

**El Dorado County**  
**Air Quality Management District**

**Ex. B: STAFF REPORT**

**REVISED  
RULE  
523-1**

**FEDERAL NONATTAINMENT**  
**NEW SOURCE REVIEW**

**PROPOSED REVISED RULE**

**June 25, 2019**

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**STAFF REPORT**  
**PROPOSED REVISED RULE 523-1,**  
**FEDERAL NONATTAINMENT NEW SOURCE REVIEW**

**A. Executive Summary**

In 2017, the United States Environmental Protection Agency (EPA) found the Sacramento region attained the 2006 federal 24-hr PM<sub>2.5</sub> (fine particulate matter  $\leq 2.5$  microns) National Ambient Air Quality Standards (NAAQS). However, EPA has not yet designated the region attainment for PM<sub>2.5</sub>. Therefore, western El Dorado County (approximately Pollock Pines westward to the County line) is still designated as nonattainment of the 2006 24-hr PM<sub>2.5</sub> NAAQS. Western El Dorado County (EDC) is also designated as nonattainment for the 2008 and 2015 8-hr Ozone NAAQS. As such, EPA requires the EDC Air Quality Management District (AQMD) to implement measures to control emissions of VOC and NO<sub>x</sub> as ozone precursors and PM<sub>2.5</sub> and the PM<sub>2.5</sub> precursors NO<sub>x</sub>, SO<sub>x</sub>, VOC and ammonia from major stationary sources. A “major source” is defined as any stationary source of air pollutants which emits, or has the potential to emit, more than 25 tons per year (tpy) of Volatile Organic Compounds/Reactive Organic Compounds (VOC/ROC) or Oxides of Nitrogen (NO<sub>x</sub>) in areas classified as “severe”, or 70 tpy or more of PM<sub>10</sub> or PM<sub>2.5</sub>.

AQMD and the Sacramento region have committed to reducing pollution by submitting a federally enforceable State Implementation Plan (SIP). A New Source Review Rule (NSR) is required as part of the SIP. NSR Rule 523 is currently SIP-approved, however, Rule 523 does not include or apply to PM<sub>2.5</sub>.

In March 2016, AQMD adopted Rule 523-1 Federal Nonattainment New Source Review to address PM<sub>2.5</sub>, as well as ozone precursors. Adoption of Rule 523-1 satisfied the federal 2006 PM<sub>2.5</sub> and 2008 ozone nonattainment area requirements. To satisfy SB288 anti-backsliding requirements at the state level, Rule 523 was left in place as a local rule because it is more stringent than federal requirements for nitrogen oxides (NO<sub>x</sub>), sulfur oxides (SO<sub>x</sub>), and volatile organic compounds (VOC). Rule 523-1 was submitted to EPA, and AQMD received a completeness determination in June 2016. However, EPA has yet to act on approving and including Rule 523-1 into the SIP.

Rule 523-1 is based on a model rule template developed by EPA Region 9. In February 2019, EPA Region 9 staff informed AQMD that EPA legal staff had re-evaluated the model rule and determined it to be deficient in some areas. As a result, EPA has requested that AQMD make the needed revisions and submit the revised version of Rule 523-1 for SIP approval. The alternative is for EPA to issue a limited approval/limited disapproval action for the currently submitted version of Rule 523-1, which would trigger the requirement for AQMD to make these same revisions to Rule 523-1 for full approval.

As before, adoption of a revised Rule 523-1 will not add new requirements to any existing source in EDC. However, if any permit applications for major sources are received after rule adoption, they will be subject to the new rule. Rule 523-1 will satisfy the federal requirement to have an approved Federal ozone and PM<sub>2.5</sub> nonattainment NSR permitting program. Without the proposed rule revisions, the Sacramento region may be subject to federal sanctions, including the potential

loss of transportation funding.

## B. Introduction

On June 25, 2019, the EDC AQMD Board of Directors (Board) will consider adoption of revised Rule 523-1 Federal Nonattainment New Source Review. Rule 523-1 would continue to regulate PM<sub>2.5</sub>, and the PM<sub>2.5</sub> precursors NO<sub>x</sub>, SO<sub>x</sub> and VOC, but will also now regulate ammonia as nonattainment pollutants for any new major stationary source which will emit or have the potential to emit 100 tons per year (tpy) or more. Rule 523-1 will also regulate any major modification of an existing PM<sub>2.5</sub> major stationary source that directly emits 10 tpy PM<sub>2.5</sub> or 40 tpy of NO<sub>x</sub>, SO<sub>x</sub>, VOC or Ammonia. Currently, there are no permitted major stationary sources in EDC that emit or have the potential to emit at these levels. In addition, submittal of Rule 523-1 will satisfy AQMD's upcoming obligation to submit a nonattainment NSR program for the 2015 ozone NAAQS.

