cost effectiveness of the 2019 SCM was estimated by CARB to be \$1.85 per pound of VOC reduced (\$3,700 per ton) in 2019 dollars. This estimate can now be considered a conservative upper bound because manufacturers have already developed coatings for sale in SCAQMD and districts that have adopted the SCM limits.

To meet the draft contingency measure timeline requirements and to allow coating manufacturers, distributors and retail outlets time to comply, a one-year sell-through period is being proposed, starting 60 days after the contingency measure is triggered. This compliance timeline is necessary to begin achieving emission reductions in the second year after the triggering event. In the event that the contingency measure triggers, the districts of the SFNA will conduct public outreach prior to the 60-day trigger implementing the requirements.

ADOPTION SCHEDULE

The contingency measure will be implemented by amending the architectural coating rules of each district. The proposed deadlines for adoption are shown in Table 3.

TABLE 3: Contingency Measure Adoption Deadlines		
District	Rule	Deadline
EDAQMD	215	May 2024
FRAQMD	3.15	June 2024
PCAPCD	218	May 2024
SMAQMD	442	May 2024
YSAQMD	2.14	May 2024

CONCLUSION

The SFNA districts are proposing commitments to amend the identified architectural coating rules as contingency measures to be submitted as part of the 2015 SFNA Ozone SIP. In addition, the SFNA districts commit to re-examine the need for additional contingency measures upon EPA's final contingency measure guidance document.

REFERENCES

California Air Resources Board. *CEPAM: 2019 v1.03 Standard Emission Tool, Base Year: 2017*. Sacramento, CA. <https://ww2.arb.ca.gov/applications/cepam2019v103-standard-emission-tool>. Accessed June 7, 2023.

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