Revised Rule 523-1 will be submitted to EPA for approval in the SIP in place of the 2016 version of Rule 523-1, and will replace existing Rule 523 currently approved in the SIP. Rule 523 will remain a local rule to satisfy state SB288 NSR anti-backsliding requirements.

Because the proposed revisions are an "action taken to protect the environment" by imposing more stringent requirements, the proposal falls under a categorical exemption pursuant to California Environmental Quality Act (CEQA) Guidelines Section 15308. Staff have prepared a Notice of Exemption to satisfy the requirements of CEQA.

## C. Background

In October of 2006, the EPA promulgated a new 24-hour PM<sub>2.5</sub> NAAQS ([71 FR 61144](#)), that strengthened the standard from 65µg/m<sup>3</sup> to 35µg/m<sup>3</sup>. In December of 2009, the EPA Administrator established nonattainment designations for the 35µg/m<sup>3</sup> standard, ([74 FR 58688](#)). A multi-county Sacramento region PM<sub>2.5</sub> nonattainment area was designated. Western EDC was included in that nonattainment area.

The region's PM<sub>2.5</sub> monitoring data showed that the 2006 24-hour PM<sub>2.5</sub> NAAQS was met by December 31, 2011. In May of 2012, ARB submitted a request that EPA find the Sacramento region in attainment for the standard. EPA issued a proposed rule for Determination of Attainment on October 26, 2012 and a final rule for Determination of Attainment on July 15, 2013 ([78 FR 42018](#)). The final rule became effective on August 14, 2013. While the Determination of Attainment finding relieved the Sacramento region air districts from various planning requirements, it did not relieve the AQMD of the requirement to submit a PM<sub>2.5</sub> NSR rule. The AQMD can only be relieved of the NSR program requirement if EPA re-designates the AQMD to attainment. Re-designation to attainment requires the Sacramento region submit a maintenance plan demonstrating attainment will be maintained over the next 10 years.

On December 3, 2013 the AQMD adopted and approved the submittal to ARB of a PM<sub>2.5</sub> Implementation/Maintenance Plan and Redesignation Request for Sacramento PM<sub>2.5</sub>

Nonattainment Area. However, the Sacramento region exceeded the 35µg/m<sup>3</sup> standard by 0.1µg/m<sup>3</sup> on the last day of 2013 at one monitoring site in Sacramento. Therefore, the request for EPA to re-designate the regional area to attainment has been delayed.

EPA allowed the use of data for the following year (2014) to be considered. The Sacramento region had a ‘clean’ year in 2014. Sacramento Metropolitan Air Quality Management District (SMAQMD), as the lead air district, began to prepare the new re-designation request in early 2015, but that has not yet been completed. Re-designation to attainment would relieve AQMD from the need to adopt 523-1 to include PM<sub>2.5</sub> in the NSR program.

On October 8, 2015, the Center for Biological Diversity et al. filed a lawsuit against the EPA asserting EPA had failed to make findings of failure to submit (FFS) for nonattainment SIPs for the 2006 PM<sub>2.5</sub> standard for multiple areas throughout the United States.<sup>1</sup> EPA negotiated a Consent Decree and issued a Finding of Failure to Submit (FFS) in April 2016 ([81 FR 19175](#)). However, AQMD adopted Rule 523-1 in March 2016 and submitted the rule prior to EPA’s issuance of the FFS, thus EDC was not included in the FFS. AQMD received a Completeness Finding from EPA in June 2016 ([81 FR 36803](#)), however, EPA has not yet acted to approve Rule 523-1 into the SIP.

On August 24, 2016, EPA promulgated a rule entitled Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements (“2016 Implementation Rule”) ([81 FR 58010](#)). This Implementation Rule, which implements the D.C. Circuit court’s January 2013 decision in *NRDC v. EPA*,<sup>2</sup> areas classified as nonattainment for any PM<sub>2.5</sub> NAAQS are required to comply with the parts of CAA subpart 4 section 189(e)<sup>3</sup> that require the control of major stationary sources of PM<sub>10</sub> precursors (and hence under the court decision, PM<sub>2.5</sub> precursors) “except where the Administrator determines that such sources do not contribute significantly to PM<sub>10</sub> levels which exceed the standard in the area.” The 2016 Implementation Rule amended the definitions of (1) Regulated NSR Pollutant with regards to PM<sub>2.5</sub> precursors; (2) Major Stationary Source with regards to major sources locating in PM<sub>2.5</sub> nonattainment areas classified as Moderate and Serious; and (3) Significant with regards to emissions of PM<sub>2.5</sub> precursors. Rule 523-1 is subject to these new regulatory requirements.

Adopting Rule 523-1 added: PM<sub>2.5</sub> and the precursors NO<sub>x</sub>, SO<sub>x</sub> and VOC as regulated NSR pollutants, requirements for Lowest Achievable Emissions Rate (LAER), offsets, and major source and major modification thresholds; addressing the 2006 PM<sub>2.5</sub> NAAQS requirements. Adoption of Rule 523-1 also ensured AQMD had a current NSR program for ozone precursors (VOC and NO<sub>x</sub>) which satisfied federal requirements for a severe ozone nonattainment area for the 2008 Ozone NAAQS. When AQMD is re-designated to attainment of the PM<sub>2.5</sub> or ozone NAAQS, the respective applicable provisions this rule will no longer apply to those pollutants.

On May 10, 2017, EPA found the Sacramento region attained the 2006 federal 24-hr PM<sub>2.5</sub> NAAQS ([82 FR 21711](#)), however, the required PM<sub>2.5</sub> Implementation/Maintenance Plan and Redesignation Request for the Sacramento region has not yet been submitted to EPA. This Plan details how the region will stay in attainment for 10 years. Therefore, western El Dorado County

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<sup>1</sup> [Center for Biological Diversity et al vs. Gina McCarthy, US EPA Administrator, Case 4:15-cv-04663 filed 10/8/2015.](#)

<sup>2</sup> [Natural Resources Defense Council \(NRDC\) et al vs. EPA, Nos 08-1250, 09-1102, 11-1430](#)

<sup>3</sup> [CAA Section 189\(e\), 42 U.S.C. § 7513a\(e\)](#)

is still designated nonattainment of the 2006 federal PM<sub>2.5</sub> NAAQS.

In February 2019, EPA Region 9 staff informed AQMD that EPA legal staff had re-evaluated the model rule (the basis for Rule 523-1) and determined it to be deficient in some areas. In addition, it does not include provisions pertaining to PM<sub>2.5</sub> to satisfy the new 2016 Implementation Rule requirements. Rather than progressing forward with a limited approval/limited disapproval of the current version of Rule 523-1, EPA recommends AQMD revise Rule 523-1, and resubmit the revised version of Rule 523-1 in lieu of the 2016 version for EPA approval. The revised version of Rule 523-1 includes all the clarifications and corrections EPA has stated are needed for full SIP-approval of the rule.

After AQMD's 2016 adoption of Rule 523-1, EPA promulgated a more stringent ozone NAAQS in October 2015, designated AQMD as moderate nonattainment for this 2015 ozone NAAQS, and issued a Final Implementation Rule on December 6, 2018 ([83 FR 62998](#)). Adoption of the proposed revision to Rule 523-1 will satisfy federal nonattainment new source review requirements for the 2006 PM<sub>2.5</sub>, 2008 ozone and new 2015 ozone NAAQS.

## D. Proposed Revisions

The needed changes to Rule 523-1 involve:

- Clarifications on how this rule fits in with other AQMD rules,
- Clarifications of the New Major Stationary Sources and Major Modifications definition,
- Exclusion of transportation and non-road engines and vehicles from the definition of Stationary Source,
- Prohibition of approving an Authority to Construct for a new major stationary source or major modification if EPA determines SIP is not adequately being implemented,
- Various updates to Definitions, including removal of Carbon Monoxide, Lead, and Sulfur Dioxide in the definition of "significant" as the region is and always has been in attainment for those pollutants,
- Addition of ammonia as a precursor to PM<sub>2.5</sub> in the "significant" definition. (As required by EPA's 2016 Implementation Rule),
- Addition of volatile organic compounds, nitrogen oxides, and sulfur oxides as precursors for PM<sub>10</sub>,
- Additions to Application Content,
- Correcting the offset ration for Severe Ozone Nonattainment Areas in Table 1,
- Revisions to Restrictions on Trading Pollutants for offset purposes,
- Inclusion of Stack Height Procedures,
- Various nomenclature changes throughout.

The proposed revisions to Rule 523-1 retain the same applicability threshold limits and add new threshold limits for ammonia. The thresholds are based on the existing Rule 523-1 values for PM<sub>2.5</sub> precursors nitrogen oxides and sulfur dioxide of 40 tons per year. U.S. EPA's regulation requires the threshold for VOCs to be 40 tons per year but allows states to propose thresholds for ammonia. AQMD staff proposes the same 40 tons per year threshold for ammonia. This is a conservative approach since on a regional basis, NO<sub>x</sub> emissions have a greater influence in the

formation of secondary ambient PM<sub>2.5</sub> when compared to than ammonia emissions. Other than the changes pertaining to the treatment of ammonia as a PM<sub>2.5</sub> precursor, the rule revisions do not strengthen or weaken any requirements found in the 2016 version of Rule 523-1. The proposed revisions to Rule 523-1 will not result in any new requirements for existing EDC sources. At this time, El Dorado County has no “major stationary sources” and there are no potential facilities meeting this definition in the foreseeable future. Once approved by EPA, revised Rule 523-1 will satisfy NSR requirements for the 2006 PM<sub>2.5</sub>, the 2008 ozone and new 2015 ozone NAAQS. When the District is re-designated to attainment of the PM<sub>2.5</sub> or ozone NAAQS, this rule will no longer apply to sources of those pollutants.

## **E. Impacts of New Rule (H&S Code § 40703)**

In adopting any regulation, the AQMD must consider and make available to the public, its findings related to the cost effectiveness of a control measure, as well as the basis for the findings and the considerations involved.

### **Emission Impact (CEQA CCR Title 14, § 15180 to 15190)**

Staff cannot quantify the potential emission reductions as this rule applies to future Authority to Construct permit applications. Any emission reductions will result from affected sources either taking lower permit limits or from surrendering more emission reduction credits. Rule 523 already controls the PM<sub>2.5</sub> precursors VOC (also referred to as ROC for reactive organic compounds) and NO<sub>x</sub> at levels below those required by federal law.

### **Cost Impact (H&S Code § 40703)**

California Health & Safety Code (H&S) Section 40703 requires the AQMD to consider and make public “the cost-effectiveness of a control measure”. This revision to Rule 523-1 is not expected to have a cost impact beyond the previous potential cost impacts associated with adoption of current Rule 523-1. The discussion concerning cost impacts of the previous rule adoption is as follows:

Total costs of compliance include both the costs employing appropriate LAER emission control technology and providing sufficient emission offsets by purchasing Emission Reduction Credits (ERCs). The federal NSR LAER requirements are determined on a case by case basis. EPA maintains a central database of air pollution control technologies to assist local air districts with determining appropriate LAER processes and equipment to employ for various major emission sources.

The addition of PM<sub>2.5</sub> as a new federal NSR regulated pollutant will require that applicants provide offsets for PM<sub>2.5</sub> for new sources emitting 100 tpy or more of PM<sub>2.5</sub>, NO<sub>x</sub>, SO<sub>x</sub> or VOC. For existing major sources with a potential to emit 100 tpy of any of these pollutants, a modification resulting in an increase of the pollutant that the source is major for, of 10 tpy for PM<sub>2.5</sub> or 40 tpy for the other pollutants, would also trigger offset requirements. Currently, applicants supply offsets of PM<sub>10</sub> at 7,500 pounds per quarter (15 tpy). Evaluating the cost increase is complicated in that PM<sub>2.5</sub> is a major constituent of PM<sub>10</sub>. For combustion sources, PM<sub>10</sub> is approximately 90% PM<sub>2.5</sub>.

There are no PM<sub>2.5</sub> Emissions Reduction Credits (ERCs) currently available in EDC. An applicant would have to supply a greater quantity of PM<sub>10</sub> ERCs depending on the PM<sub>2.5</sub> content of the PM<sub>10</sub> ERC. For example, for PM<sub>10</sub> ERCs from a combustions source, the applicant would supply 1.1 ton of PM<sub>10</sub> ERC for every 1.0 ton of PM<sub>2.5</sub> ERC required. The most recent price of PM<sub>10</sub> ERCs in neighboring Placer County in 2011 was approximately \$9,800 per ton<sup>4</sup>. The cost for the applicant to supply a ton of PM<sub>2.5</sub> ERC would be \$10,780 (1.1 x \$9,800). In EDC, there has been no need for PM<sub>10</sub> ERCs over the past ten years.

The addition of PM<sub>2.5</sub> as a NSR regulated pollutant could increase project compliance costs. However, there are no current nor are there any sources anticipated to emit 100tpy of PM<sub>2.5</sub>. Since the addition of PM<sub>2.5</sub> is mandated by the federal Clean Air Act, cost-effectiveness is not an issue for this proposed Rule. Staff does not anticipate an additional need for staff resources due to inclusion of PM<sub>2.5</sub>.

#### **Socioeconomic Impact (H&S Code § 40728.5)**

H&SC Section 40728, in relevant part, requires the Board to consider the socioeconomic impact of any new rule if air quality or emission limits are significantly affected. However, air districts with a population of less than 500,000 are exempted from this requirement. In 2017, EDC population was approximately 189,000.

#### **Incremental Effectiveness (H&S Code § 40920.6)**

H&SC Section 40920.6 requires a determination of the incremental cost-effectiveness by calculating the difference in the dollar costs divided by the difference in the emission reduction potentials between each progressively more stringent potential control option as compared to the next less expensive control option. There are no other control options being proposed as alternatives to the inclusion of PM<sub>2.5</sub> as a regulated pollutant and corresponding offset requirements.

## **F. Environmental Impacts of Method of Compliance (CA PRC § 21159)**

California Public Resource Code Section 21159 requires the AQMD to perform an environmental analysis of the reasonably foreseeable methods of compliance. The analysis must include the following information for the proposed revised Rule 523-1:

1. An analysis of the reasonably foreseeable environmental impacts of the methods of compliance.
2. An analysis of the reasonably foreseeable mitigation measures.
3. An analysis of the reasonably foreseeable alternative means of compliance with the rule or regulation.

However, Section 21159 also states, *“In the preparation of this analysis, the agency may utilize numerical ranges or averages where specific data is not available; however, the agency shall not be*

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<sup>4</sup> <http://www.arb.ca.gov/nsr/erco/erc14.pdf> and <http://www.arb.ca.gov/nsr/erco/erc11.pdf>



*required to engage in speculation or conjecture.” Further, “This section does not require the agency to conduct a project-level analysis.”*

Since there are no current permitted facilities in EDC to which Rule 523-1 or the proposed revised Rule 523-1 would apply; and the AQMD is not aware of any affected facilities considering locating within the County, it is impossible for staff to reasonably foresee what methods of compliance a facility might use to be consistent with the proposed Rule.

## **G. Regulatory Findings (H&S Code § 40727)**

H&S Code Section 40727(b) requires that prior to adopting or amending a rule, an Air District must make findings of necessity, authority, clarity, consistency, nonduplication, and reference.

### **Necessity**

Districts with areas designated as Nonattainment for federal National Ambient Air Quality Standards (NAAQS) are required by the US EPA to establish Federal New Source Review (NSR) Rules for inclusion into the State Implementation Plan (SIP). Proposed revised Rule 523-1 would satisfy this requirement for the 2006 PM<sub>2.5</sub> NAAQS, as well as the 2008 and 2015 Ozone NAAQS.

### **Authority**

The AQMD is authorized to adopt rules and regulations by California Health & Safety Code, Sections 40000, 40001, 40701, 40702, 40716, 41010 and 41013.

### **Clarity**

The AQMD has reviewed the proposed revised Rule and determined that it can be easily understood by the affected industry. Additionally, other districts have and are in the process of adopting this same model rule.

### **Consistency**

The proposed revised Rule is not in conflict with or contradictory to any existing statutes, court decisions, or state or federal regulations.

### **Nonduplication**

The proposed revised Rule does not conflict with any state laws or regulations, regarding attainment and maintenance of state and federal air quality limits.

### **Reference**

All statutes, court decisions, and other provisions of law used by the AQMD in interpreting this regulation are incorporated into this analysis by reference.

## **H. Public Comments**

As of the time of submittal of this staff report to the County Clerk, AQMD had received no public comment on the proposed revised Rule.